

**REVIEW OF THE FINAL REPORT OF
THE 21st CENTURY COMMISSION ON
PRODUCTION AGRICULTURE**

HEARING
BEFORE THE
**COMMITTEE ON AGRICULTURE,
NUTRITION, AND FORESTRY**
UNITED STATES SENATE
ONE HUNDRED SEVENTH CONGRESS

FIRST SESSION

JANUARY 30, 2001

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REPORT FROM THE COMMISSION ON 21ST CENTURY PRODUCTION AGRICULTURE

TUESDAY, JANUARY 30, 2001

U.S. SENATE,
COMMITTEE ON AGRICULTURE, NUTRITION AND FORESTRY,
Washington, DC.

The committee met, pursuant to notice, at 9:00 a.m. in room 216, Senate Hart Building, Hon. Richard Lugar (chairman of the committee) presiding.

Present: Senators Lugar, Roberts, Conrad, Harkin, Thomas, Nelson of Nebraska, Allard, Lincoln, Hutchison, Stabenow, Crapo, Dayton, and Cochran.

OPENING STATEMENT OF HON. RICHARD G. LUGAR, A U.S. SENATOR FROM INDIANA, CHAIRMAN, COMMITTEE ON AGRICULTURE, NUTRITION, AND FORESTRY

The CHAIRMAN. This meeting of the Senate Agriculture Committee will come to order.

We are very pleased today to have the final report of the Commission on 21st Century Production Agriculture. The Commission was created by the Federal Agricultural Improvement and Reform Act of 1996, the FAIR Act, to identify the appropriate role of the Federal Government in production agriculture, following the expiration of the FAIR Act in the year 2002.

In many respects, today's hearing and the public release of the Commission's final report mark the beginning of the 2002 Farm Bill process. I want to welcome Commission Chairman, Dr. Barry Flinchbaugh and Commission members, Bruce Brumfield, John Campbell, Donald Cook, James DuPree, Charles Kruse, William Northey, Ralph Paige, Bob Stallman, Leland Swenson and Don Villwock. The Commission has taken its assignment very seriously and has worked hard to produce a substantial final report which contains a great deal of information.

Achieving a consensus view on this issue is no easy task. I would note that all 11 Commission members signed the final report, subject, in some cases, to minority views, which are included as a portion of the report. We look forward to hearing the Commission's findings and recommendations.

With respect to the 2002 Farm Bill process, I look forward to working with distinguished Ranking Member, Senator Harkin, of Iowa, and all Committee Senators, including many new members on both sides of the aisle. A good place to try to begin is try to gain a better understanding of the basic structure of farming.

Sparks Company, Inc., for example, recently completed an analysis of this subject based on the 1999 census of agriculture. The census defines a farm as any operation with annual farm sales of \$1,000 or more. And about 2 million such entities exist in our country.

But the Sparks analysis found that of the Nation's 1.9 million farms, as counted in 1997, only 157,000 farms, just 8 percent, with annual sales of \$250,000 or more, account for 72 percent of the food and fiber production in this country. These commercial farms rely primarily on income earned from farming; that is, 72 percent of the income of the families who were involved in these farms came from farming. Only 28 percent came from off the farm.

A second group of 189,000 farms, about 10 percent of all farms, have annual sales ranging from \$100,000 to \$250,000. And they account for 15 percent of production.

Now, in this situation, 57 percent of the group's income comes from off-farm sources, only 43 percent from on the farm. That's contrasted to 72 percent with the larger group.

Now, the remaining 1.57 million farms, 82 percent of all farms, account for only 13 percent of production. And the Sparks report amazingly found that on a net basis, all of the total income comes from off-farm sources. That is a striking conclusion, and one on which perhaps members will comment and on which we will have considerable debate, as we look at the structure of who is in agriculture and where income comes from.

Virtually all agricultural economists tell us the benefits of production-based farming, support and risk management programs, are capitalized in the value of farm land. The most recent evidence of this is our experience in the last 3 years, and during that period, farmers' returns from the market place have fallen sharply.

Yet agricultural land prices and rental rates have continued a steady rise as regular FAIR Act programs and supplemental farm assistance from Congress have provided farmers with increasingly large amounts of Government assistance. The impact of this assistance on individual farmers can be very different, depending upon whether a producer owns or rents the land that he or she is farming. Without doubt, our recent policies have helped to keep many farmers in business.

But increasingly asked is the question as to whether many farmers are being hurt in that process. We need farm programs that will build the international competitiveness of American agriculture, and will help provide both producers and the general public with increased environmental benefits. Our farm programs exist because of resources provided by all of our Nation's consumers and taxpayers. We have a responsibility to provide farm support in ways that are as economically efficient as possible.

Though the direct cost to taxpayers of recent farm support is high, a new analysis by University of Maryland Professor Bruce Gardner concludes that the combination of regular FAIR Act programs and supplemental market loss assistance is a relatively efficient way of supporting farmers' incomes. That is that the money either goes to farmers, to consumers or somewhere in America, as compared to pre-FAIR Act programs, which relied heavily on acreage reduction programs, and which resulted at least in Professor

Gardner's calculations, to a dead loss of about \$4 billion a year to the American economy.

Following opening statements by Senators, we will hear background testimony from Agriculture Department Chief Economist Keith Collins on recent policy and market developments. And he will also be available during the discussion period with Commission members, who will be a part of the second panel, and provide additional information as required.

I want to remind Senators that Dr. Collins is here, and has been asked to provide us with information, not to comment on the Commission's policy recommendations. Chairman Flinchbaugh will testify today summarizing the Committee's findings and recommendations detailed in full in the final report we have received. Senators may want to engage all Commission members in discussion following Dr. Flinchbaugh's testimony.

I also want to recognize Commission staff, Mickey Paggy, Matthew Howe, and Timothy Peters, all of whom provided the Commission with invaluable assistance.

It's my privilege to turn now to Senator Harkin for his opening statement.

**STATEMENT OF HON. TOM HARKIN, A U.S. SENATOR FROM
IOWA**

Senator HARKIN. Thank you very much, Mr. Chairman, and I am pleased we're holding today the first of a series of hearings on the future of agriculture and food policy in America. And I look forward to working together, as we have in the past, in the bipartisan tradition of our Committee, hopefully to craft a balanced and thoughtful, comprehensive new Farm Bill, one that looks not to the past, but to the future.

Over the past several years, this Commission has done a lot of work. They've been meeting with farmers around the country and consulting agricultural policy experts and debating the issues preparing this report. I want to thank the members and the staff of the Commission for their work, and for taking part in the hearing today.

In particular, I comment Bill Northey, a fellow Iowan, who farms near Spirit Lake, and is one of our State's agricultural leaders.

The Commission's report identifies and discusses many issues and ideas for the Farm Bill, makes a number of important recommendations. The report also leaves a lot of questions unanswered, and as reflected in the minority views, it points to some strong disagreements. In short, despite its laudable efforts, the Commission has left us here with plenty of work to do on the next Farm Bill.

There does seem to be at least an overall agreement that a sound food and agricultural policy is critical to our Nation, that we do need a policy framework. We can't just walk away from it.

We have some very good programs, such as in conservation, some other areas. But I believe at its core, however, our Nation's farm policy is badly adrift. Freedom to Farm cut us loose from past farm policies. Then we had to change the course charted by Freedom to Farm to avert economic collapse in the farm economy.

Now, today, this year, ad hoc emergency cash assistance packages are the life blood of our farm programs. I don't believe this is a defensible or a sustainable policy for our farm families, rural America or for our Nation as a whole.

For the next Farm Bill, we must better articulate the underlying purposes and rationale of our farm policy, clearly identify our objectives, and develop consistent and cohesive programs to achieve them. Frankly, on that score, I had hoped for more creativity and innovation in the Commission's report.

To be sure, finding agreement on farm policy recommendations is a tough job. But even though the Commission acknowledges the inadequacy of the current farm programs, it proposes only incremental changes.

Let us not set our sites too low. America's farm families and rural communities need new directions in farm policy. Maybe we should start thinking out of the box, as they say, it's a popular phrase these days, and start thinking about farm policy and rural policy as more than just commodity based programs, but programs based upon a comprehensive set of economic incentives, different types of programs that will provide alternative sources of income and revenue, and a new focus on rural America to make rural America a more inviting and livable place for people to live and raise their families.

That encompasses everything from rural hospitals to transportation, clean water, good schools, closing the digital divide, off-farm income, long-term care, a whole host of things. Whatever makes cities livable and good places to raise your families ought to provide the kind of dynamic that we want to look at, not the same, it's going to be different, because rural America is different than living in a city.

But we ought to apply the same kind of thinking, perhaps, to the next Farm Bill. I don't know that we can continue to go down the road of just saying exports, exports, exports, unless we're prepared to send our military forces overseas and force food down people's throats, and tell them they've got to eat what we've got, whether they like it or not.

Now, we've got to keep our exports up, we've got to think about how we provide the kind of food and fiber that the rest of the world wants, not what we want, but what they want. The customer is always right. So what they want is what we've got to grow.

So I think there may have been some good things in the Freedom to Farm, flexibility, of course, we want to continue to have the flexibility that farmers enjoy. But I think we have to learn from the experience and make some improvements, especially trying to get rural farm income up, income, income up.

We also can't forget that our farmers and ranchers are the stewards of our natural resources for future generations. We should fully support the current conservation programs, but adopt new ones, both to support farm income and also conservation on land and agricultural production.

I'm hopeful that legislation that Senator Smith and I have introduced and which has been companion introduced in the House side, bipartisan support, is something that we will look at this year, as providing both the kind of conservation we need but the income

support for farmers that we need, the kind of incentives that we need for farmers on a voluntary basis.

So again, I thank the Commission for doing its job, for having all the hearings. I look forward to their testimony, and I look forward to further questions to our Commission about their ideas on how we're going to make rural America a more inviting place. I guess my bottom line question is, Mr. Chairman, is it possible to repopulate rural America.

Thanks, Mr. Chairman.

The CHAIRMAN. Well, thank you very much, Senator Harkin, for that important opening statement.

I want to recognize each of the Senators who are here now for opening statements, hopefully of less than 5 minutes or so. So I appreciate your coming early and being a part of this Commission report.

And then after that, our question period will be 5 minutes per Senator, in rounds, as we proceed. Others who have not appeared at this point will have to put their opening comments and questions together at that stage.

I'd like to recognize now Senator Roberts.

**STATEMENT OF HON. PAT ROBERTS, A U.S. SENATOR FROM
KANSAS**

Senator ROBERTS. Thank you, Mr. Chairman.

I hope the obvious answer to the question by the distinguished Senator from Iowa is yes in regards to repopulating rural America. And I look forward to working with him as we approach not only the Farm Bill, but the many other issues that he mentioned, which I think are right on the mark.

I want to thank you for holding this hearing today, Mr. Chairman. It's the first of many hearings that we're going to be holding on the Farm Bill.

I welcome to the Committee Dr. Barry Flinchbaugh of Kansas State University, home of the ever-optimistic and fighting and successful Wildcats, who has chaired the Commission on the 21st Century Production Agriculture Commission. Barry is a long-time friend, we've worked together on many issues. We don't agree upon each and every one of them, but we have a pretty good percentage.

Mr. Chairman, the Commission was established in the 1996 Farm Bill with directions to review the effective agriculture policies since the enactment of the 1996 legislation, and to undertake a comprehensive review and to recommend a course for future agriculture policies, if anybody's interested, I have that language that we wrote. I think the Commission has fulfilled this role.

There are not specific recommendations in regards to where we should go to implement the broader recommendations of the Commission. But then again, this Commission was never intended to be an independent agriculture committee, to get into that kind of business.

Let me say that I think all options should be on the table for review and for consideration. I've often said that having experience in six Farm Bills myself, I can't remember a Farm Bill that was set in stone or that was perfect. Matter of fact, it seems to me that

after every Farm Bill we always come back in with either a technical corrections bill, which usually is far more comprehensive.

As the distinguished Senator from Iowa has pointed out, due to a lot of different causes, we have had to come in with an additional AMTA payment or lost income payment, however you want to describe it, in regards to the world price, depression. So no Farm Bill is set in stone, and obviously no Farm Bill is perfect.

I think this report is a strong basis on which to begin. It is a road map, if you will. At the same time, I think my colleagues should understand what this report is and is not. It is a recommendation. It is a broad outline for the policies of the Commission that its members believe should be contained in the next Farm Bill as it relates to actual farm programs.

It is not a recommendation, at least as I understand it, on how to deal with the issues such as a fluctuating dollar, the high energy prices we see today, rural development, although that certainly comes within the jurisdiction of this Committee. We must do everything we can to support rural development, and the many other issues that will all play a role in how we shape and write the next Farm Bill. These issues are simply beyond the scope of the Commission and what it was asked to do. And they are issues that we as a Committee and we in the Congress must tackle.

Finally, Mr. Chairman, as we begin this debate, I have no real preconceived notions. However, whatever policies we eventually decide on, I believe that we must maintain the individual producer decision making and control, which was the heart and soul of the 1996 Farm Bill, and the flexibility to make their own planting and marketing decisions.

I must also add that the component parts that we recommended that are encompassed in the Chairman's bill, and that of Congressman Bereuter, I am a strong cosponsor of that bill. And it entails all of the things that we wanted to do, commensurate with any Farm Bill. It was appropriate tax relief, regulatory reform, a consistent and aggressive export policy, sanctions reform, all the things that I think most of the farm organizations and commodity groups and members of the Commission have long supported.

Seems to me we must also address the responsibility of our farm and agriculture groups as we begin this debate. Dr. Flinchbaugh and the Commission have put forth a solid benchmark for beginning the discussion. It is now our responsibility in the Congress, and quite frankly, that of the commodity organizations and the farm organizations and the producer organizations to come forth with solid proposals of their own for the next Farm Bill.

I would repeat the admonition by the distinguished chairman of the House Agriculture Committee, Congressman Larry Combest, who has said that these proposals need to be based on fact and substance with an explanation on how they should be financed.

I realize, having been through a great many Farm Bill debates, that we always get into the discussions as to a point of view as to whether we should rely on loan rates or other kinds of payments, or what kind of a counter-cyclical payment, and whether we go back to supply management. Those are very, I guess, historic debates.

But what Larry has suggested is that we be rather specific and we see how it fits into the budget. And I think that's wise advice.

I have long tried to be a champion of production agriculture. I have no greater priority in public service. But I think as a member of this Committee, I hope we can come forward with policy and spending proposals we can defend and justify on the Floor of the Senate and the House, rather than simply asking for a level of spending of what some may believe is what we are deserving of or entitled to.

We need to do our part to support U.S. agriculture. At the same time, I think we need to do our part to support fiscal discipline, which will benefit everybody, as we don't want to slide into a real recession.

I thank you, Mr. Chairman. I thank the members of the Commission for your time, for your effort, and for your very diligent product. I did not expect a specific road map. You've given us a general road map, and I appreciate it. Thank you very much.

The CHAIRMAN. Thank you, Senator Roberts.

I acknowledge again, and this Commission knows, that Senator Roberts, as Chairman of the House Agriculture Committee, was instrumental in the success of our efforts in 1996. And it is a privilege that he is a member of this Committee now, assisting us as we approach that task again.

Likewise a veteran of the last debate is Senator Conrad. And I would like to recognize him now for his opening comments.

STATEMENT OF HON. KENT CONRAD, A U.S. SENATOR FROM NORTH DAKOTA

Senator CONRAD. Thank you, Mr. Chairman.

And I'd like to welcome not only the members of the Commission, but the new members of our Committee. Certainly Senator Ben Nelson of Nebraska, an important farm State, and we look forward to his contributions as we work to improve farm policy.

On the other side of the aisle, we want to welcome four new members. Senator Thomas, who we have worked with in the past on many issues important to our part of the country. Awfully glad to have him here.

Senator Allard, of Colorado, welcome to the Committee. Senator Hutchison of Arkansas, another important farm State. And of course, Senator Crapo.

Welcome, all. We look forward to working with you. I think you'll find this is a congenial Committee. And we have excellent leadership. And we have feisty debate. And hopefully this morning will be no exception to that.

I want to thank the Commission for their hard work, and especially recognize their proposal on a safety net. That was a very important proposal and I think will be well received on both sides of Congress.

I do think that you missed an opportunity to focus on some of the larger forces that are affecting domestic agriculture. As I reflect on current farm policy, I believe it is fatally flawed. In fact, I personally believe it's a disaster for domestic agriculture. And I think the record is quite clear, we've had to write four disaster bills in the last 3 years. And they have not been cheap.

And I think that goes right to the heart of part of what happened the last time we wrote a Farm Bill, was in the budget process, which was the first place we faced a fight, agriculture got hammered. And as a result, we really couldn't write a farm policy that made much sense.

Let me just go to a couple of charts which I think are important for us to reflect on as we consider new farm legislation. This shows what's happened to net farm market, that U.S. farm market income falls as Government payments increase. And we can see from 1996 to 2000 the blue part of the bar is market income. The red part of the bar are Government payments.

And you can see that market income, the blue portion of the bar, has shrunk dramatically since 1996. Government payments have increased dramatically. In fact, Government payments have about tripled.

And if we wouldn't have had that increase in Government payments, you can see what would have happened to overall farm income. It would have shrunk to levels that are historic lows in real terms.

Let's look at key factors. Obviously, farmers are paying more but receiving less. The green line is what prices farmers paid for inputs. And that's been moving upward, ever upward. And we can see the red line is what prices the farmers have received for what they sell. And you can see that it's interesting, coincidentally, perhaps not coincidentally, some believe, 1996 Farm Bill passage was the peak of what farmers received. And since then, those prices have plunged. And the plunge continues through the year 2000.

I believe one of the key factors affecting us is what's happened to our major competitors, the Europeans. You can see on this chart that the European Union supplies 63 percent of the world's trade distorting domestic subsidies, 63 percent. They're the red portion of the pie. Japan is the blue portion. The United States is the little green sliver. Europe alone is beating us 10 to 1 on trade distorting subsidies, 10 to 1.

Let's look at the next chart. Because it shows what they're doing in terms of domestic support. This is from the Organization for Economic Cooperation and Development, the OECD. They're the international scorekeeper. This is what they say is happening with respect to domestic support on average. We're the blue bar, \$38 an acre, on average. The Europeans, \$313 an acre. They're swamping us, 10 to 1.

And the final chart showing what they're doing in terms of world agricultural export subsidies. This is again our major competitors, the Europeans. They account for 83 and a half percent of all world agricultural export subsidy. The United States, 2.7 percent. It's not too surprising here that our farmers are losing this battle.

Unless we address those imbalances in whatever Farm Bill we write, we're going to be handing our farmers a losing hand. So the question is, do we permit our farmers to fight back, or do we leave them in this circumstance in which the deck is stacked against them. I hope very much that this information can get out as we proceed on the Farm Bill debate and that it goes to the Budget Committee, where, Mr. Chairman, I'll have to leave, because we're holding a hearing this morning.

The CHAIRMAN. Thank you very much, Senator Conrad.

It's my privilege now, Senator Conrad has already welcomed these four distinguished Senators. But let me reiterate that welcome. It's a privilege to have each one of you on the Committee. As all of you in the audience know, we have just completed the selection of the Committee. This is the first time the 20 members of the Committee, now 10 Republicans, 10 Democrats, have come together. So it's a privilege to recognize each one of these Senators for a brief opening comment and then for full participation and the questions to the witnesses.

First of all, Senator Thomas.

STATEMENT OF HON. CRAIG THOMAS, A U.S. SENATOR FROM WYOMING

Senator THOMAS. Thank you, Mr. Chairman.

Certainly, I want to say it's a great honor for me to serve on this Committee. As many of you know, I have had a strong interest in agriculture and for a very long time, testified a number of times here at this Committee. So I welcome the opportunity to be more a part of that.

On other committees, I've dealt with public lands, continue to, with energy, environment, foreign trade. So all those things, of course, relate to agriculture.

As we prepare this Farm Bill, it's important, of course, to evaluate the current direction of agriculture. Agriculture and markets change rapidly, certainly. We need to have a plan to stay ahead of that curve, to learn from the successes that we've had and also learn from the things that have not been as successful.

We face some tough times, but we need really, it seems to me, to take a look at where we want to be in agriculture, what our goals really are, so that as we move towards that, we'll be able to evaluate the things we do. Obviously there's no single response. There are an array of obstacles to farm programs, of course, tax burdens, environmental restrictions, market concentration, trade barriers, just to name a few.

So I certainly look forward to this, and hope that we can be successful as we move forward in seeking to make agriculture more successful in our country. I commend the Commissioners who have done a lot of work, certainly, on their job, and they've come a long way.

So, Mr. Chairman and members, I appreciate being a part of your group and look forward to working with you. Thank you.

The CHAIRMAN. We're privileged that Senator Nelson is a part of our group. We welcome you again, Senator. You appeared in your initial appearance for the hearing for Secretary Veneman. We are delighted that you are here today. Please proceed.

STATEMENT OF HON. BEN NELSON, A U.S. SENATOR FROM NEBRASKA

Senator NELSON of Nebraska. Well, thank you very much, Mr. Chairman. And it truly is a honor and a pleasure as well as a great opportunity to serve on this Committee.

I know this very often is tempting to dwell on the past with what was. We can learn from the past. Sometimes we learn from our

failures and our successes equally. And occasionally, we have a near success. But now I believe it is in fact time to focus on the future to find a way to put together a program that will work to return agriculture, and farming in particular, from simply a wonderful way of life to a way to earn a living once again.

I congratulate all those who have labored on this challenge over the years. I thank you for everything that's been done. It's not an easy problem to solve and the solutions, while too easy to discuss, are hard to crystallize into a comprehensive program.

As a Senator from a rural State, I too am hopeful that we can repopulate many of the rural areas of our country, and at the very least curb the depopulation that we are incurring at this very time. The important thing, ultimately, is to develop a program that will protect income, not simply subsidize it.

I must admit, and I'm getting used to Senator Conrad's charts, I think they very clearly establish what has been happening. I am sure he would be the first to say that it's easier to point out the problem than it is to find or to bring about the resolution.

But farm income protection is what we must be about in some fashion or other. We have to recognize that trade agreements, while they can be helpful at times, aren't as helpful as they might be if agriculture could be considered as part of the main thrust of trade agreements, as opposed to an afterthought. I believe if agriculture, and particularly some of the so-called lesser commodities, had been considered at the time of the development of the NAFTA agreement we would have spelled it right—it would have had two Fs. You've heard me say it before, I don't criticize anybody for the misspelling, but I would like to point out that it should have not only been free trade, but fair trade.

And that I would hope, as we work toward looking at the EU, or we look at other parts of the world, that we recognize the reality that we're asking our agriculture producers to compete in an unfair market and in a market that is highly subsidized. While it may be tempting to say, well, if you can't beat them, join them, I think we have to be careful in that approach. But at the same time, I don't think that we can totally ignore what's going on with world markets.

Here at home, I hope this Committee will work very carefully as an energy policy is being worked on to include biofuels, additional sources of alternative markets for farm products, that will help us and help agriculture not only solve the energy crisis that we're seeing develop, but also a national security interest in producing more of our fuels here at home.

There are a lot of things that remain to be done. I want to be a party to these discussions and these considerations. And I want to be a friend, if you will, of the process. But I think it is important that we work together, and that we recognize that the solution is not to continue what we've done in the past, but to find adjustments to the Freedom to Farm Act as we move forward, to retain the flexibility, to retain what's working and find solutions for what isn't. And I would hope that we would be able to do so in the context of protecting income for agriculture.

Thank you very much for this opportunity.

The CHAIRMAN. Thank you very much, Senator Nelson.

Let me just mention that other Senators are arriving. At the beginning I indicated we would have opportunity for opening statements of Senators that were here at that point. And those who were not here at that point will have an opportunity to make comments, opening statements and questions during the question period.

But I would like to get on, at some point, which I hope the Committee will appreciate, to the testimony from Dr. Collins and the panel. But I'm going to recognize two Senators who were here at the outset, and we welcome once again Senator Allard to our Committee.

STATEMENT OF HON. WAYNE ALLARD, A U.S. SENATOR FROM COLORADO

Senator ALLARD. Mr. Chairman, thank you. It's a pleasure to be on your Committee and I look forward to working with both sides on many important issues I think that the Committee will be dealing with. I think that it's a particularly opportune time for me to be on the Committee, because I served on the House Agriculture Committee at the time that we put together the Freedom to Farm legislation, and actually at the time the Commission was set up. And I'm looking forward to hear what they have to say in their analysis. I think it will be something that this Committee will probably need to rely on as we move forward in our deliberations.

I hope that we can get something passed within the next 2 years to expand markets for our agriculture producers. I think that's a real challenge. I think we're also going to be facing some real energy challenges, and perhaps maybe one of the greatest factors in increasing the costs of farming today may be the cost of energy.

I hope to bring to this Committee kind of a special expertise, since I am a veterinarian. I think that animal disease worldwide will get to be a greater problem and probably more of a debate in this Congress. So I hope to bring forward some special understanding in that, and also some science issues, dealing with production agriculture. We're already down the road on many of those science issues, but I suspect they'll be brought up by certain groups. I hope to be a member and a spokesman of any special study that you may have in that regard, so that we can address some concerns, I think, out there about our high quality farm product that we produce in this country, to explain to the American public that it is high quality.

Thank you very much, Mr. Chairman.

The CHAIRMAN. Thank you very much, Senator Allard. Senator Hutchison, do you have an opening comment?

STATEMENT OF HON. Y. TIM HUTCHINSON, A U.S. SENATOR FROM ARKANSAS

Senator HUTCHISON. Just very briefly, Mr. Chairman.

I want to thank you for the opportunity to serve on this Committee. I'm very excited about it, and I'm thrilled to be able to join my colleague from Arkansas, Senator Lincoln. I think it bears testimony to how important agriculture is to the State of Arkansas that both of us would desire to serve on this Committee. And I appreciate your leadership.

I also look forward to hearing Dr. Collins and Dr. Flinchbaugh review the recommendations of the Commission. I think the 11 members of the Commission have worked hard and this final report will give us some guidance.

I especially want to recognize Jim DuPree, a member of the Commission from Newport, Arkansas, who is a fixture of Arkansas agriculture and well respected. In his very candid and I think creative way he has expressed some minority views, and I want to thank Jim for his service.

Agriculture is the backbone of Arkansas' economy. As I was listening to other opening statements, in Arkansas, we've seen in the delta a depopulation. We've seen a lowering of income, a lowering of population, and so we've also seen a loss of hope. So I'm excited to be able to be a part of the process by which we write a Farm Bill and look forward to serving on the Committee.

Thank you, Mr. Chairman.

The CHAIRMAN. Thank you very much, Senator Hutchison.

Let me just mention for all members and those who are witnessing the hearing that Keith Collins, the distinguished economist at USDA, has been asked to summarize his remarks in 8 minutes. The Chair will be liberal in case it spills over a bit. That's a rather rigorous situation, but it's an important paper, and we'll take longer if necessary. And likewise, Dr. Flinchbaugh, to summarize in 20 minutes. That is even a more difficult task, given the volume that the Commission has produced.

But at this point, I'd like to recognize Keith Collins, United States Department of Agriculture, for his testimony. We will follow on immediately then with Dr. Flinchbaugh, and then we'll have a round of questioning by all members of the Committee. Dr. Collins, great to have you back.

**STATEMENT OF KEITH COLLINS, CHIEF ECONOMIST, U.S.
DEPARTMENT OF AGRICULTURE**

Mr. COLLINS. Thank you very much, Mr. Chairman, Senator Harkin, members of the Committee.

I'd like to start by saying that under the 1996 Farm Bill, the Department of Agriculture was directed to provide administrative support to the Commission. That job fell to me, so I had an opportunity to meet frequently with the Commission. And I'd like to, on behalf of the Department, compliment them for the intensity and the dedication that they showed during the development of their report.

Regardless of the recommendations and the differing views, I think it's very clear that they all shared a very strong common bond, and that was to want to do the best they could for America's farmers and ranchers.

Mr. Chairman, I thank you for inviting me on behalf of the Department to help set the stage for the Commission's report today, by commenting on some of the recent developments in farm policy, how we got to where we are today, and then describing the general condition of the farm economy. As I look back over farm policy history, I think farm programs grew out of concerns about the ability of a free market to deliver safe food at reasonable prices to consumers, assure farmers fair returns, assure farmers that they would

get treated fairly in international markets, and provide proper management of the Nation's natural resources.

Prior to the 1930s, I think most concerns about the plight of farmers were addressed by trying to make farmers more efficient. This generally meant expanding research, education and extension programs, goals and policies that we still pursue today.

The farm legislation of the 1930s, which was driven by the great depression, and driven by the fact that farm per capita incomes in the 1930s were one-third the level of non-farm per capita incomes, introduced price support loans, production control programs, and even conservation programs to reduce erosion, retire land and support producer incomes.

From the 1930s through the 1960s, programs generally attempted to raise prices and incomes, and that occurred at the same time that we had the miracle of productivity growth in agriculture, the productivity revolution in which yields were exploding. That often led to chronic surpluses and both mandatory and voluntary supply control programs. During the 1970s, farm policy was pretty much benign, as we had strong exports and higher prices. But when we got into the 1980s, high supported prices and growing yields once again led to the largest supply control program in history in the early 1980s.

Well, after 50 years of strong Government intervention in markets, important steps toward a market-oriented economy were taken in the mid 1980s, with the passage of the 1985 Farm Bill. I think that three factors contributed to this rethinking of the role of Government in agriculture markets, and the first of course was the fact that the budget deficit became a national priority, and farm program costs were spiraling out of control, hitting \$26 billion in 1986.

Second, there was recognition that the high price support and production control policy was doing some damage to consumers, doing some damage to our international competitiveness, also affecting the environment and also affecting the freedom of enterprise of individual producers. And third, agriculture was increasingly viewed as a sector where a small share of farms produced much of the output and this very small share of large scale producers had household incomes that on average were above those of non-farm households.

Prior to the 1996 Farm Bill, market-oriented policy reforms included reducing target prices and payment acres, fixing program payment yields, reducing price support loan rates, creating the concept of marketing loans, together these changes decoupled payments from current production. The 1996 Farm Bill went further in separating payments from production and prices, giving farmers almost total planting flexibility and eliminating annual production controls. In addition to that, with the exception of oilseeds, price support loan rates were capped at the 1995 level.

The move to a more market-oriented agriculture that we've seen since 1985 has been slowed somewhat by the sharp drop in prices since 1997, which led to four pieces of legislation that increased farm program costs by about \$25 billion over the last 3 years. The downturn in the farm economy, which was caused by large U.S. and foreign production, the global economic slowdown of the late

1990s and its after-effects, and the high value of the U.S. dollar resulted in some of the lowest farm prices that we've seen in the last 15 to 25 years.

With some of these factors improving as we go into 2001, we are currently forecasting that the value of farm exports will go up about 4 percent to \$53 billion this year, and that the volume will go up about 6 and a half percent. And we can look at several major commodities where we're starting to see some stronger markets, including wheat, corn, cotton, cattle, and a number of horticultural products. But with large U.S. supplies, price recovery is likely to be very slow.

In addition, we're going to see, I think, continued price pressures for soybeans, for milk through much of this year, and I think during the second half of the year for hogs as well.

Record large Government payments have helped avert a national farm financial crisis. We've seen farm debt rising in recent years. But non-performing loans have only risen slightly. And land values keep rising, which are helping to keep the farm debt to asset ratios manageable.

For 1999, the year 2000 and for our current forecast for 2001, if you take U.S. net cash farm income and exclude Government payments, those 3 years are the lowest since 1984. However, when payments are added in, net cash income for 1999 and 2000 about equals the average of recent years.

Looking at this year, for 2001, we of course do not build in any supplemental payments, since there is no legislation. So assuming no supplemental payments, net cash income is projected to decline about 10 percent from \$56.4 billion to under \$51 billion. The major field crops, food grains, feed grains, cotton and soybeans, have had particular market difficulty the last couple of years.

Direct Government payments to producers of those crops on average accounted for three-fourths of net cash income of those crops in 1999, and two-thirds of net cash income in the year 2000. Absent any new legislation, regions and crops that have been dependent on Government payments are likely to see the greatest declines in farm income in 2001.

Income is also going to be squeezed this year by higher prices for farm production inputs. Last year, during 2000, higher fuel prices, higher interest rates, along with higher prices for a number of other inputs, increased farmers' production expenses by \$7.6 billion in that one year. This year, higher fertilizer and other costs are likely to increase total cash expenses another \$1.5 billion on top of last year's level and cause total cash expenses in agriculture to reach a record high \$180 billion.

In the absence of new supplemental assistance, U.S. farm income may drop below recent levels during the next few years, as higher commodity price and cash receipts do not fully offset the drop in Government payments. Beyond the next few years, I think the outlook for the farm economy improves as expanding domestic use and exports, particularly developing countries around the world, strengthen farm prices, and increases in farm income and asset values help to contain farm financial stress.

That completes my statement, Mr. Chairman.

[The prepared statement of Mr. Collins can be found in the appendix on page 71.]

The CHAIRMAN. Thank you very much, Dr. Collins. As indicated before, you will be available for questions of the Senators after we have heard from Dr. Flinchbaugh.

I'd like to ask now Dr. Flinchbaugh to come to the table. Following his testimony, we will welcome all the members of the Commission to the table, all available for questions.

Dr. Flinchbaugh, you have been introduced by the distinguished Senator from Kansas, and I welcome you because you have performed a noble service for agriculture in our country during this Commission's work, but for many years in your work in Kansas and throughout the Nation. It's an honor to have you here today, and will you please proceed.

**STATEMENT OF BARRY L. FLINCHBAUGH, CHAIRMAN,
COMMISSION ON 21ST CENTURY PRODUCTION AGRICULTURE**

Mr. FLINCHBAUGH. Thank you, Mr. Chairman.

Mr. Chairman, Senator Harkin, members of the Committee, we appreciate the invitation to appear before you today to present the report of the Commission on 21st Century Production Agriculture. In my written statement, which is before you, I provide an outline of the findings of the Commission with regard to the role of the Federal Government in support of production agriculture. Today I will cover as much of the statement as time allows.

The Commission relied on input from a diverse set of stakeholders, subject matter experts and background materials and analysis provided by the staff to arrive at the specific findings for policy initiatives or other courses of action. I wish to thank the staff, Dr. Paggy and his assistants, Matt Howe and Tim Peters. And I especially wish to thank the staff of the Office of the Chief Economist and Dr. Collins.

The results of these efforts are contained in the report entitled "Directions for Future Farm Policy: The Role of Government in the Support of Production Agriculture." That report was provided to you in advance of this hearing.

In general, it was agreed that the role of the Federal Government should be limited to activities that involved issues that were unlikely to be solved through private sector initiatives.

The Commission concluded that the proper role of the Federal Government should be to pursue policies and programs that promote the following concepts and/or accomplish the following outcomes: ensure a competitive agricultural economy through monitoring of concentration, enforcement of antitrust laws and related regulatory authority; ensuring transparency of market behavior, including contracting; develop policies and programs that enhance the competitiveness of U.S. agricultural products; reduce trade barriers, open markets, and enhance the ability of producers to maximize value added opportunities; base all policy on sound science and insist that foreign competitors do likewise; promote and enhance food safety and a clean environment; promote and enhance animal and plant health and safety; provide support for agriculture research and education; enhance the development and use of risk management tools; develop and fund programs that meet the spe-

cial needs of small and limited resource farmers; and finally, provide an effective and adequate income safety net for farmers with minimal market distortion.

To guide us in our deliberations, the Commission relied on input provided in a series of six public hearings held throughout the country. At these listening sessions, the Commissioners heard testimony from over 200 witnesses from 30 States. To aid the Commissioners in their understanding of the critical issues, a series of informational meetings was held. Over the course of the Commission's tenure, there were 14 meetings with over 60 expert witnesses providing input on the various aspects of each major issue.

Within the guidelines established and given the limitation of time and resources, issue priorities were set. Priority number one, income safety net. The persistence of very low commodity prices has rendered existing farm program support inadequate to address the level of stress experienced over the last few years. As a result, the Congress has had to rely on emergency measures to provide additional support to the sector. The Commission has established a set of policies it believes will prevent the need for continued reliance on emergency measures, provide the flexibility necessary to address unforeseen changes in future market conditions, while continuing to provide a solid foundation of support for production agriculture.

The Commission recommends a continuation of a fixed AMTA payment in accordance with existing baseline budget allocations, in addition to a counter-cyclical income support program. The Commission specifically recommends a program referred to in our report as supplemental income support or the SIS program. The SIS program, along with the extension of the fixed AMTA payment, would provide a flexible income safety net for agriculture producers in times of depressed farm income.

The Commission also recommends as a part of the income safety net that the loan deficiency payments and marketing loan be retained, however adjusting the marketing loan rates to reflect the balance between the historical market value of individual crops. In addition, the Commission recommends that the limitation on Government payments to producers be removed.

The Food and Agriculture Policy Research Institute, known as FAPRI, provided an assessment of the Commission's SIS counter-cyclical income support program. Their analysis concluded that SIS, using a 5-year moving average program crop gross income, as the income trigger level, would have an estimated counter-cyclical payment of approximately \$2.8 billion in the year 2003.

The payments are estimated to decline due to increased yields and stronger prices to \$558 million by 2005. This counter-cyclical approach would be decoupled from current prices and production and be distributed in a similar manner as the current production flexibility contracts. The decoupled nature of the SIS payments, along with the aggregate eight program crop gross income trigger, yields a program that would likely be categorized as green-box under the aggregate measure of support World Trade Organization.

The SIS program is envisioned to provide counter-cyclical income support for eight major program crops: wheat, corn, sorghum, upland cotton, soybeans, rice, barley and oats. Producers of non-pro-

gram crops would not receive direct benefits from this program. However, non-program crops could be added to the aggregate. Planting flexibility, as it currently exists, would be maintained under this proposal.

Priority item number two, risk management. Producers have an array of tools at their disposal with which to manage risk. The Commission recommends that the possibility of creating an actuarially sound insurance program with coverage provided by private companies be studied. An actuarially sound insurance program is defined as one where the Government does not underwrite a portion of the insurance company's risk, but rather provides farmers with a voucher to offset the cost of insurance premiums.

The Commission also recommends the implementation of a farm account without a time restriction on how long money may be left in the account, thereby allowing the account to serve as both a cash reserve for low income years, as well as an alternative retirement fund for the producer.

Priority item number three. The Commission recommends continuation of the Conservation Reserve Program, and suggests that any possible increase in the acreage of the program be dedicated towards buffer strips, filter strips, wetlands, grass waterways and partial field enrollments. The Commission recommends continuation of the EQIP program at funding levels initially proposed in the 1996 FAIR Act, and for providing adequate support for the NRCS staff to administer the EQIP program.

The Commission recommends that research be conducted that focuses on the following conservation and environmental issues: providing voluntary incentive-based programs to enhance agriculture's positive contribution to air and water quality; a means to provide compensation to producers who establish environmentally beneficial practices, with funding from a separate environmental program; establishing a baseline measure of agriculture's positive contribution to air and water quality; and finally, priority areas including, but not be limited to, carbon sequestration, control of greenhouse gases emissions, manure management and alternative fuels.

Number four, agricultural trade. The Commission endorses the comprehensive U.S. position on trade as it was tabled with the WTO in June of 2000. In addition, the Commission stresses the need for agriculture negotiations to be part of a comprehensive negotiation conducted in a single undertaking approach. The Commission also recommends that Congress grant the President negotiating authority for the new round of trade talks. Last, it is the view of the Commission that negotiations on trade reform within the WTO are not the appropriate forum for negotiation of environmental and labor issues.

Number five, individual commodity policies. Dairy, sugar, peanuts and tobacco are commodities that have evolved into specific and unique agricultural programs over the years. In reviewing each of these commodities' programs in detail, the Commission has identified areas of concern that will have an impact on the economic well-being of the producers of each of these commodities.

In an effort to provide direction for inquiry, the Commission has outlined a set of policy options for each commodity it feels should

be reviewed, and urges those within each industry to work together to develop solutions that will provide for a prosperous future for each of their respective commodities.

Dairy. Decisions regarding the course of future dairy policy must address at least four issues: Federal marketing order reform, extension of dairy compacts, future price support and international market opportunities and challenges.

Peanuts. The Commission recommends that the following options be examined: a phased reduction of the quota system with compensation to existing quota holders, allowing for transfer of quota across State boundaries, subsidies to manufacturers to stimulate purchase of domestically grown peanuts, a marketing loan for peanuts, a direct payment type program for producers of quota peanuts, and greater incentives for increased industry competition to reduce concentration.

Sugar. The Commission believes that there needs to be a serious consideration given to developing an alternative program to the current sugar program. It is the view of the Commission that the following program options individually or in combination be evaluated: a marketing loan for sugar, domestic marketing controls, domestic production controls and some form of direct payment to sugar producers.

And finally, tobacco. The options to the existing program the Commission feels should be examined include the following or some combination thereof: increasing transferability of quota across county lines and/or State lines; a buyout program designed to phase out the quota program; and a marketing loan for tobacco with a view to increased export competitiveness.

Number six, small and limited resource farms. The Commission recognizes the importance and value of the small family farm in production agriculture and in rural communities. The Commission further recognizes the significant impact Government policy has on the economic condition of small family farms. The Commission acknowledges the work of the National Commission on Small Farms. Their work continues in the activities of USDA's Advisory Committee on Small Farms. The Commission believes that this Advisory Committee on Small Farms should be the lead group in this issue area, and that it is the role of the Government to develop and fund programs that meet the special needs of small and limited resource farmers.

Accordingly, the Commission recommends that the work of the Small Farms Advisory Committee be formalized as a part of the United States Department of Agriculture, by Congressional authority, providing appropriate staff and funding.

Commissioners Paige, Brumfield, DuPree, and Swenson wish to endorse the report of the National Commission on Small Farms in its entirety.

That, Mr. Chairman, concludes the majority report. I now will attempt to summarize briefly the minority views.

The first minority view submitted by Commissioner Swenson on the Farm Income Safety Net has been endorsed by Commissioners DuPree and Paige. Commissioner Swenson's recommendations are based on the fundamental belief that the assumptions underlying

the support for the passage of the 1996 FAIR Act have proven not to be valid, nor will they likely have merit in the future.

A fundamental part of Commissioner Swenson's program is the change in the calculations of existing commodity marketing loan rates. Commodity marketing loan rates for each commodity would be established utilizing a uniform methodology, such as some minimum percentage of the 3 year moving average of USDA's full economic cost of production including dairy.

The program proposed by Commissioner Swenson would also include implementation of an inventory management program. The elements of this program would include efforts to expand demand for and the use of agricultural products; incentives for management of existing inventories through farmer-owned reserves program and producer-stored reserves dedicated to renewable energy production and humanitarian food assistance and a voluntary acreage setaside program where participants would benefit from increased marketing loans for the balance of program crops produced.

The voluntary setaside would also provide authority for the reduction of marketing loan rates for non-participants if stocks to use ratios exceed specific levels. The program as envisioned would also include mechanisms to provide for targeting of benefits, such as a limitation on the level of gross benefits from marketing loan receipts.

Last, the program would provide a set of incentives that encourage the application of long term stewardship practices including authority to create and implement a multi-year land and soil rehabilitation program.

A minority view on the income safety net submitted by Commissioner Campbell. In Commissioner Campbell's view, the SIS program offered by the majority of the Commission would prevent adjustment in land prices and land rates attributable in large part to the recent Congressional emergency assistance payments. As a result, in Commissioner Campbell's view, larger producers are able to optimize production at lower variable costs, are at an advantage over smaller operations, and are increasing the rate at which these smaller operations are absorbed by the larger operators.

The policy alternatives proposed by Commissioner Campbell are made in large part with a view to remove Government incentives for farming operations to increase in size. In addition, Commissioner Campbell emphasizes that while the farm economy has changed significantly over time, agricultural programs and policies have not. Commodity marketing loans, income support decoupled from production, and planning flexibility have been policy improvements. The difficulty is finding a non-distortive direct income support mechanism.

It is the view of Commissioner Campbell that three types of programs can be economically and socially justified in the future. Number one, safety net programs for commercial producers to protect against catastrophic markets or weather situations, including market-oriented marketing loans, and a market-oriented risk management program.

Number two, social and/or credit programs that help farmers on the edge transition to larger commercial operations, smaller spe-

cialty operations, or to off-farm employment. And number three, environmental stewardship programs.

A minority view on trade submitted by Commissioner Swenson and endorsed by Commissioner DuPree. Specific recommendations provided by Commissioner Swenson include a call for some mechanism to allow a nation whose agriculture producers suffer injury due to changes in relative currency values to offset those effects through border and export measures as well as domestic programs; elimination of the use of direct and indirect export subsidies; international harmonization of environmental, labor, intellectual property and competition policies and regulations; elimination of non-tariff barriers not based on scientific principles; increased transparency in reporting of support to agriculture prices in industry concentration; international cooperation and economic development and inventory management; and a streamlined and expedited dispute settlement mechanism.

And finally, a minority view on antitrust and industry concentration offered by Commissioner Swenson and endorsed by Commissioner DuPree. While the Commission clearly stated that it is the role of the Federal Government to ensure a competitive agriculture economy, Commissioner Swenson provided additional views on these issues. Commissioner Swenson provided several suggestions to revitalize the U.S. effort to ensure and maintain that the level of market and sector concentration promotes open, competitive efficiency throughout the system, and encourages market and transactual transparency.

The main thrust of these recommendations are to increase the review and enforcement capacity of agencies charged with antitrust responsibilities, provide for an ongoing review process of both past and present mergers, and provide additional authority to ensure that antitrust competitive practices that fall outside current or traditional antitrust regulations of enforcement are continuously reviewed and appropriate avenues for redress provided.

Mr. Chairman, members of the Committee, on behalf of the Commission, I would like to extend to you our appreciation for allowing us to present you with our report. This concludes my testimony, and I would be pleased to respond to any questions. Thank you.

[The prepared statement of Mr. Flinchbaugh can be found in the appendix on page 89.]

The CHAIRMAN. Thank you very much, Dr. Flinchbaugh, for that excellent summary of the majority and the minority views.

I'm going to ask all members of the Commission now to come to the table, and likewise Dr. Collins, and ask staff to make there are chairs available for each member of the Commission, so that we can all be seated.

Gentlemen, thank you all for coming to this hearing, and for the enormous contributions you already made to our understanding. As previously announced, we will have a round of questioning, limited to 5 minutes, and then we'll proceed again if Senators have additional questions. We have a good attendance and that will take us well into the morning and maybe into the early afternoon. But this is a very, very important time of coming to an understanding.

Let me begin by expressing two thoughts. This is not a critique of anything the Commission has said, but simply an observation

from census data that there are now 2,312 counties in our country, out of some 3,000, that 2,300 are non-metropolitan. But of these non-metropolitan counties, only about 30 percent have agricultural activity or income that represents 10 percent of what goes on in those counties, meaning the other 1,700 are non-metropolitan but do not have significant agricultural activity.

As a matter of fact, even the 300 and some which do have from 10 to 20 percent of activity from agriculture, this is the high water mark. I make that point because frequently the comment is made, we don't want to depopulate America, and obviously we don't. Demographic policy is tremendously important. Agriculture might affect 680 some of these counties in a significant way, but that is about it.

So as we try to take a look at a Farm Bill, it seems to me we want to be careful in terms of outlining our demographics and knowing exactly where it is that we might have some effect, which I think we can.

Another comment I would want to make is that the comment is made from time to time about the importance of exporting. And clearly, that is something the Government can help. As a matter of fact, perhaps the major thing that can occur. There simply is a case with 40 percent of our rice, cotton, soybeans, more or less 20 percent of our corn in foreign trade. But the expansion of those markets is virtually impossible on domestic consumption alone.

In the event we are not successful in our foreign policy and our trade, we are going to have a very constrained situation of feeding ourselves, but having a market that is not much larger than that. So this is not a question of exports or something, we really have to succeed in this. And likewise, in all of our efforts in this Committee, we will try to push that to happen.

I want to ask just rhetorically, because there's no way that this can be answered, really, in this hearing, but I've commented before, Senator Grassley used to be a member of our Committee, and we will miss him. He's now moved on to the chairmanship of the Finance Committee. And there may be other members of the Committee who have agricultural land. I'm not aware of that, but if so, they will respond. I have 604 acres in Indiana, which I've been responsible for for 44 years. I mention this anecdotally, because perhaps I'm the only one who has any stake in what you're talking about today. That is, some of my income really depends upon how all this turns out. So I admit a conflict of interest or enthusiasm, as the case may be.

Senator LINCOLN. I'll join the Chairman on that. Absolutely.

The CHAIRMAN. All right. Now, let me just say, in the past, I've mentioned, over the 44 years, we have not lost money in any year. This brings a great deal of criticism for anybody for mentioning it is possible to be profitable in agriculture. But it is.

Having said that, marginally so. I've admitted that my calculations are we've made about 4 percent on invested capital. Now, when I mention that at agricultural meetings, many people say that sounds too high.

Now, taking a look at the chart on page 86 of the Commission's report, that doesn't fit exactly the question of return on equity. But it does say farm profitability measured by return on assets. Which

comes reasonably close, my farm does not have debt, so essentially we're dealing with the value of the land, the barns, improvements and what have you on that.

Now, the idea in this chart is that there's a prediction that we'll have only 2.1 percent return on assets in the coming year, or in 2000, I guess as it's calculated. And that's lower than the average of 3.4 percent from 1990 to 1999.

This raises a question for anybody who is not in agriculture. And that is, if the average return on assets decayed, that includes 1996 in the boom times, 1997 and the downward, is in the nature of 3 or 4 percent, throughout this period of time an investor having an asset, say, of a Government bond could have received 6 percent every year, without benefit of weather, Government programs or anything else involved.

Now, this is a fundamental question this Committee and hopefully some of you on the Commission, from your wisdom, can help us on. Is there anybody in America, during any period this time, making money on agriculture that is commensurate with other activities that people have in our country, such as retail stores, machine tool shops, quite apart from the more exotic dot-coms that have come and gone in the process? The dot-coms come and go. But as many of you pointed out, the number of people involved in farming has continued, has increased.

Now, my earlier comments were to say that much of the increase comes from people who derive really on a net basis almost 100 percent of their income from something else. And in fact, 82 percent of all farms on a net basis apparently have off-farm income, when offset by the losses on the farms in that group, come out to a wash. So we're dealing, even in the category of farms in which I'm involved, the 604 acre variety, this is in that group of 10 percent behind the 8 percent that are really the true commercial farms, described as farms in transition, because the 57 percent of the income on our group comes from off the farm, only 43 percent from on.

Now, we're going to have to come to grips at some point with who is a farmer in America, who is making money, as opposed to having an interesting avocation. Are there prospects, even among those who are trying to make money, to do so, in a significant enough way to have even a lower middle class income in America?

I would finally mention that in the demographics I started with, in these counties that have significant farm income, most of these were found to have per capita incomes higher than the other non-metropolitan counties that don't have farming. These are not the poor counties. The agricultural counties are the better counties in this group, with the exception of some mountainous areas and some very geographically challenged parts of our country that have very severe weather or topographical problems.

In taking a look at agriculture as one whole cloth, one Farm Bill fits all, we are unlikely to come up with a very satisfactory situation. I admit having gone through this process I think five times, we broker all of the attitudes and ideas of America the best we can, by State, by category, by crop and by weather and so forth.

But we're down now to a point, and I think the Commission has highlighted it, at which the American public is asking, and we appreciate agriculture, we are supporting agriculture, as a matter of

fact, we've had a large transfer of payments from those who are not in agriculture to those of us who are. But why? What are the significant things that the Federal Government uniquely can do or should do in this process? And who are farmers and do they make money? I know there are prospects they might make money if the proper programs and encouragements were given.

Dr. Flinchbaugh, do you have any comment, and be brief, because I've taken my 5 minutes and I don't want to impinge upon others.

Mr. FLINCHBAUGH. Well, Mr. Chairman, I would like to comment on your statement that one size fits all. I think that's the peanut. A one size doesn't fit all. And as the Commission deliberated, we clearly understood that. And we have come up with what I would call a four wheeler, or a four legged stool or whatever you want to call it. And that is the income safety net, the counter-cyclical assist program, the marketing loan, crop insurance, revenue insurance and the farm savings account.

And that gets at this problem of one size doesn't fit all, so that with that four wheeler plus conservation programs, you may want to call that the spare tire, we try to get at this differentiation and these unique sets of problems as we move from region to region, etc. So clearly, one size doesn't fit all.

The CHAIRMAN. Well, I appreciate that comment, because I think your report does attempt to differentiate, and obviously, in the best of all worlds, I would want to do some more. We might have a long conversation with all of you in which we would glean more, and hopefully we will do that, that you will be available for our questions and to participate in further conversations as we try to enhance our understanding.

Senator Harkin.

Senator HARKIN. Thank you, Mr. Chairman.

Again, I want to thank all of the Commission members for your years of diligence and hard work and traveling all over and going to meetings and coming up with this report.

I guess I want to start, Mr. Flinchbaugh, by just saying, I like what I hear when you say one size can't fit all, doesn't fit all. But I look at the proposed SIS or whatever you want to call it, is that not what it is? I mean, for example, SIS payments would be made to producers with aggregate program crops, wheat, corn, soybeans, sorghum, rice, upland cotton, oats and barley. Gross income falls below some percentage of the historical income level calculated over fixed base period, whatever you want to figure that out to be.

Well, let's say king corn has a good year. Let's say corn has a darned good year and that income's up. But my rice farmers down there, they don't have such a good year, or the wheat farmers don't have such a good year. But when you aggregate it, one size fits all. What do you square this with?

Mr. FLINCHBAUGH. Well, that's one leg of the stool. And you will note in the report that we clearly state that other crops could be added to the program. And then we go on and talk about a marketing loan, we go on and talk about studying a voucher system for crop insurance, a farm savings account, etc. So that's where we come, where I come to the comment that we've tried to come up

with a package that gets at individual, unique problems, crop to crop, region to region, etc.

The SIS program, just one leg of the stool, could be designed on a regional basis, for example.

Senator HARKIN. That seems to me like the biggest leg, the fattest, strongest leg of that stool right there.

Anybody else have any thoughts on this at all? Mr. DuPree. Mr. Swenson. Mr. DuPree.

Mr. DUPREE. Yes, sir. Looking at SIS and SID both, two different kind of programs, when those were applied against the farmer profiles at Texas A&M, where they actually have histories of farmers out there and know something about their economic—they're not projected numbers or anything like that, these are actual farmers in the United States of all sizes. This left holes in the safety net for those fellows that was almost a little better than no program at all.

This harks back to something, Mr. Chairman, that I kind of want to make a statement about. The mistake I think sometimes made of using aggregated numbers to draw too many conclusions about agriculture. I asked a farm economist that I know and like a great deal about the use of that, and he warned about it. He said usually they're not accurate enough to be useful, very useful, in policy work. And you're going to have to get more specific. There's just too much diversity in agriculture, the way it's done in the United States. And for that reason, try to draw too much from any of those numbers, you have to be very cautious that you don't leave someone out of the situation or the program doesn't aptly fit.

Senator HARKIN. Mr. Swenson.

Mr. SWENSON. Thank you, Senator Harkin.

Mr. Chairman, I did not sign the majority report, and the point you raised is one of the reasons. It's that when you lump it into an aggregate, and if you're tying it to where the market revenue has been, you're on a slippery slope down. And the pressure would be for you as members of the Ag Committee to come in with additional supplemental income as SIS payments went down, just as we have seen under the current farm program.

That is why in the nature of how I addressed and was supported by Mr. DuPree and Mr. Paige in the minority report, we chose a different avenue of which to provide the counter-cyclical support. And if you take a look at the minority report, what we did is try to address what are the issues that are impacting producers that are beyond their control. And you have heard already this morning talking about what happens to interest rates, what happens to energy prices, and that's why we felt it was important to take a look at tying the support mechanism, or the counter-cyclical support mechanism, to that of a cost of production factor, some percentage. And then you treat all farmers on an equalized basis, and you leave planning and flexibility in place.

So that to me then directs the payments to those farmers, what they're producing today, what kind of yields they're getting today, what kind of yields they may get tomorrow. If you look at the minority report, we also included some other elements, which interestingly enough, was raised by Committee members in their comments earlier.

One of the unique things I hope you would look at is the limited Farm Loan Reserve that we call for. What that does is allow farmers who really right now are left bare in the first 25 or 35 percent loss they must suffer before crop insurance kicks in, Congress does a great job of protecting the interests of the bank and the interests of the insurance companies and agents that are selling crop insurance. But they do very little to help subsidize that first 25 to 35 percent loss that the farmer must endure.

One of the concepts we're laying before you in the Farm Loan Reserve is that if farmers voluntarily participate in that, they could draw out of that if they suffer a crop loss in that next year. So it's a way for them to voluntarily participate in a limited reserve of which then to protect their interests in the future. It's that idea we'd like to see you sort of delve into.

The other is an energy thing, to be able to have an energy reserve. We have an oil reserve. We think that we also, in the support of developing alternative sources, especially as we take a look at the sugar problem we've had, take a look at what we can do with corn and many other commodities.

But we throw those out because of some of the concerns we had in the majority report. Thank you.

Senator HARKIN. I see my time has run out. But on my next round, I want to get into that, also, that aspect of why the Commission didn't look at the other uses of agriculture in terms of energy production in this country. Thank you.

The CHAIRMAN. Senator Cochran.

Senator COCHRAN. Mr. Chairman, thank you very much. I'm glad to be here today to welcome the Commission and to thank all of you for your hard work in compiling a report that can be very helpful, I think, to the Committee as we proceed to consider the options for supporting the efforts of those involved in production agriculture and helping make sure that we continue to have as vibrant and healthy as possible agricultural economy.

I particularly want to thank my friend, Bruce Brumfield, for serving on this Commission. He's a blue ribbon member of a blue ribbon commission and a leader in our State for a long time in agriculture organizations such as the National Cotton Council and the Delta Council and many others. We've come to look to him for dependable advice and counsel over the years, so I'm glad he had a part in developing this report.

There are a couple of observations I guess I would make, and one is that there seems to be an underlying fundamental conclusion in this report, and that is that there should be a market orientation to farm policy and to legislation that endeavors to support production agriculture. Is that a correct conclusion? Should I ask Dr. Flinchbaugh or Bruce if that's a correct conclusion?

Mr. FLINCHBAUGH. The majority report clearly comes to that conclusion. And as you read, the minority reports, of which there are several, there's various degrees. But yes, overall clearly, market orientation, when we came up with the role for Government, the report says clearly, we're looking at activities that cannot be solely done in the private sector.

Senator COCHRAN. One other aspect of your report deals with conservation programs. You seem to support without question the

Conservation Reserve Program, the EQIP program, you call upon the Congress to expand those programs, as I understand it. You don't mention specifically some of the other conservation programs. Do you mean by leaving them out that you don't think they should be continued? Such as the Wetlands Reserve Program, Wildlife Habitat Incentives Program, and others, that are designed to encourage land owners to use their lands and set aside those lands, in effect, under a lease arrangement in some cases, so that it's not added to the problem of over-production.

Mr. FLINCHBAUGH. Do not draw the conclusion that because something is not in here that we didn't look at it favorably. We had to set priorities. We could have worked 5 years and produced 1,000 pages and we would have scratched the surface. Senator Harkin mentioned rural hospitals. They are not mentioned in here. Obviously they are important, especially as this Commission gets grayer hair, you understand. [Laughter.]

Obviously, there's nobody that doesn't support a strong system of rural hospitals. But the charge to this Commission was very specific: the role of Government in production agriculture. Given our limited resources, given the complexity of the multitude of issues, we had to set some priorities, which we did. But do not draw the conclusion that you don't read something in here that you think should be in here, we're not interested, we don't care. That's certainly not the case.

Senator COCHRAN. We have been confronted in the last couple of years with requests from the agriculture community for emergency assistance in a wide variety of descriptive titles, counter-cyclical aid, emergency assistance, disaster assistance, restructuring crop insurance program so it's more responsive to the real needs out there, and the problems of getting value for the investment you make in that program.

What, in the opinion of the Commission, if you touched on this, is your view about the future of emergency assistance? Should we limit ourselves to any particular kind of emergency assistance, or should we continue to try to assess it on an ad hoc, case by case assessment of the needs and try to respond when the Congress feels that response is necessary, on an annual basis?

Mr. FLINCHBAUGH. At the beginning of the section on the income safety net, we clearly state that it was our goal to develop a mechanism that was flexible enough to take care of emergency situations so that we didn't have to come back in on an ad hoc basis. So specifically, we attempted to produce a mechanism that would relieve you from doing that, that would formalize it, that would provide a safety net under farm income. And we further state that we attempted to do that with minimal market distortion.

So you've really hit on the key point, in the majority report, at least.

Senator COCHRAN. Thank you very much. That's very helpful.

The CHAIRMAN. Thank you very much, Senator Cochran.

Other members of the Committee have introduced members of the Commission from their States. I've been neglectful in failing to mention one of the best farmers in Indiana, Don Villwock, who has been a distinguished member of the Commission, but beyond that,

a personal friend of mine and an advisor on agriculture in Indiana for the last 24 years.

So I appreciate, Don, your service, and it's great to have you here today.

I'd like to call now on Senator Lincoln.

**STATEMENT OF HON. BLANCHE L. LINCOLN, A U.S. SENATOR
FROM ARKANSAS**

Senator LINCOLN. Thank you, Mr. Chairman.

I first would like to welcome my friend and colleague from Arkansas, Senator Hutchinson, to the Committee. I'd certainly like to echo his comments that agriculture is so important to Arkansas that it takes two of us on the Committee. I'm looking forward to working with him and with you, Mr. Chairman. To all the other members, certainly Senator Thomas and Senator Allard and Senator Crapo as well, we welcome them to the Committee.

I want to thank you, Mr. Chairman, for bringing up the issue you did. As a matter of fact, we have a family farm as well. I have visited with both my siblings and my cousins over the holidays, and they pointed out that they could be making a great deal more money in other industries, which caused me a great deal of concern, because I enjoy the family farm, and I don't want to lose it.

I want to thank the Commission for all of their hard work. Dr. Flinchbaugh and Dr. Collins, in particular, thank you for all of your leadership and hard work.

I'd also like to say a very special and personal thanks to Jim DuPree, who has been involved in farming for a long time, and he's also participated in ag policy debates for many, many years. I depend on Jim for a lot of insight into what's going on, and I really appreciate his expertise. The farmers of Arkansas are fortunate to have his voice and his experience present on this Commission and I thank him for all of his work.

I'm also delighted that we're finally here having this discussion. I've served on the House Ag Committee and now the Senate Ag Committee, and I'm delighted that we are bringing forth some of the concerns and the problems that we have seen over the past 5 or 6 years, and that we're really beginning to look and visit with individual farmers about how we can address those concerns. My phone lines in my office have been lit up with calls not only from farmers, but also from our bankers at home, who are trying to cash flow loans for the upcoming growing season, our car dealers, our grocery store operators, our furniture store owners, and everybody else out there in this rural economy whose businesses are based on agriculture. They are a part of that economy in their own businesses.

So I think this is an important issue that we have to deal with. Without a doubt, farmers do need to know ahead of time what they can expect from their Federal Government, and we need a sound policy in place. And now is the time. Time is a critical issue here, and unfortunately, agriculture, for too long, has not been the glamorous or glitzy issue here in Washington that it perhaps should be.

I think the energy crisis, fertilizer crisis, and everything else that's going to come knocking at our door in the next 18 months definitely warrants the movement on this by the Committee.

Just a couple of questions if I may. In reviewing your report, I see that the Commission does recommend removing limitations on all Government payments to the producers. The payment limitations are certainly an area that can be a politically sensitive one, as we've found on this Committee and on the Floor. And I'd certainly like just to ask you all to expound on the need for raising or eliminating those payment limitations, if you would.

Mr. FLINCHBAUGH. Well, we certainly concur with your comment about the political sensitivity.

Senator LINCOLN. Yes, sir.

Mr. FLINCHBAUGH. We attempted to look at it from a practical standpoint, and if you look at the record, at least historically they haven't been effective. They penalize efficiency. They assume that there's a very strong correlation between size and profitability.

There are efficient family operations that would get eliminated from the program if we had an effective payment limitation, especially the last 3 years. I'm most familiar, of course, with the State of Kansas. But I can show you wheat farms in western Kansas with a \$30,000 or \$40,000 payment limitation the last 2 years, and they're total family operations, right out of Americana, that would not have survived.

And you all recognize that, because you repeatedly increased those payment limitations.

We can wire around them pretty effectively. They provide all necessary paperwork, etc., etc. But as a Commission, we can say all that, because we're not subject near to the degree that you are of the political sensitivity of eliminating them.

Senator LINCOLN. We appreciate your backup. [Laughter.]

Quickly—yes?

Mr. VILLWOCK. Senator, let me comment to that, too. In my previous life, I was also our State ASCS director, now would be FSA director. We spent a tremendous amount of time in oversight and payment limit work. And I guess all the dealings that I had in my tenure there, we spent more in administrative costs dealing with payment limits and what we saved the Government.

I know it is a political issue for you, and it is a sensitive issue. I'm a 2,000 acre farmer that just lost some land to a 7,000 acre farmer, so I'm starting to question this payment limit thing myself, whether or not maybe that 7,000 acre farmer shouldn't do that. But I consider myself a family farmer.

But to look at the cloud from an administrative side is, payment limits, our farmers are very intuitive and very creative in the way they find their way around that. And even though the political favoritism that payment limits might receive, there is no way that I think we will ever create, or at least to date, we have found any way to make payment limits an effective mechanism to target revenue.

Senator LINCOLN. Thank you.

Mr. PAIGE. I'd like to make a comment on it. I'm more concerned with the fairness of payments, you know, in the FAIR Act, limited resource funds, minority funds, especially African-American small farmers, did not receive a proportionate share of these payments to them. In fact, most of them were too small or did not have payment histories and other things.

So the question is, how do we make limited resources fair and put it on a level playing field. And I think we have to look at those kinds of things.

Senator LINCOLN. Thank you, Mr. Paige.

Mr. SWENSON. If I may, just quickly, because not all Commission members necessarily agree that we need to eliminate total payment limitations from this standpoint. It's sad that we get in a debate over payment limitations. All it is is an indication that farmers are relying more and more on direct Government assistance in order to survive. What we've really lost sight of is the purpose of the farm program intended to which to elevate greater returns for the commodities in the market, or is it designed to which to totally depend upon Government in order to survive.

If the intent of the farm program is only to hand out money, then unlimited payments will only drive greater concentration in the structure of agriculture. And that's what my concern is. And I don't advocate necessarily going back to the old concept of payment limitations, but I do charge this Committee with having to deal with the issue of payment limitations. Unless you've got unlimited funds with which to work with, then it's a different issue. But if you've got \$25 billion a year to work with, then you don't need payment limitations.

Senator LINCOLN. But if we craft a program that's going to be one that fits everyone, I don't think that we'll have as much of a problem with that, or certainly an abuse of a program without limits.

Mr. Chairman, can I ask one quick question, please? I think it will just be a yes or no answer. I just would like to ask, would the AMTA program that you described continue to be based on the 1990 basis, or would they need to be updated? Did you indicate in there?

Mr. FLINCHBAUGH. We didn't indicate either way, except that when the analysis was done, the answer to your question would be yes.

Senator LINCOLN. Yes to update them?

Mr. FLINCHBAUGH. No, yes to keep the current base.

Senator LINCOLN. Oh, to keep the 90.

Mr. FLINCHBAUGH. But we didn't make a recommendation on that. But the tables in the back that make the analysis assumed that.

Senator LINCOLN. Okay, thank you, sir. Thank you, Mr. Chairman.

The CHAIRMAN. Thank you, Senator Lincoln.

Senator Roberts.

Senator ROBERTS. Mr. Chairman, I have some questions of Dr. Collins and Dr. Flinchbaugh and Mr. Swenson. But I think before we head out on the trail to corral the next Farm Bill, it's good always to take a look at where you've been and avoid any box canyons. Or put another way, there's a lot of cactus in the world, I don't think we have to sit on every one of them. [Laughter.]

And I'm a little concerned about what I've heard for the past 3 years. On occasion I have taken the Floor of the Senate, very few times, to say, well, now, wait a minute, that isn't exactly my recollection of what happened and why in regards to the Freedom to

Farm Bill. And since I'm described in the press and others as the godfather of that critter, when we let him out of the chute, I'd like to say that the goal of the Freedom to Farm bill was not to march our farmers off any kind of a free market cliff, more especially when we all know that a total free market doesn't exist without any appropriate support. That's not the case.

Maybe somebody in the House of Representatives at that time, who I affectionately now call the Khmer Rouge, thought that that was the case, but it wasn't. It was to do our part to try to achieve a balanced budget and reduce interest rates, which we did, more than any other entity of Government, with the help of the distinguished Chairman. I think it was \$8 billion in savings in regards to farm programs over the life of the bill, and also a tremendous savings with regard to food stamp reform. We kept food stamps, but we reformed them.

The biggest thing we wanted to do was restore the decision making back to the individual producer. I can remember these days, everybody sitting here talking about a more consistent farm program. You remember those days, when you couldn't figure out what the setaside was until June, July, August, September? Stood outside the ASCS filling out the paperwork and the Congress was changing loan rates and changing the target price deficiency payment year after year after year?

I mean, this isn't exactly, or that bill wasn't exactly a paragon of consistency. We wanted to provide an adequate safety net, but we wanted it to be consistent. And we made a contract with farmers and said over a period of years that they could have a guaranteed AMTA payment. That was the transition payment.

All the talk about the lack of a safety net, I don't hear many people talking about the AMTA payment. Doesn't exist in regards to those kind of arguments and that kind of rhetoric. We have an LDP program, never thought we'd have to use it. Had hoped during those years that obviously we wouldn't into a world of market depression that we've experienced.

But it does exist and it is counter-cyclical and it's \$8 billion worth, for goodness sake. Then we added on an additional AMTA payment because of the lost income that we've all experienced. And I think that's appropriate in regards to the real causes of what the farmer is facing. We wanted to make it WTO friendly, didn't want to have it to be market distorting, because we had hoped all the countries in the world would meet under the WTO umbrella, barn, whatever, and achieve some progress. Boy, that didn't work out very well.

And so under the banner of consistency and the WTO and the safety net and the decision making which is the biggest thing, you restore that back to the farmer and not have the command and control decisions being made in Washington, that was the goal. It was not, I repeat, to go into the ocean of the free market that may not exist.

I don't think it's been a disaster. I think farmers have appreciated the flexibility. I think if there has been a disaster, I'll tell you where that responsibility lies, and that's the component parts that we said had to be part of any farm program. Some of you represent some of the farm organizations, and some of the commodity

groups. And every meeting that you have in every county and every State in this country, they said, here's the laundry list of things that we think we ought to be doing. You know what they are, they're tax relief, State tax reform, greater deduction on your health care, regulatory reform.

Not to mention the farmer savings account. If we had passed that like we tried to do for the last 4 years, the situation would be better than it is today. No, it wouldn't have answered the whole thing. And that's an editorial we in terms of our responsibility. Both Republicans and Democrats and yes, the President, and yes, the distinguished chairman of the Finance Committee and Ways and Means Committee, bless their hearts. And they're gone now, so maybe we can get a little bit of progress.

Export policy. I know we hear a lot about exports and we can't rely on it too much. We wanted a consistent and aggressive export policy. We wanted sanctions reform, the Chairman's worked for that as long as he's been in the Congress. We wanted fast track legislation, we wanted success with the WTO. Zero for three.

Regulatory reform. All of you want the regulatory reform. And now we need a comprehensive energy policy, which we tended to ignore for the past 8 years. If we put those component parts together, I would wage to you that the situation would be serious because of the world depression in market prices, but not as serious as before.

Why are prices low? Well, you know, you check Canada, same thing. You check Australia, same thing. You check Brazil, same thing. And all throughout the European Union. Argentina. As the distinguished Dr. Collins has pointed out, this is a worldwide depression. Guess what? None of those countries ever passed Freedom to Farm.

I don't think that Freedom to Farm added to the problems in terms of the price depression in the EU. Everybody talks about, well, maybe we had the over-production. Keith, you've mentioned, we've had large production in the United States. Well, I checked back, let's see. In the height of the land retirement days and the days of PIC in the 1980s, when John Campbell was aboard down there at the Department, we had one-fourth of our production set aside and we had a PIC program. And we rolled out the money from the CCC, doors were wide open, \$26 billion.

And we had 325 million acres in production at that time, with one-fourth of our production simply taken out. Do you know how much we have today? We have 328. Three million acres more. Only 3 million. That's a drop in the bucket.

Now, what happened? Well, the farmer increased his productivity. Are we saying we're going to have a Farm Bill to deny the farmer the productivity advances? Now, come on. Farmers made the decision in regards to land retirement. You don't have to plant anything under this bill. You can get a payment and have zero in regards to crop production. They made the decision.

And in Kansas, 25 percent of the acres that were planted to wheat are no longer planted to wheat. We have 40,000 acres of cotton. That Cochran doesn't realize it, but when Stephen Foster wrote the song, Those Old Cotton Acres Back Home, hey, that was Kansas. [Laughter.]

And so they enjoy the flexibility, and it is their decision, not somebody waiting in Washington to figure out where all of this is going to be in terms of budget exposure and then finally telling the farmer in regards to September.

Safety net. Oh, there's not enough safety net. Have to have a counter-cyclical safety net. LDP, \$8 billion, AMTA, and an additional AMTA payment, all under the architecture, under Freedom to Farm, has put the wheat guarantee around 4 bucks. There's never been a farm program that guaranteed the wheat farmer \$4 before, and I will wager never again.

All under the architecture of this bill that has been so pilloried.

John, am I right when I'm saying \$2.7 billion more each year under this bill than under the old farm program? Is that right, is that what you told me?

Mr. CAMPBELL. No, sir, it's actually \$3.6 billion. That farm income average above the last Farm Bill.

Senator ROBERTS. Well, on one hand, the critics say that's not enough. And on the other hand, they say it's too much, has to come from the marketplace. But when they say it's too much, all the critics of the farm programs, they do not take into consideration what's happened to us in terms of the real causes out there, the value of the dollar, the lack of an export policy, world depression in our markets. It seems to me that there are some things that we ought to consider.

I remember, there seems to be a situation here where in the old Farm Bills, we never got into the situation of changing anything. And oh, all these disaster payments that we've had to make. Well, let me see. There was the Disaster Bill of 1988, the Disaster Bill of 1989, the Disaster Bill of 1991, the Disaster Bill of 1992, the Disaster Bill of 1993, thank God for Thad Cochran, and the Disaster Bill of 1994 and the Disaster Bill of 1994, and on and on.

I remember during the ag crisis of the late 1970s, where we moved the target price from 242 to 290, we thought it was the biggest deal in the world. And Republicans actually proposed that, and Tom Foley, the former chairman of the House Ag Committee, found it on the Floor and said, guess what I found, and we passed it. In the 1980s, we had the PIC program, and as I said, we opened up the doors.

So when we get in trouble in farm country because of the high volatility and in regards to the roller coaster, hey, we respond. And we've had to respond. But at least we've responded under architecture where the farmer got a payment, money. And I know people say, oh, my gosh, we don't want to give them money, that's terrible, a cash payment. I've got news for you. It's way ahead of whatever's in second place or standing in line waiting for paperwork and loan rates and whatever else that you could come in.

Mr. Chairman, I'm going on a little bit long here, but I'm going to keep going. [Laughter.]

It's not so much as to whether or not the payment, and I will finish this and I'll come back with my questions in just a minute, there will have to be a payment because of the volatility. But what kind? Do we do loan rates and setasides? I don't know how we can do setasides when we only have 16 percent of the world grain market. That's 84 percent of the grain market by the other fellow. We

only have 16 percent, we're going to cut back on our production and that's going to answer the thing with the world market as opposed to other people coming in and taking our markets, more than we set aside?

So I would just say that with a little bit of blood pressure and hearing all of the comments by my colleagues, I'll make a prediction to you. I think with the members who come from the States who have been most critical of this bill, they have received more income assistance under this bill than any other bill we've ever had and ever will have again.

Is it perfect? No. Is it set in stone? No. Can we do better? You bet. But nothing hurts the truth like stretching it. And there's been a lot of stretching in regards to this Farm Bill debate. I thank you, Mr. Chairman.

The CHAIRMAN. Thank you very much, Senator Roberts.
Senator Stabenow.

**STATEMENT OF HON. DEBORAH ANN STABENOW, A U.S.
SENATOR FROM MICHIGAN**

Senator STABENOW. Well, thank you, Mr. Chairman. I appreciate very much being a part of this Committee, and I appreciate the work of the Commission and the hours that you have put in. I certainly hesitate to follow my colleague, who is knowledgeable and certainly passionate on the issue of Freedom to Farm, and look forward to debating and discussing the impacts around the country, and certainly in Michigan, where I represent what is one of the top two industries for Michigan. People think of Michigan, they think of cars. But agriculture is critical to us, as you know. We are second only to California in terms of the variety of crops.

So everything you're talking about except for rice, peanuts, tobacco and some citrus, everything else really is Michigan. And we're very concerned about what's happening.

The bottom line for me in looking at Freedom to Farm is that in the time that I've been in the Congress, 2 terms in the House, after passing Freedom to Farm, I saw us passing supplemental emergency funding bill every year, I believe. And so there really is a question, I think, about what's happening in terms of the inadequate support for our farmers. And we've seen, as you've mentioned, that while the incomes are going up for farmers, it only counts if you include the emergency funding coming from Congress. If you extract that, in fact, we are seeing incomes going down.

And I am very concerned about the swings in the market and the low commodity prices and frankly, the incredible pressures on family farmers in Michigan and around the country, and I think that we all have a stake in helping them to be able to survive and thrive.

I'm very concerned that Michigan's share of total acreage of farm land since 1995 has declined 300 percent. I'm very, very concerned about what's happening. I realize there are many complicated reasons for that. But we have a lot of challenges in front of us in addressing your recommendations and the realities of Freedom to Farm and its real impact on the agricultural community.

I wanted to ask one question as it relates to specialty crops. I notice that those are not listed as part of the SIS program that you

propose. And as a House member, I was very involved in efforts to expand our crop insurance efforts, to begin to move in that direction. Because they also were not included in crop insurance.

And as someone who represents many specialty crops, I'm concerned about whether or not you see the SIS program covering specialty crops and what kind of a timetable you would see in that happening, so that we might broaden, if in fact we were to take your recommendations on this program, would we in fact under your recommendations be broadening that to crop insurance.

I welcome anyone's response.

Mr. FLINCHBAUGH. Well, Senator, that's up to you, frankly. That's up to the Congress.

Senator STABENOW. I'm asking what you recommend. Do you envision that, as you made your recommendations?

Mr. FLINCHBAUGH. No. We took the eight program crops that are now included, and we developed the program around those crops. But we have a statement in the report that if the Congress so wishes, they can add additional crops. Theoretically, you could add livestock. But we did not make a recommendation. We just simply analyzed the eight program crops to show an example of how this would work.

Mr. PAIGE. Most of the farmers that I work with grow a lot of specialty crops, fruits and vegetables and small livestock and so forth. This is something we've advocated for a long time, to get it in there. And I think, given the language that's in the report, I think you should look at that as you deliberate the Farm Bill. It would help them.

Also on crop insurance and so forth, this is one thing we've recommended and tried to get to happen from the last Farm Bill, to get it expanded to cover specialty crops. A lot of the farmers who did not receive payments under the Freedom to Farm, they were in fact in that. A lot of people who suffered from drought after drought or specialty crops, and there's no relief for them. And I think it should certainly be considered as you deliberate. And that's an option of yours, but I would say, you need to do that.

Mr. VILLWOCK. Senator, I take a little different view, and I appreciate the reforms we made in crop insurance to include some of those crops. We have heard some discussion on livestock and some discussion of specialty crop inclusion in the farm programs. But I want to make the point that 60 percent of net farm income that we look at today is not farm program affected in any way.

Until recent times, until the collapse of the world economy in certain big areas, most of these areas have been pretty profitable, and in fact, more profitable than program crop areas. And I question, and we have had testimony at our field hearing from specialty crop producers, saying, don't include me into this mish-mash of farm programs and dictation from Washington on how to run our programs.

The point that I think that hits home with me that I try to remember is, the more risk, the more profit. And if we take all the risk out of some of these crops, everyone tends to want to get in them, and we take away their profitability. There is no such thing as a big niche market.

I have a neighbor who is a tomato producer. It is a very expensive crop to be in. His production costs are three to four times per acre more than mine. But they're also very profitable in good years, when times are good.

My banker, when I go say, well, maybe old farmer Don ought to get to raising tomatoes, and he says, well, what's your guarantees, and what's the farm program payments, or what's your risk, and I say, it's a \$1,000 an acre risk, plus or minus. And he'll say, well, you'd better stay to those program crops.

If I would start raising tomatoes because the guarantee is there, and my next door neighbor starts raising tomatoes, guess what? There's no money left in raising tomatoes.

So specialty crop producers, the one that testified to us, and the practicality of the economics say, do we really want to get in this Pandora's box. And I think most of them want to stay away from it. And I challenge you to visit with your producers and make sure that's their consensus as well.

Mr. NORTHEY. Certainly one of the values, Senator, of the farm savings accounts, is to be able to include those that are not just in program crops now. So as we heard testimony and comments, there were those that expressed some desire to be able to get through those years that were very profitable, save some of that money for those years they knew were coming, rather than be subject to any kind of limitations, any kind of other rules and regulations that go along with the commodity programs, to be able to do it on their own through a farm savings account.

Mr. SWENSON. If I could, Senator, make a couple quick comments. Separating out the specialty crops, just in the issue of risk management, I do think it's a challenge that faces this Committee of how to develop an insurance program that may cover production loss. Either that, or as Senator Roberts has pointed out, it will be the responsibility of this Committee to deal with an ad hoc economic or disaster program every year. Every year. Not just once in a while.

Because as you take a look, just in the last number of years, you've had potato disaster, both economic as well as production loss. You have had economic situations face wool producers that has come before this Committee, and economic assistance provided. You name the commodity, it's come before this Committee either on an economic front and/or disaster front.

So if we're going to deal with it only in the risk management area, that I want to talk about, is developing an insurance program that might fit that commodity. And that will be challenge, and be an interesting debate. Because being outside of the farm program area, which is a separate issue and a debate in itself, the other crops had an historic production history of which to sort of use to develop the insurance program around, and you had a lot of other information of which doesn't necessarily exist in the public arena on the specialty crops. I think it exists more in the private sector through their marketing structures. Not that information cannot be obtained, but it doesn't exist currently in the public sector.

Senator STABENOW. Thank you, Mr. Chairman.

I look forward to working on these issues as we sort through the Freedom to Farm bill and where we go from here.

The CHAIRMAN. Thank you very much.
 Senator Thomas.

Senator THOMAS. Several of you have mentioned, and certainly there are some questions there about fairness in trade, foreign trade. Tell me where you think that unfairness occurs and what do you suggest we do about it?

Mr. FLINCHBAUGH. The Commission basically endorsed the protocol that was submitted to the WTO in June of 2000. And it had a list of areas to address the fairness situation. And basically, that is a more market-oriented approach, reduction in tariffs, reduction in tariff trade barriers, reduction in export subsidies, etc., etc., to more level the playing field, move to a more open trade situation.

Fairness is in the eyes of the beholder. It's a very difficult concept. If you read the section in the report that looks at the role for Government, we clearly state up front that it is the role of Government to ensure a competitive environment for agriculture, not only domestically, but internationally. So that gets at the fairness concept. But to specifically define what it ought to be is certainly beyond the scope of this Commission.

So it's a matter of degree in moving that direction—

Senator THOMAS. Well, I don't know that it's beyond the scope of it. Several of you have indicated, you mentioned a world economic disaster. Is that what we've had?

Mr. VILLWOCK. I don't think we've had a world, maybe that was too strong, but surely our largest customers of agriculture have been in an economic decline, in especially the Asian community.

Senator THOMAS. But it's hardly a world, what you mentioned a moment ago.

So what do these payments have to do with having a fairness in trade?

Mr. FLINCHBAUGH. Are you referring to the SIS program?

Senator THOMAS. Any program where the Government assists agriculture, and then we go into the market and want fairness in trade.

Mr. FLINCHBAUGH. Well, there is a protocol that the WTO has, basically operates under. And we attempted, as we developed our report, as we developed the SIS program, to stay within those rules. That's why we came forth with an aggregate base that throws those eight crops all in the same pool. So that we think we'd have at least a fighting chance to get it in the green-box. That was the thinking behind that, to not only provide the income safety net for farmers, but also meet the rules and regulations of WTO.

And after all, we said it was the function of the Federal Government to ensure a competitive environment not only for us but around the world.

Senator THOMAS. Okay. Good. Yes?

Mr. STALLMAN. Your question brings up a point that sort of ties in comments from many of the Committee members with respect to our SIS proposals. Specifically, you're asking what we should do, and the chairman has outlined one of those factors. The other thing is, the reason we had the SIS as the primary leg of the stool in the form that we did, it is decoupled, and as a rice producer, I understand the potential dynamics that could occur if different crop prices were different relative to each other.

It's been an easy decision for the past 3 years, with all crop prices being down, for Congress to allocate more money to solve a problem. Now, I question what would have happened had corn been up and rice been down, or rice been up and corn was down, what the Congress would have had to deal with then. And it would have been a lot more difficult.

The SIS program institutionalizes sort of the concept that when net farm income is reduced overall, in the aggregate, then some assistance can be provided. It addresses the uncertainty issue that Senator Cochran raised with respect to, what is our program and what can producers depend on.

But one of the most important things we can do for trade, given the fact that we're trying to start another round of multilateral negotiations, is to use every dollar, if you will, up to the limits. We need to observe our WTO commitments. But we don't want to exceed our caps under the amber-box, because that has some consequences which I don't think agriculture wants to deal with.

Senator THOMAS. Yes, that's good.

Mr. STALLMAN. So sort of tying it all in, that's why we structured the SIS program the way we did, because if it's coupled, we would probably exceed those. But on the other hand, we need to keep the pressure on our international trading competitors out there to get them to come to the table and deal with a lot of these multilateral trade issues.

Senator THOMAS. Well, it's important, because we obviously produce more than we're going to consume domestically. And that has to be it.

Tell me a little bit about the concentration area. Do you think concentration, say, of packers or any other processors, is it under control? Is there a concentration? And again, what do you propose to do about it, if you say there is?

Mr. FLINCHBAUGH. Senator, when I answered a question earlier, I stated that we had to set priorities. And we didn't rank priorities, we didn't say this is important and this isn't. We simply tried to get our arms around issues that we had the resources and the time to do. Concentration was initially on the list.

The majority finally concluded that we would open the statement on the role of the Federal Government with a very clear statement of what the real role ought to be. We said clearly, it is the role of the Federal Government to ensure a competitive economy. And therefore, the Government should enforce the antitrust laws, should look at those laws, modernize them if necessary. We talked about transparency, monitoring, including contracts.

And we chose to handle that issue with that statement, and we did no go further.

Senator THOMAS. So you just suggested if that's the case, it should be handled, but you didn't suggest that that was necessarily true.

Mr. FLINCHBAUGH. That's right. That's the majority opinion in the report.

Senator THOMAS. Well, it just seems, one of the things that's been so obvious in the years is that the difference between the producers price and the retail price seems to have gone substantially higher. And one wonders why that is.

I think I've used my time, Mr. Chairman.

Mr. PAIGE. If I could make one statement on concentration. As the larger factory farms and large farms get bigger and bigger, smaller farms, especially minority farmers, are being driven out of things that have been cost effective to them, such as hog production and small animals and so forth. I think some attention needs to be paid to that. Because that trend has contributed to the limited number of minority farmers, that is African-American farmers that we have on the land today.

And it's back to your issue on the trade. You know, peanuts, if they are allowed to move in from Mexico without any tariffs or restrictions, and south Georgia specifically, if you take away, if we destroy quota, it's going to drive communities, and it's going to cause loss of jobs and farmers are going to go out of business wholesale. I just wanted to make that comment.

Mr. SWENSON. If I can make a short comment on two points. One on trade. One of the reasons that I submitted a minority report, though it was mentioned in the majority report, I think the biggest challenge facing us in international trade, both in our opportunity to procure markets, but as well as what's impacting our domestic market and prices, is currency values. And I just think that's an issue. I know that many people say we can't address it. I believe it's an issue we have to address.

And Mr. Chairman, I would offer, because I just got this Friday, a copy of a study done by the Department of Agribusiness, Applied Economics, at North Dakota State University, Northern Plains Research Center, that did an in-depth study of the currency value between Canada and the United States, especially since CUSTA was passed. In summary, it just points out one thing real clear, and that is that currency differences have made a huge impact on trade. And I just think it's an issue of which we must spend more time on.

The second element I would mention, that stands out to me, is the dispute resolution process, especially the livestock sector, has been impacted, I think in the price, over the years, volatility in price, over how the issue has been treated on international trade, from the hormone issue to other issues in relevance to livestock. Producers have been impacted, and yet there's no way to compensate them for that volatility in the market that I think comes about because of our inability to get a dispute settled in a timely manner.

And so I want to emphasize that the dispute resolution process I think needs a higher priority in the nature of our trade negotiators.

And the other is the area of transparency. I am really concerned at the lack of transparency in our market, but the public market as well as what's happening in the contract market, and how those prices are not reported into the public sector in a timely manner, both on the domestic side as well as international side. So on trade, I share those points with you.

On the consolidation, I couldn't emphasize more, and that's why I submitted a minority report. But I truly believe, from the retail sector all the way down to the control of genetics, concentration is becoming probably second to price as the issue of concern to farm-

ers. That includes transportation concerns, who's handling trade versus who's handling domestic processing, are they global in concentration, not just domestic in concentration. I think it's the second priority of concern to farmers across this country.

[The information referred to can be found in the appendix on page 130.]

Senator THOMAS. Thank you, Mr. Chairman.

The CHAIRMAN. Thank you very much, Senator Thomas.

Senator Dayton.

STATEMENT OF HON. MARK DAYTON, A U.S. SENATOR FROM MINNESOTA

Senator DAYTON. Thank you, Mr. Chairman. I certainly want to commend all the members of the Commission for taking on a herculean task, and particularly for your forward looking orientation. I think that's, obviously these are complex issues and ones, as you say, that affect different parts of the country differently. So I think what you've undertaken is extraordinary.

I don't want to try to debate the history, because I don't think that's productive, but I also believe that if we don't recognize or aren't willing to acknowledge all the forces that have brought us to this present point in time, that we're not going to make an accurate diagnosis, and therefore, an accurate prescription for what we might try to do. I'm aware that the experience of administrations and committees and bi-partisan efforts throughout the decades should make anybody humble about the task of trying to direct agriculture policy from Washington.

But I'm concerned, the record shows, at least the Commission's majority report, that really the only sentence that I find that directs itself to what has occurred in the last few years in agriculture is one on page six that says, these price levels, the market prices, succumbed to international economic events and began their current slide in 1998.

I don't disagree with that, but I think that's an incomplete analysis, in my view. And I guess I am concerned that since we have been saying to American farmers, at least many have been saying for the last couple decades, that, increased international trade, increased exposure to world markets, is going to be the solution to prosperity, that then we complain when the international market conditions aren't exactly the way we would like them to be to serve our interests. I think it's naive to assume that other countries are going to act accordingly, or that we are going to be able to rely on that segment alone of the agricultural economics to produce our salvation.

And I particularly point out that I don't see anything in the report looking at these levels of U.S. production. Certainly our increased productivity is one of our strengths, but at least in some of the major commodity groups that affect my State of Minnesota, corn, nationally, wheat, soybeans, milk have been record high levels of domestic production in the last year or 2, and not surprising, to the basic law of supply and demand. Therefore, market prices have dropped to very low levels, and as others have noted, therefore, the Federal Government payments have increased in order to avert market disasters.

So we're left in this paradoxical situation where we have market prices at record low levels, and we have taxpayer subsidies at record high levels, which if they were to continue, I suppose, might obviate the problem. But that wasn't the purpose of the program, and shouldn't be.

So I guess I go back to my question, if our goal is to get the Government out of agriculture rather than put it foursquare as the sole basis of financial support for agriculture, how are we going to achieve that by extending the current program, really I'm simplifying your report, essentially as large an extension of the current program, lifting the limit on payments? I don't see how we get anywhere other than continuation of over-production relative to market demand, low prices that are so low that farmers cannot survive except by the Government payments and are going to be increasingly then dependent, and we're going to be increasingly called upon to, as others have noted, avert every disaster.

I mean, where are we going with—and then we're hoping that international conditions improve so that we can get the salvation that we haven't gotten yet. I don't see where we're going with this, and I wonder if you, Mr. Chairman, would like to comment on that, or other members.

Mr. FLINCHBAUGH. Well, clearly speaking, when you talk to farmers, they prefer their income out of the marketplace. But in a dynamic, global, political economy, there are periods when that isn't going to happen. It hasn't in the past, and I don't think it will in the future. It's not a perfect world.

So the Commission then concluded that it was the role of the Federal Government to come in with an income safety net to basically provide a foundation under farm income. Now, the distinct departure from the past is the counter-cyclical income program, as we call the SIS program, provides a mechanism, a formal mechanism, to do just that, where we have relied up until now on a program, and you can go back to 1933, that does not have a mechanism in place, and therefore, the Congress had to come in with emergency payments and so forth.

Now, the program we have proposed, is it foolproof? I doubt it. But at least it provides a mechanism that can react to future problems that aren't anticipated. And that's the distinct change.

Mr. CAMPBELL. Senator, your question was the same question I asked myself, and is the reason I wrote minority comments, where are we going with all this. Because we're changing it at the margin, but essentially, we're continuing it. And there are some glaring omissions, I think, here in the report.

I find myself hearing echoes of Senator Harkin's words back in 1996 when he said, this program's too much. I couldn't believe it at the time. And here we are, where essentially it's proven correct, that the windfall of 1996 and 1997, billions and billions in windfall, have now become the high water mark that you all are expected to defend. That in fact has been inflationary, and that is why the 2,000 acre farmer down on the end of the table is being squeezed out by the 7,000 acre farmer.

These programs are based on bushels, bales and pounds. Whether you call them decoupled or not, they are. And bushels, bales and pounds don't experience financial stress, farmers do. Very, very few

of these payments go to farmers experiencing financial stress. Very few commercial farmers are experiencing financial stress, according to USDA and the Federal Reserve Board.

So what can we do different? We tried supply controls. They didn't work. We tried coupled supports. They didn't work. We tried decoupled supports. Now we have built ourselves a huge beast that needs fed.

We've tried everything, at least in my lifetime experience working with this Committee. And to Senator Harkin's point again, we've got to think outside the box. And there's two areas where we can do that, where we can begin to take some of this money, and instead of putting it into the same old programs, we could put them into different programs for different reasons. One of those is stewardship programs.

For example, USDA estimates that there needs to be 2 million miles of grass waterways and filter strips. That's 7 million acres. We should be paying \$300 an acre to get that done instead of \$150. We need to have a program, a pilot program, to begin the greenhouse gas emission reductions for agriculture, not only carbon, but methane, nitrous oxides and the other greenhouse gases. Tremendous economic benefit there that farmers can receive compensation for that's based on how they farm, not what they farm.

Another area that Senator Lugar and Senator Daschle and Senator Harkin and others, and Senator Nelson, have worked on, is the renewable fuel standard. We can double, with the stroke of a pen, the use of corn, sugar and soybeans for energy. Never before have the needs of our national energy policy coincided with the needs of agricultural policy like they have today.

Senator Lugar's bill would add 15 cents to the average price of corn, and would therefore reduce by \$1.5 billion the cost of farm programs. This Committee could reimburse the Highway Trust Fund \$500 million and still be ahead by \$1 billion.

The same is true in oilseeds. Five hundred million pounds of oil off the market through biodiesel costs \$70 million and saves you hundreds of millions of dollars in oilseed LDP payments. Those are the things that we didn't deal with, and those are the things that I think, if we want to get out of the same old worn-out stuff, we're going to have to come to terms with.

Senator DAYTON. Thank you, Mr. Campbell. Well said. My time is up, Mr. Chairman. I don't know if other members want to respond, of the Commission, want to respond.

Mr. SWENSON. Thank you, Mr. Chairman.

Senator very shortly, I would agree with your comments very much. And it's another reason why we submitted a minority report.

The comments made by Mr. Campbell, I agree with many of them, not all of them. But if you take a look at the section in the minority report on conservation, some of the points that he raised are submitted, the carbon sequestration, supporting additional wetlands areas and those types of efforts. So some of those ideas are expressed. But I think he was right on with many of the points that he made.

Mr. PAIGE. Under the small farm section, we asked for special session on the minority register, on which minority farmers would register voluntarily and get incentives to participate in programs.

What you've just heard from Mr. Campbell and parts of the other minority reports is, these are programs that they could get incentives to.

One reason, on the conservation side, that many small farmers don't participate, is because they're restrictive because of different payment limitations. People don't have the amount for cost reimbursement. Cost share should be raised.

This is the intent of the minority register put in, that people register voluntarily and get incentives to programs to participate in that. And that would increase, that would really help a lot of farmers to stay on and do different things. Otherwise, it's out there and we need to look at these type programs very strongly. Thank you.

Mr. KRUSE. Mr. Chairman, if I could very quickly. Senator Dayton, I'm a fourth generation farmer from Missouri and raise many of the same crops on my farming operation that your farmers do in Minnesota. And I think it's important that we not in any way by anything any of us individually or collectively say, that we leave the impression that this current Farm Bill is all bad. I would go back to what Senator Roberts said a few minutes ago, there are some very good features that I personally like in this Farm Bill. And as I talk to my neighbors, get the same reaction.

Clearly, there are some things, as Senator Roberts said, can we make this Farm Bill better? Absolutely we can. That's part of what we have to do. But I do think, too, sometimes we don't spend enough time talking about, as Senator Roberts, said, there are basically three main categories, that, if we look at a report card, looking back now, whether it's trade policy, whether it's tax policy or whether it's regulatory policy, there are a lot of missing things in there.

We could spend a lot of time just this morning talking about things we haven't done in terms of trade. Because I personally believe that trade is absolutely important. I think we all do. So I think again there are some very good features of this Farm Bill, and I certainly as a farmer don't think it's correct to characterize all the problems we have in agriculture today as just simply a result of this Farm Bill. I disagree with that very strongly.

And I think as we move forward we have to find ways to make it better. But we really need to continue to emphasize trade and tax policy and regulatory policy and all the things associated with those issues.

Mr. DUPREE. Senator, I'm kind of the old man on this Commission, from appearance and also experience. This is my 48th farm crop I'll be making, it's my total income, it's what I do and what my family does, an operation that began in 1832. My farmers know I'm up here, and I get questions from not only them, but bankers and all about what I think the outcome is going to be, because they're all vitally interested.

In Arkansas, this whole thing, agricultural income is 25 percent of the total resource, income resource, of the State. And therefore, although all counties don't have agriculture to the same extent, to the extent that that 25 percent is impacted with low incomes and economic problems, it affects the whole State very dramatically.

And my people tell me you know, if we can do anything in the world, we need some sort of comprehensive, long range food and

agriculture policy that tells us what we can do, not only what is expected of us but what we can expect in return for doing those kinds of things. Some of the burdens that are placed on agriculture, in the absence of some of this, is so overpowering that agriculture, the fragile nature of its business, that's the reason it's having these throes that it's in and the depression that's out there.

I don't have any small farmers left in Arkansas. We got rid of those back in the 1980s. Therefore, everything is large scale commercial agriculture. And yet it's having real difficulty. Forty-nine percent of net farm income last year came as direct result of these payments. And yet when they were analyzed, the return on agriculture in Arkansas is only 1 percent. That's not going to be good enough to satisfy creditors and all. That's going to have a real influence on structure.

What you're doing by these programs, Senators, is you're defining the kind of agriculture this Nation is going to have as we go into future years. Don't mistake you're not. And to the extent this Nation has always, in trying to rationalize these, and I think we should somewhat, the Nation has always had a history of moving into areas where a sector is important, and yet cannot do things for itself collectively. And therefore, the Government plays an influence on that.

That's the reason for Government programs, and has been. And surely, our difficult has been sometimes that they were not adequate to address the real problem, which in my area down there is simply low prices. And there are better ways to get at it than the tools we've been using in the past.

Hence, that's the reason I signed on the minority report using the market loan is that I think it's directly coupled and is responsive to need directly and therefore, who can beat that kind of tool? It has its shortcomings but all the rest of them do as well. But you can do it for a whole lot less than AMS \$19 billion that we're talking about. We think \$12 billion would give you market loans at prices that farmers can get along with, particularly if you couple them to cost of production.

The CHAIRMAN. Well, thank you very much, Senator Dayton, and likewise the responses your questions brought.

Let me start a second round of questions by just observing things that I've heard. I thought a comment that very few payments go to farmers who are in distress is an interesting point. Clearly, distress is a value judgment, likewise, as to how much distress.

I would start by saying, as I did in the beginning, that whether it's the 1 percent farmers are making, as you said, Mr. DuPree, in Arkansas, or 2 percent which annually may come in the prediction of the Commission, or the 3 or 4 percent that I mentioned glibly from my own operation, this is very little money. In other words, what fundamentally we have to come to grips with is why people in America are still farming. Each one of you would be able to give a commencement speech on that subject. [Laughter.]

And you would inspire young farmers to go out and do the job. And I understand that. The question you raised is, why have I been at it for 44 years, if I could have got the money. And there are good, emotional, family, quality of life, all those sorts of reasons. Plus the fact that I had other sources of income, as do almost

everybody in my category of farming. In fact, a majority of the income comes from something else.

So maybe with the 8 percent at the top of this, they receive 72 percent, we're told, of their income from farming. So this is very serious, because there's not everything else.

But I'm trying to come to grips in my own mind's eye with exactly who it is we're trying to help. Now, essentially, everybody, because the return for almost everybody is very low. There's very little we could do in sending money in any of these directions that would not help somebody have a higher return. And my guess is, a good number of people are below zero. So they are very distressed. And in fact, the whole safety net idea of the last Farm Bill, in a way, is to keep everybody in the game. Everybody. We may not have succeeded, because people do become tired of receiving these low returns and what have you. But that's the idea.

Now, you can do it by crop, and Mr. Villwock's comment in response to Senator Stabenow I thought was very interesting, as to why he believes you should not try to get crop insurance or risk management into the specialty crops. But what Mr. Villwock is saying in essence is, leave us alone, because this is some part of agriculture that still could be profitable if not everybody is in it.

But once you begin to have risk insurance, and you stabilize, say, corn, wheat, cotton, rice, then everybody is in it. In fact, we're keeping everybody in it by definition, as we get better at it, in terms of yields per acre, there will be more of it.

Now, one strategy is of course that the world must still have hunger needs, and it does. And maybe we will be successful politically in moving the product and reducing tariff and non-tariff barriers, so people eat better around the world. But it is a fact that many governments, as a matter of policy, would rather starve certain sectors of their population, or are so protective of their farmers that the rest of the population doesn't eat very well.

We hopefully will finally come to a more humane set of governments with whom we're dealing, and maybe that will be an outcome that will lead to higher prices. But I just have not seen the end of the rainbow at this point, as to how any Farm Bill achieves, really, the kind of income levels that I believe are required for a normal family, husband and wife and some children, to have a middle class income and send their children to college and have upward mobility in our society without having other income, and a lot of it, and with the agriculture as a piece of this action.

Now, you know, you finally boil this down, there are very tough circumstances in some parts of the country. Challenges that are very formidable with regard to whether, and the soils that you have to deal with and all of that. Maybe we target those situations. We do ultimately in terms of most of our emergency legislation. And these are people who are just sort of outside the box of any program we have.

There has been suggestion that as opposed to crop by crop we deal with total income on the farm. And that's an interesting idea, certainly, for economic theorists to take a look at. And that does get to the specialty crop business in a way. It gets into livestock in a big way, which is not really on the charts now in terms of the stabilization program.

On the other hand, this is an intrusion, of physically, how the local ASCS officer or anybody gets into the income tax returns, is able to quantify precisely what the net income of that operation is, has defied many people in agriculture, long before we came along. Although conceptually, there's something to be said for the whole farm idea and for the whole income business in this thing.

I raise these questions just simply as a part of the record, because I think that we and hopefully you helping us in your testimony, may help us wrestle out a solution that is a better one than we have now. But I would say that for the moment, the Farm Bill that we have, with all of its infirmities, has at least maintained, as has been suggested, a fairly high level of income for the country as a whole. Even in the midst of this, the speeches on the Floor, if you had a dollar for every one that's establishing the crisis, the turmoil, everything falling in the drink, you'd be a wealthy person. This is a part of our life, to both give these speeches and to listen to them. [Laughter.]

But here we finally have to come to grips with how to make any difference. And I don't know whether in American agriculture everybody will stay, and whether they find the returns or whether maybe the emotional content overwhelms this. But I'm intrigued by this whole idea: why do we have so many farmers, why do they stay in the business, why, for instance, in the dot-com business, where people are routinely leaving every day because they run out of money, and there is no stabilization of this at all, is this substantially different?

So does anybody have a philosophical comment, because it would have to be that, I suspect. Mr. Swenson.

Mr. SWENSON. Thank you, Mr. Chairman.

Dot-coms will come and they will go, movie theaters will come and they will go. But they aren't a necessity of life, as food is. And I think if there's one reason why this debate needs to maintain the priority and the level of consideration and intention that it deserves, the same as energy, look at the debate we're now giving to the energy situation, because of the situation we find ourselves in, and dependency of the world for our energy source, and the lack of commitment we've made in the past to develop our own domestic energy sources.

So I think it's significantly different than other sectors, and deserves that attention.

The other thing I want to emphasize is that I think the world will consistently change. We've talked about our own productivity increase. The world's productivity and agriculture will increase as well. And I think probably more rapidly, as we look to the future, than what we've seen in the past. Because the globalization of the chemical companies and the seed companies and the equipment companies will be able to apply that technology to the world, where in the past, a lot of that was developed internally here, and then went from the United States to other parts of the world. That's changing and I think will continue to change.

So those are factors that I think require us to maintain the discussion and the debate of agriculture providing food at the level of consideration that I believe we should give it.

The CHAIRMAN. Let me just ask, though, granted that we have to have farms, we have to have food production, is there any reason why we have to have each person doing this? And if you suggest around the world that people are going to do it better, this is of small comfort. We're at that point squeezed even further. In other words, at what point do we grant that we ought to have these acres tilled, but the question is by whom, and does agricultural policy determine that?

Mr. CAMPBELL. Senator, there's some very interesting USDA data that go to your question. And it's derived from the census, as well as their own surveys. Every sales category of farm size has a household income above the American median household income, the smallest and the largest. They also have net worth many, many times above that of the average household. Only until you get to that 8 percent that produces 72 percent, those above \$250,000 in sales, do you get to what we know as commercial farms, who earn most of their income on the farm.

Most farmers earn most of their income off the farm. That's why we have as many farms as we do today. In 1970, had we continued the trend that we had then, we would have only had 600,000 farms instead of the 2 million that we do today.

But to the challenge of this Committee, only 36 percent of farms get payments. Only 36 percent. And only one-fifth of the total cash receipts is affected by the AMTA payments, the LDPs and those sorts of things.

So for example, when Senator Conrad shows the charts, it's the charts for all of agriculture. But when hog prices go to \$8 or cattle prices go to \$80, those numbers get put into those net farm income figures. But when you look at the eight program crops, and I'm excluding dairy, but when you look at the eight program crops, the last 5 years, the net, net farm income for those eight program crops has been \$3.6 billion per year average higher than the previous farm bill. And that is what's driving land prices for those crops.

So even though you might say aggregate income or net profits is only 4 percent, the fact is, they've been high enough to drive land prices higher, drive rents higher, and therefore drive the less efficient or the smaller producer into doing something else.

So we have kind of a tale of three cities, actually, here. We have the commercial farmers who, on average, are doing extremely well. That's that 8 percent. We have the small farmers, who earn most of their income off the farm, in fact, lose money on the farm but still make up for it with enough farm income to have incomes higher than the average American family.

And then we've got a group in the middle that call themselves or consider themselves to be full-time farmers. But they are not earning enough from those operations to keep going. And that, when you start to slice it and dice it, you come to some interesting conclusions. And Keith Collins has got some information which I think is very interesting about what percent of those people are experiencing financial stress.

In my recommendations, what I try to say is that we need to zone in on those producers. Those producers either need to get bigger and more efficient in order to achieve their objective of full-time income from full-time farming, or we need to have some credit pro-

grams or some transition programs so they can earn off-farm employment.

When we continue to look at agriculture as one big glob, we can't get there from here. We've got to begin to look at it in its individual pieces and design policies that fit each of those pieces.

The CHAIRMAN. My time is up and I want to—Mr. Paige.

Mr. PAIGE. I want to make one last comment on it, more philosophical for me, but it's true that now the African-American community only owns a little over 2 million acres of land, when it comes to that. And that in itself is sad. Then with about 18,000, 19,000 black farmers, at one time over a million farmers were receiving life and livelihood. What happened to them? They're in the inner city now, unemployed, underemployed, and perhaps on other types of services. So we pay now, we pay later.

There's opportunities in the small farm section to do things with beginning farmers. There are farmers who want to go in to do that in other incentive type programs that would encourage this, that would encourage niche markets and other kinds of things. But resources have to be put there. Technical support for minority farmers has by and large not been there like other farmers have enjoyed over the years.

Just putting money into that, there's a program called 2501 that we've tried to get funded for the last two Farm Bills. We have not done it. Congress has only put up \$3 million, and we've had to fight for it which means that we've not been given the opportunity for survival on the farms. We're talking about life and livelihood. We're talking about communities. We're talking about families. There are several reasons that folks want to stay on the farm and want to own land. And it has been proven, the best stewards of the environment, of land, has been small family farmers.

So I think it's something that we have to take a serious look at, and find a means to do that. And I think the small farm portion off of that, and also we need to find those types of incentive programs as you deliberate over the next Farm Bill. Thank you.

The CHAIRMAN. Thank you.

Senator Harkin.

Senator HARKIN. Well, very interesting discussion. But I've got to get back to your question, with this kind of return, why do we have farmers? I might answer that with a question: why do we have history teachers? You're not going to get rich unless you write a book, you know, maybe if you're one of those few that write a book. Why do people go to college to become history teachers? You get a decent income, but you're not going to get very wealthy.

I think people like to do it. And in agriculture, people like the independence of it. They like living out on the land, owning some land, people like to do it, and they're willing to trade off a lot of things to do that.

But what I've sensed in the last 25 years is that it's gotten to the point where they've traded just about everything they can off. And it used to be, the neighbor was across the road, maybe down the road a few hundred yards and your kids could play together and stuff. Now the nearest neighbor is 2 miles away. Can't even get groceries unless you drive another 15 miles, or you can get maybe a small Casey's store or something like that, out our way.

So the whole infrastructure has broken down in rural America. And even though people would like to live there, I mean, they've got to have neighbors, they've got to have some social support. Our churches are closing down because they can't even keep the congregations up. Schools are consolidated, not unusual in my State, and I'm sure a lot of yours, kids get on that bus in the morning and they're going an hour to go to school—and that's in good weather—and coming back.

So when this happens, people say, yes, I'd like to farm, I'd like to do this, but I've got to have something else out there. That's why, when I opened my comments, I think we have to break out of the box and start thinking. I like what you have to say, Mr. Campbell. I think you're right on target.

I was making notes when you were talking there, talking about, you know, we've raised this thing up, now we can't go back. In Iowa, in 1999, Government payments were 130 percent of net farm income. Explain that to somebody, they say, how can that possibly be, that Government payments were more than net farm income. Well, go figure when they paid their debt and expenses, they had some more.

But obviously, Mr. Campbell, you're right, individual pieces. Look, we're a technologically advanced society. And that's when I get back to where I started with this one size fits all type of things. We have the wherewithal, I think, to begin to break this down into individual components, and maybe to do something a little bit different than what we've been doing.

Again, I will take you all to task. I am disappointed in this report. There isn't one word in here on energy. Not one word. Now, Mr. Flinchbaugh, I read the law, I was involved in it when we wrote it. Production agriculture. That's what we talked about, production agriculture, an assessment of economic risk to farm—oh, but to continue, production agriculture, and I had another thing here I wanted to talk about, too. An assessment of economic risk to farms delineated by size of farm operation, small, medium, or large, what Mr. Campbell was talking about there. I'm not certain that we got that assessment. Delineated by small, medium and large. Mr. Campbell talked about it a little bit in his minority report.

But not one word in there on energy. That's production agriculture. If we just replace all the MTBE with ethanol, I hate to get on this kick again, what a boon that's going to be. That's going to help every farmer in America, corn, sugar farmers, things like that. Biodiesel, biomass, one pound of switchgrass has more BTUs than one pound of coal. True. The only problem, a pound of coal is this big and a pile of switchgrass is this big.

But we do have some interesting programs going on now about biomass production. Now, will it replace all the energy in this country? No. No one's saying that. But it could be a substantial part of it.

Production agriculture, value added energy, a lot of things like that. Drugs, we already know that pharmaceuticals are looking at the new biotech regime and genetic engineering to begin using crops to actually grow drugs. We ought to be thinking about that, and how that's going to help small farmers, who could specialize

on a small area of using biotechnology to grow a specific type of a drug or pharmaceutical for a company. You don't need 7,000 acres to do that. You might only have, Ralph, 40 acres. You might make a pretty good living off that. Maybe that's something our tobacco farmers ought to start looking at, when we've got to wean them off of that.

So I am really disappointed that you didn't look at the whole aspect of production agriculture as being outside the box of food and fiber, food, feed and fiber.

And in international programs, Senator Dole and Senator McGovern, I think the former Senators had something I never thought about before, I thought it was a great concept, international school lunch and school breakfast program. Why not? Why not take this great program that we've had in this country and internationalize it. Does that mean we're going to supply every ounce of every food to every kid in the world for school lunch and breakfast? No, but we should do some of it. We can do a lot of it. We could be the instigator of that, worldwide, to get this kind of process going around the globe. That would help also.

I just think we've been too long with accepted orthodoxy. Mr. Villwock, I've got a comment on the risk aspect. When you were talking, I thought about it in a different contextual framework. If you've got all these big payments out there, and they go to the bigger farmers, and it takes away the risk of getting larger, then big farms become stronger, better able to out-bid their neighbors for that extra bit of land that's coming up.

So our policies engender that, if we take that risk away, by having these big payments out there. Mr. Campbell's right, we have had a generalized orthodoxy of, we pay pound, bushel and bale. Well, maybe we ought to think of some other way of focusing on those payments, because it is, I believe it's factual. We can debate it, I suppose.

But I believe our farm programs really have promoted farm getting bigger in this country, because it does take away that top end risk. So you can go and out-bid your farmers for that extra bit of land.

Well, I don't know, I guess everybody's giving speeches, why can't I give mine. Anyway, there are a lot of questions I have, I know the hour is getting late. The Commission recommended eliminating all payment limitation provisions, yet you say we should recognize the importance and value of small family farmers. You oppose raising loan rates, but you want relative loan rates rebalanced. Well, then, are you suggesting we lower soybean rates? Anybody suggesting that?

Well, how can you have it both ways, if you want the relative to close, but you don't want to raise the bottom, you've got to bring the top down some way. Am I missing something here?

So anyway, and the natural environment, again, I take the Commission to task for viewing a farmer's role and preserving the natural environment as a crucial policy goal that we ought to have. Not the old hit them on the head, but what can we do policy-wise out there that would encourage, again, as Mr. Campbell said, more grass waterways, more buffer strips, more switchgrass, a lot of dif-

ferent conservation crops, which can be carbon sequestering also, and help our farmers with an income there.

Well, so those are some of my questions. Maybe I might, as we come back later, these and in the future, I hope in the future that all of these gentlemen sitting here in front of us—why aren't there any women on this Commission? Just thought about that. Why aren't there any women on this Commission? I mean, women are a part of agriculture, unless I missed something here.

Senator ROBERTS. Well, we have one for Secretary, though.

Senator HARKIN. We have one for Secretary of Agriculture now. But anyway, that's enough of my speechifying. I hope, Mr. Chairman, as we move ahead on the next Farm Bill, these people have a lot of expertise, they've been involved, I hope we can ask them to come back either individually, as groups or something like that, to help us in our thought processes on this.

The CHAIRMAN. I think there are two comments from Mr. Swenson and Mr. Paige, so we'll take those before we move on.

Mr. SWENSON. I would just urge Senator Harkin to make sure he reads the minority report of the farm safety net, including the conservation section.

Senator HARKIN. That's what I mean. I said the Commission didn't. I said they were in the minority sections. I'm sorry, if I didn't say that, I meant that. The Commission didn't, but they were in the minority section, two minority sections.

Mr. PAIGE. On the small farm section, both the minority report and the regular report, we referred to a document, the National Commission on Small Farmers. In that commission, a couple of things that were pointed out in that commission report, research and extension. And conservation is another one, beginning farmers.

But the research that's certainly what you've said, looking at niche, looking at different types of research, looking at markets, looking at research for value added type products that small farmers can use, and certainly that is the intent of that, and the talk about that, doing that. Research being biased towards large farmers and large agriculture interests. That's what this report talked about.

And one of the things we tried to do, and certainly in the minority report, is get you to look at it, and continue this as an advisory committee or put a budget to it, put some resources in it, where it could have an ongoing concern with small farmers, whereas they did spend a lot of time talking about conservation, lots of time and energy in there looking at extension, looking at research and this type of thing. And they did take those to task, that's why we suggested that we look at these things. And those are just a few.

There was a report given out on these things, and I'll go through it very quickly. On some of the things, such as research and extension for farmers, they've got C. Conservation, C. Credit, C. Farm workers, D. Civil rights, C. Not taking on any of those things that's concerning small farmers. And I would say, and I would hope that after you look at that, you would see fit to continue this Commission and let them work on issues of that kind.

Now, grant you, we had a lot of things to do at the 21st Century Commission, and we decided to put, that was one of the things, put this in there where you could look at that. And those things were

thoroughly discussed in there. And here again, a lot of meetings were held, just like we had meetings around the country. And money should be put in it, and a continuation of that, where that dialogue can be continued.

And I could talk to you a lot about different initiatives that are going on in the field around small farms and around niche markets, around even the pharmaceutical you're talking about, we are doing that with small cooperatives. We need money in this. We talk about funding for cooperative development, 2501 research and technical assistance, that's exactly what you're talking about, Senator, that we are trying to do.

But there was nothing in the last Farm Bill that really dealt with that, that really dealt with it. In fact, the 2501 didn't even get any money for it. And we have 1890 land grant universities, organizations, depending on \$10 million to provide research, technical assistance, value added and other kinds of things for small farmers. That is not fair and we need to look at that.

The CHAIRMAN. Thank you. Senator Roberts.

Senator ROBERTS. Thank you, Mr. Chairman.

I think on your philosophical question, we should have the former chairman of the House Ag Committee, the Honorable Kika de la Garza, come in and make his submarine speech. That takes you back a little bit, but it does indicate the value of agriculture.

And I might say, sir, that when I was zooming around to 12 States and talking to all the editorial boards that I could shake loose in regards to the value of agriculture and where we were headed with the 1985 Act, which was passed in 1986, I was meeting with the Wall Street Journal. And I had a young man ask the question which is often posed: why are farmers any different from, say, somebody who has a manufacturing plant and makes widgets. And I asked him if he had ever put a widget between two pieces of bread and tried to eat it. I said it would be high fiber but might not really work so well.

Then I asked him about all of the folks who were on fixed income and all of the minorities who live in our cities who only spend 11, 12 percent out of their disposable income dollar for that market basket of food, if in fact we put agriculture in the same basket or the same category as any other manufacturing entity or any other business entity, I suspect that price would rise rather dramatically. That has always been one of the rationales that we have used when we talk about farm bills, that it is not only a farmer subsidy, if you will, or an investment, it is a consumer subsidy as well.

Mr. Swenson, thank you for your concentration on concentration. I would report to you in Kansas that, while we're concerned about price, we are also concerned about the merger and concentration issue. But it's throughout our economy. My gosh, look at the Daimler-Chrysler issue, and Tysons-IBP. I just put down here U.S. Air and what happens there, since I go to Kansas City on U.S. Air. Banks, all the communications, all the dot-coms. This is a development that is affecting our entire economy.

But I detect a sense of fear among our agriculture producers about losing control of their destiny. And I think you've hit on that. I'm not sure which antitrust provision, Senator Harkin has had

several bills in that regard, Senator Grassley, others. Obviously we're going to have to monitor that very closely.

I also want to pay credit to my colleague from Iowa for his plan in regards to conservation. You get a double benefit there not only from conservation but also from investment in agriculture. But I've been adding up these payments that everybody's been talking about here. We had a conservation payment, a supply management payment, a transition payment, stewardship payment, CRP payment, LDP payment, SIS payment, I have to add in Charlie Stenholm's SIP payment. It could be a gulp by the time we're through. An energy payment, a carbon sequestration payment, and then let's see, a social welfare payment, I'm not trying to perjure that term, there's nothing wrong with social welfare. Look at the food stamp program.

Mr. Chairman, we add up all these payments in place of the current payment criteria, we're going to have to get a lot bigger mailbox, it seems to me, out on the farm, or a CD-ROM for somebody at the Department of Agriculture to figure out who's going to administer all this, how much paperwork, whatever. But I do think at least it is a good suggestion.

Let me say that one of the reasons that we stuck with the AMTA payment, even though the Administration declared that it was not the best way to do things, and that's the mildest way I can describe that, was that the payments went out, and in 2 weeks, where they got to farmers. And they were hard pressed, we were going through a lot of weather problems, we were going through planting or harvesting cycles.

I can recall the other payment that was made on a different basis took 6 months to 1 year. So expeditious handling of these payments without all the paperwork is a consideration.

Let me ask Keith Collins a question—no, I'm not going to do that. I am going to do it.

But, farm numbers and size, and this is from the directions for the future of farm policy here, the National Agriculture Statistics Service indicated there were about 947.3 million acres of land divided among the Nation's 2.19 million farms in 1999. Since 1995, over the past 5 years, the number of farms has increased from the 2.07 million, and the amount of farmland has decreased from the 970.2 million acres. The increase in the number of farms in 1995 is attributable to a continued rise in the number of small farms.

Oops. Where are we off base here? I suspect it's because of where you come from. As I look at the States that you represent, there is a decrease, not much. In Kansas, we lost 300. We went from 47,800 to 47,500. Let's see what Iowa owes me, or Indiana owes me here. No, I owe Indiana and I owe Iowa.

But at any rate, it seems to be, what is your definition of a small family farmer? I always got into that argument over in the House when we were trying to determine of farm program payments would be adequate. And I finally deduced that a small family farmer is somebody 5 feet 2 inches from Vermont who is an airline pilot who has 40 acres in orchard, quite a bit of holdings and a three-legged dog named Lucky. [Laughter.]

But the guy in Kansas who's now 2,000 and now 6,000 acres, he produces the food and fiber for this country. So you've got to figure out, where are we here on the criteria.

Keith, your statement states, the recent reduction in farm prices and returns from the market reflects large U.S. production, large production in key countries such as China, Argentina, Brazil, the global economic slowdown of 1998, 1999, its after-effects on the continuing high value of the dollar. In your opinion, do these facts have a greater impact on farm prices and income and the well-being of farmers and ranchers than the actual underlying farm bill, whether it is, whether it was the past bill, the current bill, or the bill down the road? The answer's yes.

Mr. COLLINS. I think those facts have a greater influence on market prices than the underlying Farm Bill. The answer is yes.

Senator ROBERTS. Where are we headed? You have a whole paragraph. Where do you think we're headed? You say now we're going through a tough time, but things down the road are going to improve a little bit, if we get our exports cracking and all the rest of it.

Mr. COLLINS. Well, I think we're already starting to see some signs. As you know, agriculture is cyclical. Within agriculture, there are sub-cycles, like cattle. When you're at the top, you don't see the bottom very well. When you're at the bottom, you don't see the top very well. And we've been at the bottom for the last 2 years, but we're starting to see some signs. The dollar exchange rate has been coming down some, it's still quite a bit higher than it was in the mid-1990s. But it's coming down.

We've seen some adjustments in production, both in the U.S. and around the world. Wheat is a good example. Our winter wheat plantings this fall are down 5 percent, 2 million acres. In addition to that, the world economy, which was fairly slow in 1998 and 1999, is starting to grow pretty well. It will be down a little bit this year, mainly because of the United States.

But I think we're looking at world GDP growth of 3 percent or more, consistently over the next several years. And if you look back over the last 20 years, whenever we've had GDP growth in the world of 3 percent or more, that's when we've had our peak export periods.

So I'm beginning to see some things turn. If you look at specifically some of our markets like corn, we had a 10 billion bushel demand this year in corn. If we get a little bit of cutback in acreage, maybe because of high fertilizer prices, we get a normal yield, we have every prospect of running down our corn stocks in the United States by a couple of hundred million bushels.

Our stock situation in the world wheat market is extraordinarily tight. We've had several consecutive years of world consumption exceeding production in wheat as we have had for coarse grains as well. So I think that those markets are going to be stronger over the next couple of years.

Look at cattle. We started liquidating our cattle herd in late 1995. We're now down to 97 million head in the United States. And I think that that's going to start to turn, as heifers are retained. I think that we're going to see cattle prices, we've already seen

them at \$79, \$80 for fed cattle here recently. I think we could see that consistently in the second half of 2001 and beyond.

So I think there's a lot of little markers that are starting to tick up and are a little promising for the farm economy. But I still think there are other sectors like oilseeds, for example, where it's hard to see where we're going to get much price strength over the near term.

Senator ROBERTS. I guess my point is, I think it would be wise for us to take that into consideration, at least to some extent. I hope that the good Lord is willing and that the creeks don't rise, or that there is something in the creeks, and that our demand factor picks up as these economies occur. But so many times, you know, Congress arrives late to the issue and then proposes something, only to find out that it could be actually counter-productive. And I think we have to keep that in mind.

Dr. Flinchbaugh, you just didn't have the Commission meet in Washington, you went out around the countryside and talked to a lot of producers. Tell me what they said in regards to maintaining the flexibility of the Farm Bill.

Mr. FLINCHBAUGH. Well, if there's anything that there's almost total unanimity—too big a word for a professor—on which there's consensus, you hear very little negative about planting flexibility. And if you look at the minority reports, they don't propose we move away from planting flexibility, at least not in total.

So if there's one item out there on which there's consensus, it's planting flexibility.

Senator ROBERTS. Let me ask you, on CRP, you made the comment, I think, a continuation of the current CRP program with increases in size being directed toward buffer strips, filter strips, wetlands, grass waterways and partial field enrollments, all part of the basis of Senator Harkin's bill. Do you suggest fitting this within the current cap, that's 36.4 million acres, or an increase in CRP?

Mr. FLINCHBAUGH. Basically within the current cap.

Senator ROBERTS. Since we don't have the sign-up up to the cap yet, then we would go on beyond that.

Mr. FLINCHBAUGH. Right.

Senator ROBERTS. Mr. Swenson, I had a question on crop insurance. I'm not going to ask it, just take a look at allowing our producers to plug in 60 percent of their T yield in any year that they suffer a loss that falls below this level. Senator Kerrey and I worked very hard on that bill. It's \$8 billion, it's not everything that we had hoped. But I noted in the minority report, you were a little critical of the crop insurance bill. Also on the revenue side, we think we made some progress. We'd welcome your suggestions. But I do think we've made some progress.

Let me ask you something. There was a fellow back there, he's still there, has his coat off, Mr. Bill Lescher, used to be with the Department of Agriculture. The first amendment that I ever had in the Farm Bill, way, way, way, way, way back, was a farmer cost of production board. And Bill met with those folks for the better part of 1½, 2 years. And the chairman was from Kansas, a guy named Bill Turpentine, we called him Bill Turpentine.

And we had all sections, all regions, all commodities, just like this. And we tried to come up with a uniform, flexible whatever,

comprehensive cost of production, and couldn't, because of the regional differences and wherewithal of farmers and the Senator's cost of production on his farm might be different from somebody else's in terms of that operation.

How do we do that? And if you know, whisper in Bill's ear and my ear, because it may be a criteria that we can use. You and Mr. DuPree indicated that there's a yardstick to determine a cost of production. We used to do that, sort of, with the deficiency payment, depending on what happened. I remember the marketing loan vote served back in 1985 or something in there, and we fell 31 votes short from going to a marketing loan, which by the way is very expensive, if we really fall off.

But how do you determine the cost of production?

Mr. SWENSON. In the development of our report, we used USDA statistics. That was our method of development.

Senator ROBERTS. That's why we had the farmer cost of production board, because most farmers didn't think the USDA stats really measured their cost of production.

Mr. SWENSON. That's a political decision you have to make if you—

Senator ROBERTS. I mean, one fellow doesn't have a friendly home town banker, he's got a heck of a higher cost of production than the other fellow.

Mr. SWENSON. Well, costs of productions are going to vary. If a farmer's out there and got 80 percent debt, his costs are going to vary in productions of commodity of the same producer that has a 20 percent debt ratio. So there's no doubt that costs of production for every producer in this country, even of the same commodity and different commodities, will vary. So you have to use an average. All I did in my report was try to come up with an analysis of saying, here's something for you to look at.

Senator ROBERTS. Mr. Chairman, my time has expired a long time ago, and I apologize. I again want to thank every member. I don't think you've fallen short at all. I think you've done a damned fine job. Thank you.

Mr. SWENSON. If I could comment, Mr. Chairman, real quickly, in regard to the crop insurance. When this report was developed, we had not yet seen the implementation of the action taken. And we worked very hard from the organization I also represent, in working with the members in trying to advance reforms of the crop insurance. We look forward to seeing how they are achieved.

Senator ROBERTS. So you're ready to give Bob Kerrey and I a little attaboy or a little pat on the back?

Mr. SWENSON. Oh, absolutely. Absolutely. But we would like you to consider what we do to help farmers ensure themselves on that first 25 to 35 percent loss area and would like your consideration.

Senator ROBERTS. Thank you, Mr. Chairman.

The CHAIRMAN. Senator Dayton.

Senator DAYTON. Mr. Chairman, thank you. I have a number of questions, but in deference to the time, I'm just going to ask one of them. That's regarding dairy, since Minnesota's lost 6,000 dairy producers in the last decade, you make your reference to four areas of reform. I wondered if you'd like to elaborate on any of those. And again, in deference to the time, Mr. Chairman, if anyone would like

to submit a written response, I'd welcome them, because the Minnesota dairy producers are in serious economic straits today.

Mr. FLINCHBAUGH. Well, the frank answer to your question is, Senator, no, I don't want to elaborate on them. [Laughter.]

The Commission discussed these four commodities that are in the report. And we simply concluded that there is so much disagreement within those industries that it would be very presumptions on our part to try to come to any kind of consensus. So we basically have said to those industries, get your act together. What do you want, where are you coming from? And I, frankly, as the chair of the Commission, am not going to go any further than that, because the Commission didn't go any further than that.

Senator DAYTON. Mr. Swenson.

Mr. SWENSON. Thank you, Senator.

In the minority report, we touched very briefly on dairy. And that was in offering for your consideration, looking at establishing the same type of support program that we advocate for the other commodities to be researched and looked at for dairy. Since I've served on the Commission and we've developed that kind of scenario because of the interesting element when we plugged it into USDA's cost of production, if you tie it into support it comes up to 1250, which many dairy producers across the country say, that's not a bad target for support price to be looked at.

We've shared it with dairy producers from California to New York to Texas, throughout the country. And dairy producers have a lot of interest in that concept.

Now, if you talk to the industry, which has different goals and different objectives, you're going to get a different answer. So I think it's important, when the Committee begins its deliberation, be it in dairy policy or grain policy or whatever, is the argument brought forward in policy that representative of producers or that representative of industry. They have different goals, different objectives. And I hope that the Committee will recognize those in the deliberations. Because you're not going to get a unified voice.

Mr. COOK. I think as this discussion goes forward that it's important to recognize some of the realities that have to be dealt with. And one of those is that a Farm Bill can't be all things to all people. And I would hope that we'd be able to identify those things that maybe can be influenced and spend our energy and our resources on that. And an example of that relates to your dairy question. There are so many circumstances far beyond governmental control that are influencing the concentration of farms these days that in our community there are three new 5,000 head dairy operations being developed right now. First one will be on-line this summer.

Those are situations that technology, machinery, efficiency, need for less labor, a whole lot of things that are beyond the influence of a farm bill. The same thing relates to the repopulation of small communities. I think it's very unlikely that whatever comes out of the Farm Bill can have a very major significance on repopulating rural communities with farmers.

Now, a lot of the smaller communities in our area are growing some through industrialization, small and sometimes not so small businesses. But there are a lot of circumstances out there that you

just aren't going to influence that much through the farming community. And I think it's important to recognize that and not spend a lot of time and energy and maybe resources on something that isn't going to happen because of circumstances beyond anybody's control. That's our free market system working.

Senator DAYTON. Thank you. Thank you, sir. Thank you, Mr. Chairman.

The CHAIRMAN. Thank you very much, Senator Dayton.

Senator Nelson.

Senator NELSON of Nebraska. Thank you, Mr. Chairman. Now that Senator Harkin has left, I feel comfortable commending you on your work. [Laughter.]

I know it's difficult work, and I'm sincere when I say that if you didn't know before, and I'm sure you did, that we talk about the agricultural business, though it's a unitary industry, it's not, this is a part of the discussion, and that there might be unanimity, I'll try that, Doctor, I tried the word unanimity, I got it out. But people will speak as though there is agreement, and it's a single industry. And I think the fact that it's come out in this discussion as on so many other occasions that we have segments of agriculture that are altogether different. They may have some similarities. They are in fact agriculture. But that may be where the similarity ends for a lot of the commodities and the programs.

I commend you for trying to identify what you can in separating out so that we don't continue to make that kind of an error.

I want to commend my good friend, John Campbell, from Nebraska, who has been back here in Washington and has been in the U.S. Department of Agriculture, and has fought many of the wars that we continue to fight today, and recognizes that a lot of the topics are similar. What seems to be an ongoing source or a search for solutions probably thought would have been solved by now.

But we're not going to solve it, but I think we can improve it. And they need to continue to work for improvement.

I want to address one issue, and that's the recommendation of the Commission on moving to an actuarially sound crop insurance program without the risk sharing agreement that now exists between the Federal Government and the private companies. As a former insurance commissioner in Nebraska, and having been around the business of insurance all my adult life, when I haven't been Governor or Senator, I would say that that would generally appeal to me.

But there are a couple of concerns that I have. One, are we aware that doing that and eliminating the subsidy, if you will, or the risk sharing agreement, could raise the price, the premium, up to the point where it's then unavailable to many of the farmers that we're trying to protect, as Mr. Campbell points out, that middle group. We don't want to see the program priced out of the reach. We don't want to get adverse selection. We don't want to see the program not succeed.

I commend Senators Kerrey, my predecessor, and Roberts, for their strong work, and Senator Lugar, for working through that, over the last several years, to make sure that we have a program. I would be very concerned about anything that would tend to weaken it. As tight as I am about not having the Federal Government

involved, inasmuch as I emphasize and support private industry and the insurance business, I am very concerned about what the implications are, whether you would have an exit of companies from this business, whether or not it would be supportive on an actuarial basis. I'd like to say that that could happen, but I question. Did you spend much time going into that aspect?

Mr. FLINCHBAUGH. Well, Senator, first of all, we recommend a study of the voucher system. We're not recommending the voucher system until it's studied.

Several factors brought us to that conclusion. Number one, you just mentioned the bill that Senator Kerrey and Senators Roberts sponsored and that was finally adopted, just passed. We think it's premature to recommend an overhaul when the bill just passed. We don't know how well it's going to work, we hope it works.

So that's why we thought it was prudent to come up with the idea of a study. We also think we need to bring more market discipline to the insurance program, enhance competition. So we're looking at an alternative program. And I think your questions or your concerns are certainly valid. And that's why we recommend studying the voucher system. We didn't go any further than that. We didn't outline the value of the voucher, etc.

So we certainly share your concerns. But we think we ought to take a look at a voucher system, and then 3 or 4 years down the road, when we've had a chance to evaluate the Act that was passed this summer, we'd be prepared.

Senator NELSON of Nebraska. I appreciate it.

Mr. VILLWOCK. Mr. Chairman, just briefly, to your earlier comments to the Commission, and before we take off here, we've have 11 people together for 3 years here, and we've brought all the kings horses and all the kings men together to try to give us the silver bullet to fix farm policy.

We worked without any partisanship. I was very pleased with this group. I don't think one time that partisanship raised its head, that we were thinking along those levels. We had disagreements on policy and how to get or solve policy. But I don't think any partisan views got in our way. And we realize you and the Committee deal with that. I guess I want to say publicly, I admire the Committee and their ability in their deliberations to be able to deal with that and the complexity of farm policy, how difficult it is.

Of course, we didn't meet with the regularity that you do. But come together with all of us in good spirit, to try to come with the silver bullet, to try to come here today and say, do thus and so and net farm income is solved for producers all across the country, and we're going to keep all farmers and every farmer that wants to farm in business. We couldn't do it. And we understand that's difficult for us.

But we also want to say to you, it's very difficult for you and you have our respect on a greater level, after going through this process. Because farm policy is very difficult, at best. And I want to say thank you for your patience and your deliberation and thought on behalf of American agriculture, that you work trying to fix these problems that we bring to your attention.

Senator NELSON of Nebraska. Thank you, Mr. Chairman.

The CHAIRMAN. Well, thank you very much, Senator Nelson, and thank you very much, Mr. Villwock, for that commendation to the Committee. I will pass it along to the other members.

I just wanted to touch upon a point that Senator Nelson mentioned with the crop insurance. Clearly, the policy we adopted last year would not work if it were simply a free market affair. The idea was for deep subsidy, underlying, very deep, with the thought that almost every crop that is covered, and every farmer having that crop, would find value in using the program. We have found in our hearings, for instance, in my home city of Indiana a couple of years ago, only 40 percent of farmers had any crop insurance, even the most basic level. The other 60 percent did not.

Now, as someone who testified indicated that that's right, they didn't have any and they didn't want any. And essentially we were off on the wrong course. And as a matter of fact, charged that crop insurance is specifically very valuable to North Dakota, South Dakota, the plains, other places where people were using it already in fairly large percentages, found value in doing that, and thus skewed the policy.

It's impossible to solve any of these problems in a national sense with perfect equity, State or county by county, and this is a good example of that, I think. But in any event, as a Senate, we resolve to have another safety net. The problem still is one of education. Many farmers that I visit with do not understand the agatype of these policies. They need consultants and interpreters and what have you even to come to grips with the basic aspects of the thing.

And so we all are encouraging them to get that advice, and certainly trying to get supplementary educational material, so that the policy we adopt, that we thought would help them, will help them because they will use it. But as Dana said, the jury is still out on this one. We're coming into a planting season, we shall see. But for the moment, that was designed literally to try to bring about a safety net and to stave off emergencies, disaster payments, the appropriate committee at the end of the session, this sort of thing.

The LDP question did not arise in this form, but one question often arises, why would the price of corn really sort of, at \$1.89, given the LDP, do people continue to produce a lot of it. Many people say, well, you have rocks in your head, the cost for many farmers is less than \$1.89. Mr. Swenson and others have testified on occasion that probably the price of corn for some farmers in production costs more than \$1.89. But for a lot of farmers, it's lower than that.

So if you have \$1.89, why do people produce? Because there are incentives to do so. The Federal Government almost guarantees you're going to get \$1.89 for every bushel you can produce, at least if you have low production costs.

That is not an argument for lowering the LDP. But the fact is, our policies, whether they be crop insurance, which takes away a lot of risk, an LDP, which is higher than marginal costs for many people to produce, for example, are incentives to produce more. If people are wondering why the rich get richer and the poor get poorer, those two policies help a lot. And so studies indicate furthermore that if you are pretty good in figuring out crop insurance, you

might also be pretty good as a marketer. You might have a consultant for that. And that large farmers predictably sell their corn for 25 cents more than do small farmers because of marketing expertise.

So once again, this is compounded. We've got an interesting debate today, who should these payments really go to? And the Commission has said, no limits. And Senator Roberts suggested that's exactly right. Senator Harkin is more skeptical. But the fact is that the payments to go where the production is. If the 8 percent of the farmers do 72 percent of the business, predict that about three quarters are there.

Now, you can say, the fact that you're big doesn't mean you're necessarily profitable. You may be running it very badly. There are always people in life who do big things badly. But on the other hand, that's not a lead pipe sense. It occurs to be the other way around frequently.

So here this Committee has this kind of a problem. We're paying a lot of money in very different sorts of ways to the beneficiaries, it's fairly clear. But then Mr. Paige raises a very important point, and that is, what about 18,000 to 19,000 minority farmers in America with just 2 million acres? Where do they fit into this situation? And that's a very important question. And I'm not certain any of us have a very good solution.

But you suggested a reasonably good one, that is the small farms commission, the emphasis upon trying to really zero in on particular situations. That's the only way I can think of, and will be much more sensitive. The Commission as a whole has mentioned the small farmers commission, and Mr. Paige has outlined that, it seems to me, today, in ways that are very important.

But these are all situations that your report has brought to our attention. You quite correctly said you could not solve or even take up in detail everything. But you have covered a lot. And the charts and the data that you have, they are subject to all of us to interpret, to try to be more thoughtful in raising further questions.

Now, at the end of the day, we have some intractable problems, and you were brave enough to touch upon those. The sugar program, for example, an unmitigated disaster, in my judgment. But that's simply an editorial comment. And that is sort of one of a kind. I've been trying to offer reforms for the peanut program for 24 years. I served on the committee 2 or 3 years, it had some success. Most years we did not.

Tobacco, a case all by itself that's sort of being dealt with generally in other committees, other issues sort of tangentially impinging upon our own. Dairy in vast change. In my State, a remarkable dairy operation in the northern part of the State, I visited there at some length this summer. Probably 18,000 cows, and an operation that has no relationship to the dairy program at all, or any aspect of this Farm Bill.

But it is juxtaposed to herds with a father and son of 60 cows, 100 cows, people trying to decide, do we stay in the business, what kind of support is required for us to handle this. And all these things exist in our own constituency, side by side, arguing with each other, quite apart from this Committee in a general way. So we are cognizant of each of these special things that you mentioned

that have really important implications for a lot of lives and communities.

But I thank you again, I thank you for your patience. You've been stalwart to last almost 4 hours through one of our Committee hearings, and we will have many more, and we hope that you will contribute as you can.

Thank you very much, and the hearing is adjourned.
[Whereupon, at 12:40, the committee was adjourned, to reconvene at the call of the Chair.]

A P P E N D I X

JANUARY 30, 2001

**OPENING STATEMENT OF SENATOR RICHARD G.
LUGAR, CHAIRMAN COMMITTEE ON AGRICULTURE,
NUTRITION, AND FORESTRY**

JANUARY 30, 2001

Good morning. Today we meet to review the final report of the Commission on 21st Century Production Agriculture. The Commission was created by the Federal Agriculture Improvement and Reform (FAIR) Act of 1996 to identify the appropriate role of the federal government in production agriculture following expiration of the FAIR Act in 2002.

In many respects, today's hearing and the public release of the Commission's final report marks the beginning of the 2002 farm bill process. I want to welcome Commission chairman, Dr. Barry Flinchbaugh, and Commission members, Bruce Brumfield, John Campbell, Donald Cook, James Dupree, Charles Kruse, William Northey, Ralph Paige, Bob Stallman, Leland Swenson, and Don Villwock. The Commission has taken its assignment seriously and has worked hard to produce a substantial final report which contains a great deal of information. Achieving a consensus view on this issue is no easy task. I would note that all eleven Commission members signed the final report, subject in some cases to minority views. We look forward to hearing the Commission's findings and recommendations.

With respect to the 2002 farm bill process, I look forward to working with Senator Harkin and all Committee Senators, including our many new members on both sides of the aisle. A good place to begin is to try and gain a better understanding of the basic structure of farming. Sparks Companies, Inc. recently completed an analysis on this subject based on the 1997 Census of Agriculture. The Census defines a farm as any operation with annual farm sales of \$1,000 or more. The Sparks analysis found that of the Nation's 1.9 million farms, only 157,000 farms (about 8 percent) with annual sales of more than \$250,000 account for 72 percent of food and fiber production. These commercial farms rely primarily on income earned from farming, with only 28 percent of their total income, on average, coming from off-farm sources. A second group of 189,417 farms (about 10 percent of all farms) have annual sales ranging from \$100,000 to \$250,000 and account for 15 percent of production. About 57 percent of this group's total income, on average, comes from off-farm sources. The remaining 1.57 million farms (82 percent of all farms) account for 13 percent of production and, on average, earn 100 percent of their total income from off-farm sources.

Virtually all agricultural economists tell us the benefits of production-based farm support and risk management programs are capitalized into the value of farmland. The most recent evidence of this is our experience in the last three years. During that period, farmers' returns from the marketplace have fallen sharply, yet agricultural land prices and rental rates have continued a steady rise as regular

FAIR Act programs and supplemental farm assistance from the Congress have provided farmers with increasingly large amounts of government assistance. The impact of this assistance on individual farmers, however, can be very different depending on whether a producer owns or rents the land he is farming. Without doubt, our recent policy has helped to keep many farmers in business, but increasingly asked is the question as to whether many farmers are being hurt in the process.

We need farm programs that will build the international competitiveness of American agriculture and will help provide both producers and the general public with increased environmental benefits. Our farm programs exist because of resources provided by the Nation's consumers and taxpayers. We have a responsibility to provide farm support in ways that are as economically efficient as possible. Though the direct cost to taxpayers of recent farm support is quite high, a new analysis by University of Maryland agricultural economist, Bruce Gardner, concludes that the combination of regular FAIR Act programs and supplemental market loss assistance is a relatively efficient way of supporting farmers' incomes, particularly when compared to pre-FAIR Act farm programs which relied heavily on annual acreage reduction programs which realize \$4 billion in dead losses.

Following opening statements from Senators, we will hear background testimony from Agriculture Department Chief Economist Keith Collins on recent policy and market developments. He will also be available during the discussion portion with Commission members who will be part of the second panel, to provide additional economic information as needed. I want to remind Senators that Dr. Collins is here to provide information, not to comment on the Commission's policy recommendations.

Chairman Flinchbaugh will testify today summarizing the Commission's findings and recommendations detailed in full in its final report. Senators may engage all Commission members in discussion following Dr. Flinchbaugh's testimony. I also want to recognize Commission staff, Mechel Paggi, Matthew Howe, and Timothy Peters, all of whom provided the Commission with invaluable assistance.

I now turn to Senator Harkin for his opening statement.

OPENING STATEMENT OF SENATOR THAD COCHRAN
HEARING ON THE REPORT OF THE COMMISSION FOR
21ST CENTURY PRODUCTION AGRICULTURE

January 30, 2001

Mr. Chairman, I would like to welcome Mr. Keith Collins and the other panelists from the commission on 21st Century Production Agriculture. The 1996 Farm Bill is up for reauthorization next year and hopefully, this report will help us in the drafting of that legislation. I appreciate the hard work, effort and time it has taken to develop this report.

I would like to thank Bruce Brumfield, an important leader from Mississippi, a blue ribbon member of a blue ribbon commission. Mr. Brumfield is also a leader in the National Cotton Council and the Delta Council.

I am pleased with the report that the Commission has presented to Congress. The Commission has made several recommendations on which I would like to recognize and comment. First, the Commission supports the continuation of the marketing loan program. This program was created in the 1985 Farm Bill, which I helped write, and has been very successful for farmers. Secondly, the Commission should be commended for not discriminating against farmers on the basis of size of the farm for the purpose of determining farm program benefits. Thirdly, the Commission recommends giving the President fast-track authority to aggressively promote agriculture exports.

Although many opponents have criticized the existing farm bill as the reason for the difficult times that farmers are now experiencing, we all know that the Freedom to Farm legislation has not caused the financial problems facing farmers today. In the past three years, the world economic growth has not been strong enough to sustain an increase of agriculture imports from our country. Our farmers have had to battle and overcome these events which has significantly reduced their export market opportunities. The low farm prices are due to a sharp decline in export prices in the world market along with strong crop production nationwide, not because of current law.

As Chairman of the Agriculture Appropriations Subcommittee, I have been able to assist in providing additional emergency assistance to help relieve farmers during these troubling times. This emergency assistance has helped rural America to stay in business and to deal with the problems of drought, of infestation of pests and weeds and other threats to efficient operation and production of our agricultural lands. The

Freedom to Farm legislation has not caused a "farm crisis".

I believe the Freedom to Farm bill has been most successful in allowing farmers to have the freedom to choose the crops that the farmer wants to plant for their economic benefit. I am pleased to see that the Commission has not recommended to change this fundamental principle of the current farm bill.

Again, I welcome everyone and look forward to hearing from our witnesses. Thank you.

**STATEMENT OF
SENATOR MIKE CRAPO**

**Hearing on 21st Century Commission on Production
Agriculture
January 30, 2001**

Thank you, Mr. Chairman and Senator ~~Crane~~^{Hagler}. It is an honor to be joining this distinguished panel.

For me, this is a return of sorts. As a member of the House of Representatives, I served on the House Agriculture Committee during deliberations on the 1996 Farm Bill. As a new member of the Senate Agriculture Committee, I look forward to the challenge of addressing the persistent problems facing the farming community since 1996.

Today's hearing touches on an issue very important to the people of Idaho and me—establishing the right mix of government assistance and market forces in our nation's agriculture system. Although current market conditions are extraordinarily different than when Congress constructed the Freedom to Farm Act, there are many elements of the law that are worth discussing as we face the challenge of securing the future of America's farmers.

That said, we also have to recognize that certain elements of the 1996 Farm Bill will need to be reviewed in the light of lessons we have learned in the last 5 years. Moreover, a significant part of the agreement between our farmers and Congress in crafting the Freedom to Farm Act have not been fulfilled. In short, while farmers agreed to reduce their reliance on federal control and aid, the government has yet to deliver significant tax reforms, regulatory reforms, research funding, market promotion and trade fairness, and other commitments made to our farmers.

Continuously in recent years, I have held many farm meetings throughout Idaho to explore issues involving the agriculture community and to explore possible solutions to problems. These meetings have been particularly helpful in understanding better what is really affecting the farmer as he or she goes to work. Although the list of issues that was raised is too long to present now, it would be an understatement to say that Congress, the U.S. Department of Agriculture, the U.S. Trade Representative, and other federal agencies have a big challenge ahead of them. Mr. Chairman, I ask unanimous consent to enter into the record at this time a summary of those meetings and the recommendations generated.

Many of the issues and solutions raised are similar to those of our witnesses today.

Therefore, I look forward to an enlightening hearing and discussion on the final report of the 21st Century Commission on Production Agriculture. I welcome our witnesses and expect to have many questions about the Commission's findings.

Knowing that we have business before us that we are all anxious to get to, I will yield back to the Chairman.

Thank you, Mr. Chairman.

**Remarks by Senator Tom Daschle
Senate Committee on Agriculture, Nutrition, and Forestry
Hearing on the Report from the Commission on 21st Century Production Agriculture
January 30, 2001**

Thank you, Chairman Lugar, for convening this hearing to discuss the final report of the Commission on 21st Century Production Agriculture. I am sure the Senate will be very interested in the Commission's findings, and I appreciate the work that has been put into this report.

Needless to say, this is an important issue for farmers in South Dakota and across the country. I only wish that the debate over current farm policy had started in earnest when prices plummeted in 1997 and 1998 and farmers were left without an adequate safety net. Instead of addressing the fundamental problems with *Freedom to Farm*, Congress passed emergency farm aid. While each emergency package was necessary, annual disaster payments are no substitute for a workable and effective farm policy. These payments should only strengthen our resolve to enact policy that enables family farmers and ranchers to compete and thrive, independent of government interference year-in and year-out.

First and foremost, we should implement policy that provides a meaningful income safety net when prices and yields fail, but reduces government's role when they are strong. Payments should go to people who are actively farming and treat producers fairly irrespective of the commodities they produce. Marketing loan rates should be fair and should not distort planting decisions. And, we simply must do a better job of considering agriculture in the context of the rural communities it supports. The economic viability of farmers and ranchers typically determines the future of the majority of towns in the state of South Dakota. We must not waver in our commitment to enacting farm policy that secures the future of family farming and ranching and, in turn, rural life in much of this country.

All of this underscores the point that Congress should make writing a new farm bill a priority in 2001. I am very pleased that the House Agriculture Committee has announced a schedule of hearings on the farm bill early this year. I also believe that the House Agriculture Committee's request that farm groups submit policy recommendations is a good way to start the discussions. Furthermore, I understand that the Chairman of this Committee, Senator Lugar, intends to convene similar hearings. I support his actions in this regard as well.

I do wish to emphasize, however, that time is of the essence. Producers are out of options. Bankers in South Dakota say that the money is not going where it is needed most, and that must change. My hope is that we can enact a new farm bill by the end of this year. But regardless, it is essential that we include sufficient sums in this year's budget resolution to fund an income safety net, be it emergency or permanent, for the 2001 crop year.

Again, I thank the Chairman for holding this hearing, and look forward to the testimony of the Commissioners.

**Statement of Keith Collins
Chief Economist, U.S. Department of Agriculture
Before the U.S. Senate Committee on
Agriculture, Nutrition, and Forestry
January 30, 2001**

Mr. Chairman, thank you very much for the invitation to discuss recent farm policy and the current state of the farm economy. First, I will comment on some of the key developments in farm policy that have led to the set of policies and programs now in place. Second, to provide a further context for the policy discussion that initiates with today's hearing, I will profile the current situation and the near term outlook for the farm economy.

Farm Policy to Date

Answers to three questions would help start the discussion about future farm policy: Why do we have farm policy? How has it been implemented? And how well has it worked? In reviewing how farm policy reached its current state, it is clear that farm policy is an attempt to address not one but several concerns. The driving force has been doubt about the ability of a free market to deliver safe food at reasonable prices to consumers, assure farmers fair returns, treat farmers fairly in international markets and provide proper management of the nation's resources. The relative importance of each of these concerns have waxed and waned over time, depending on the state of the farm and national economies and the social and structural dislocations taking place in U.S. agriculture. In response, a wide range of programs to address these doubts about the performance of free markets have been created and dissolved over time.

Farm policy prior to the great depression. If we go back far enough, such as the 1890s to the 1920s, concerns about the economic situation of farmers were addressed mainly through the goal of trying to make farmers more efficient, and the primary tools were agricultural research, education and extension. This goal and these programs remain an important part of

farm policy today. During this period, farming was generally prosperous as domestic and foreign markets grew, and the number of farms increased from 4.5 to 6.5 million. However, beginning in the 1920s and continuing through the 1960s, a combination of strong growth in farm productivity and weak demand led to a series of farm programs with the goal of propping up farm prices and incomes. The debate during the 1920s on whether the Federal government should intervene in agricultural markets and start supporting farm prices pitted the Wallaces, who supported higher farm prices and supply controls, against Coolidge and Hoover, who wanted no special treatment for a single sector such as agriculture.

Government programs during 1930-1985. The great depression, combined with the deplorable financial condition of agriculture relative to the rest of society, ultimately led to the Agricultural Adjustment Act of 1933 and other 1930s legislation, which introduced price support nonrecourse loans, voluntary and mandatory production control programs, and even the first conservation program designed to reduce erosion, retire land and transfer income to producers. The essential problem facing U.S. agriculture at the start of the 1930s was the very low income of farm households. The household income of farmers averaged about one-third the level of nonfarmers, and 25 percent of the U.S. population lived on farms. The legislation of the 1930s attempted to raise farm prices and incomes at the same time that farm productivity was exploding, which led to chronic surpluses and production controls. This experience provides a simple lesson for today: at the price Congress wanted farmers to receive, production usually exceeded domestic and export demand.

There are another couple of important lessons for today. First, transferring income to producers through production controls and higher prices reduced taxpayer costs because the

consumer was paying the bill. Unfortunately, this meant the benefits of the productivity revolution in agriculture were not fully passed on to the public. Second, the patchwork of farm programs was not enough to offset the effects of increased productivity on the structure of agriculture. The number of farms fell from 6.5 million in the 1930s to less than 3 million at the end of the 1960s and now less than 2 percent of the U.S. population lives on farms.

In the 1950s, Public Law 83-480 (P.L. 480) was enacted providing as another avenue for dealing with persistent surpluses and direct payments were introduced in the 1960s as a way of supporting farm income, which paved the way for the establishment of target prices in the mid-1970s. Export programs and direct payments remain key features of today's farm programs. Farm policy was fairly benign during much of the 1970s as exports boomed but, again, high supported prices and rising yields led to the largest annual land retirement program in history in 1983, the Payment In-Kind (PIK) Program.

Farm policy from 1985 to present. By 1985, several principles emerged that started the farm policy push toward market orientation. First, there was a focus on farm program spending, as deficit reduction was a national priority and farm program costs had spiraled to \$26 billion in FY 1986. Second, there was a recognition that the high-price support/supply control policy was doing damage to consumers, to competitiveness and to the environment. And, third, agriculture was increasingly viewed as a sector where a small share of farms produced much of the output, and these large-scale producers had household incomes that, on average, exceeded those of nonfarm households. This raised fundamental questions on just how much and what kind of support the Federal government should provide to farmers and ranchers.

Reflecting these principles, farm policy moved down a path toward reduced government

intervention and support in agriculture between 1985 and 1998. In addition, other programs, such as crop insurance and conservation, were strengthened to help farmers deal with risk and environmental concerns. During the period from 1985-95, reduced government intervention included reductions in target prices and payment acres, fixed program yields, reduced price support loan rates, marketing loans, and the partial decoupling of payments from current production. Additional market-oriented reforms contained in the Federal Agriculture Improvement and Reform Act of 1996 (1996 Farm Bill) included the further separation of payments from production and prices, giving farmers almost total planting flexibility, the elimination of annual production controls for major field crops, and, with exception of oilseeds, capped loan rates at the 1995 level. These changes in farm policy eliminated much of the market distortions caused by previous farm programs.

The 1996 Farm Bill authorized about \$36 billion in production flexibility contract (PFC) payments to producers during FY 1996-2002 and specified each crop's proportionate share of PFC payments. PFC payments are distributed to eligible producers based on program crop yields and crop bases that would have been in place under the Food, Agriculture, Conservation, and Trade Act of 1990 (1990 Farm Bill). For the most part, PFC payments are not affected by the amount of acreage a farmer plants to a particular crop and not linked to the level of market prices. Because PFC payments largely do not depend on current production or prices, it can be argued that they have very little if any measurable influence on farmers' planting and production decisions. In response to the increase in planting flexibility in the 1996 Farm Bill, producers have greatly expanded soybean plantings and reduced wheat plantings--soybean planted area was up nearly 25 percent in 2000 and wheat planted area was down about 12 percent in 2000, compared

with the 1995-2000 average. Plantings of corn and cotton in 2000 were up about 5-10 percent, compared with the 1990-95 average, with the increase likely reflecting both increased planting flexibility as well as the elimination of annual acreage reduction programs.

Since PFC payments are not tied to the level of market prices, PFC payments exceed payments that would have been made under the 1990 Farm Bill target price/deficiency payment program when prices are high. The opposite occurs when farm prices are low. This reflects the counter-cyclical nature of payments under the previous target price/deficiency payment program. The PFC payments authorized under the 1996 Farm Bill exceeded payments that would have been made under the previous target price/deficiency payment program by about \$7 billion during FY 1996-97, as strong market prices would have resulted in much lower payments under the target price/deficiency payment program. Farm prices have been much lower the past three years and PFC payments in FY 1998-2000 were well below payments that would have been made under the previous target price/deficiency payment program. However, a sharp increase in marketing loan benefits to producers were triggered by declining crop prices beginning in 1998. Even so, Congress responded to the shortfall in PFC payments by authorizing \$2.8 billion in supplemental PFC payments in 1998, and \$5.5 billion in supplemental PFC payments in 1999 and again in 2000.

The 1996 Farm Bill capped price support loan rates for wheat, corn, rice and upland cotton at the level announced for the 1995 crop. Meanwhile, loan rates for soybeans and other oilseeds were also capped at 7 percent above the 1995-crop level. In addition, the 1996 Farm Bill sets minimum loan rates for wheat and corn at 85 percent of the 5-year moving average of past market prices, excluding the highest and lowest price years. The same formulas apply to soybeans and upland cotton, except loan rates for those crops cannot fall below a designated level.

Furthermore, the minimum loan rates of wheat and corn may be reduced by up to 10 percent depending on the projected stocks-to-use ratio. For the 1996-2001 crops, the Secretary chose to announce loan rates for wheat, corn, upland cotton, and soybeans at the maximum level permitted by Congress, contributing to the increase in oilseed plantings since 1995. The Secretary has no discretionary authority in setting the rice loan rate. With loan rates set at the maximum level allowed, loan deficiency payments and marketing loan gains increased sharply from less than \$200 million for the 1996 and 1997 crops, to \$3.8 billion for the 1998 crop, to nearly \$8 billion for the 1999 crop and projected to be \$6-\$7 billion for the 2000 crop, reflecting the abrupt decline in major crop prices over the period. Because these payments are made based on current production and prices, they affect farmers' planting and production decisions. It is estimated marketing loan benefits in the form of marketing loan gains and loan deficiency payments increased plantings to the eight major crops by 4-5 million acres in 2000.

The move to more marketed-oriented farm programs has been somewhat diverted by the sharp drop in crop prices from historic high levels in 1996 and 1997, which led Congress to enact four pieces of legislation beginning in late 1998 and extending through last year that increased farm program spending by nearly \$25 billion. It is unknown whether Congress would have authorized this amount of increased spending on farm programs had the Federal budget been in deficit during FY 1999-2001.

State of the U.S. Farm Economy at the Start of Year 2001

What is next for farm policy depends on what extent the lessons of the past shape the next generation of programs, the current state of the farm economy, and the policy priorities of the Administration and Congress.

Farm prices historically weak. A simple measure of the overall strength of agricultural markets today compared with the past can be obtained by looking at the percentage change in each year's market value of total farm sales, compared with the previous 5-year average. That measure shows that the past two years have been pretty weak by historical standards, although the downturn in farm sales is being compared against a 5-year period of fairly strong market prices for some commodities in some years. The recent reduction in farm prices and returns from the market reflects large U.S. production, large production in key countries such as China, Argentina and Brazil, the global economic slowdown of 1998 and 1999 and its after effects, and the continuing high value of the U.S. dollar. For 2001, although there are hopeful signs, it is too early to predict more than limited improvement.

Agricultural exports low but recovering. In the mid-1990s, the value of U.S. agricultural exports rose sharply peaking at a record \$60 billion in FY 1996, up by more than one-third from just two years earlier. During the mid-1990s, a confluence of factors boosted exports: world gross domestic product (GDP) grew at an annual rate of over 3 percent, compared with less than 2 percent during the early 1990s and global grain and oilseed production fell about 4 percent.

The surge in exports led many to conclude that U.S. agriculture was entering a period of long term prosperity--continued and steady increases in world economic activity would be enough to keep farm prices strong even with normal weather. This new era of growth and prosperity for U.S. agriculture became a cornerstone for the 1996 Farm Bill. Obviously, that long-term forecast did not materialize. Good weather and strong prices led to an abrupt turnaround in world crop production, which increased sharply in 1996/97. Then, in 1998, world economic growth,

excluding the United States, fell to a paltry 1.3 percent. The slowdown in growth combined with continued strong crop production caused crop prices to decline sharply.

The world economy has steadily improved over the past couple of years. The world economy grew 2.8 percent in 1999 and about 4 percent in 2000, but is expected to slow a little to 3.3 percent this year. Improvements global economic growth and a weakening dollar are expected to cause the value of agricultural exports to rise to \$53 billion this fiscal year, up from the low of \$49 billion two years ago, but still well below the peak in 1996.

Over the next few years, the volume of U.S. agricultural exports is expected to register fairly strong growth, aided by large U.S. production and steady gains in world food demand, supported by income growth in most of Asia, Latin America, North Africa and the Middle East. Despite better demand, most major commodity prices are expected to recover only slowly because of large production and stocks.

Farm financial conditions remain stable because of record government payments and greater off-farm income. Large U.S. production and sluggish exports boosted crop carryover stocks causing major crop prices for the 1999 and 2000 seasons to be the lowest in 15 to 25 years. Yet, a national farm financial crisis has not occurred in large part due to record government payments and greater off-farm income. Farm numbers have been fairly stable in recent years, the proportion of nonperforming farm loans has risen only slightly, the debt-to-asset ratio remains at about 16 percent, down from 23 percent during the farm financial crises of the mid-1980s, and farm real estate values and land rental rates generally continue to rise. In 1999, U.S. farm land values rose 3 percent nationally and were up in 42 states and cash rents paid for 2000 were up in 40 states. Bankers in the Chicago Federal Reserve District reported that land

values in the district rose 7 percent over the 12-month period ending on October 1 of last year. While the national picture appears secure, regional and sector problems persist. The combination of low prices and structural change have caused the number of dairy and hog operations to decline and adverse weather in the Southeast, southern plains and elsewhere has contributed to regional pockets of farm financial stress.

After rising during the 1990s, farm debt is expected to increase slightly this year, and as a percent of assets, is expected to remain unchanged from last year. A useful indicator of financial stress is debt held by farms as a percentage of the maximum feasible debt that farms can take on, which is referred to as debt repayment capacity utilization (DRCU). Maximum feasible debt is a calculation based on net farm income, the interest rate, an assumed 7-year average repayment period for debt, and bankers' guidelines on the maximum level of income that should be used for principal and interest. In 2000, U.S. farmers, on average, used a little over 60 percent of their feasible debt and debt use is forecast to increase to 65 percent in 2001. Although the DRCU in 2001 would be the highest since 1986, and the level has been rising steadily in the 1990s, it is forecast to remain about half that of the 1984-85 farm credit crisis period.

DRCU may be taken a step further by looking at how this measure of debt stress is distributed among commercial farms. A commercial farm business is an operation that sells at least \$50,000 in farm products per year. Of the 2.2 million U.S. farms, about one-quarter, or 512,000 farms, sell at least \$50,000 in output per year. These farms account for 90 percent of total U.S. production.

Commercial farms that cannot service their debt and stop performing on their loans usually have debt equal to 240 percent or greater than their maximum feasible debt. In 1998, the number

of farms in this category rose, but the number fell in 1999. The weak markets probably led producers to use government payments to pay down debt. In 1999, about 50,000 of the nation's 512,000 farm businesses had debt repayment capacity utilization of 240 percent or more.

The most obvious reason we haven't seen more of an increase in farm financial stress is record-high government assistance to farmers. For 1999, 2000, and the current forecast for 2001, net income excluding government payments are the lowest since 1984. However, net cash income in 2000, including the record \$22 billion in government payments, was up about \$2 billion from 1999 and about equal the previous 5-year average.

In addition to government payments, another reason a national farm financial crisis has not materialized is the strong nonfarm economy which has helped increase off-farm income opportunities for farm households. For many farm households, farming is a second job. Off-farm jobs in rural areas are a major factor in why the number of farms has stabilized at 2.2 million in the 1990s.

Farm income to decline in 2001. Assuming no supplemental assistance for the 2001 crops, net cash farm income is projected to decline from \$56.4 billion last year to under \$51 billion in 2001, as production expenses continue to rise and government payments decline. Lower loan deficiency payments, reflecting modest improvement in crop prices, and scheduled annual reductions in PFC payments are forecast to reduce government payments by \$2.5-\$3.0 billion in 2001. With no supplemental payment legislation in place for the 2001 crops, emergency assistance to farmers and ranchers is projected to fall from nearly \$9 billion last year to about \$3.5 billion in 2001. The farm income situation in 2001 is not unlike that in recent years, although this year, some of the drop in government payments is expected to occur through lower loan

deficiency payments that will be made up in greater returns from the market.

The major field crops have been having particular market difficulty the past few years. Net cash farm income on a crop year basis for the major field crops--wheat, rice, corn, sorghum, oats, barley, cotton and soybeans--excluding government payments was low for the 1999-2000 crops and projected to remain low for the 2001 crops. Direct government payments accounted for three-fourths of net cash income for major field crops in 1999 and two-thirds in 2000. For 2001, net cash income for major field crops is projected to fall about \$6 billion, declining from almost \$26 billion for the 2000 crop to less than \$20 billion. The decline in net cash income between 2000 and 2001 is about equal to the amount of market loss assistance Congress authorized last year for major field crops. Absent new legislation, regions and crops that have been dependent on government payments are likely to see the greatest decline in farm income in 2001.

Major crop price and acreage prospects in 2001. Major crop prices for the 2000/01 season are expected to register only slight improvement from last year's depressed levels and for most crops are expected to remain near 15 to 25 year lows, reflecting another year of large U.S. and foreign production. Drought caused significant crop losses in some areas of the country in 2000, especially cotton in the southern and central Great Plains. Even so, cotton production was up in 2000. Soybean production was record-high in 2000 and corn production reached the second highest level on record, as growing conditions were generally very favorable for much of the Midwest. In contrast, wheat production was off 3 percent in 2000 as wheat plantings fell to a 27-year low. Farmers have responded to the planting flexibility provisions of the 1996 Farm Bill by planting less wheat and more oilseeds.

In 2001, wheat plantings and production could be down again as winter wheat area planted this past fall was off 5 percent from last year and the lowest since 1971. Corn plantings could also decline in 2001, while soybean area could exceed last year's record. Less fall planted wheat, higher fertilizer prices, and the benefits of the soybean marketing loan program provide an incentive for producers to further expand soybean plantings. Cotton plantings this spring are expected to remain about unchanged from last year.

Major livestock and poultry product price prospects in 2001. Increasing milk production caused milk prices to collapse at the end of 1999, as dairy producers responded to two consecutive years of high milk prices and low feed costs. The average all-milk price dropped to \$12.33 per cwt. in 2000, a 9-year low. In response to the collapse in milk prices, Congress authorized payments of \$0.65 per cwt. to dairy producers on production of up to 39,000 cwt. The sharp decline in milk prices this past year should begin to reduce the rate of expansion in milk production and lead to improved milk prices in 2001. The all-milk price is projected to increase by about 4 percent in 2001 but continue to remain below the average of the 1990s.

Hog and cattle prices were much improved in 2000, with cattle prices up 6 percent and hog prices up 31 percent. Large production stressed hog prices in 1998 and 1999. In 2000, hog producers cut production in response to the low prices the previous two years. Improved prices this past year could lead to a slight upturn in hog production and slightly lower hog prices this year, although large pork production during the second half of 2001 could reduce hog prices sharply in the fourth quarter.

Dry weather and lack of forage led beef producers to further reduce heifer retention in 2000, despite the increase in cattle prices. Beef production in 2000 was up 1 percent from the

1999 record. More favorable grazing conditions are expected to lead to reduced beef production and further improvement in cattle prices in 2001.

Declining poultry prices during the first half of last year reduced the expansion in poultry production in 2000. In 2000, broiler production rose 2 percent following a 7-percent increase in 1999. Broiler prices averaged 3 percent lower in 2000. In 2001, poultry prices are projected to remain steady. Returns to livestock and poultry producers in 2001 will continue to be supported by the low corn and soybean meal prices.

Production expense prospects in 2001. Higher prices for farm production inputs are raising farmers' production costs. Increases in fuel prices and interest rates along with higher prices for other production inputs increased farmers' production expenses by 4 percent or \$7.6 billion in 2000, with higher fuel prices accounting for over one-third of the increase. In contrast, farm production expenses rose only 1 percent from 1997 to 1999. In 2001, farmers' total cash production expenses are forecast to increase \$1.5 billion to a record \$179.5 billion, as higher fuel costs lead to higher prices for fertilizer and other energy-related inputs. However, declining interest rates will offset some of the increase in costs of other inputs.

Longer term outlook. Over the next several years, the agricultural sector is expected to continue to recover from the current weak market situation. Although there remain some lingering effects of the global economic crisis on the world economy, continued improvements in global economic growth, particularly in developing countries, are projected to increase steadily foreign demand for U.S. agricultural products. World real gross domestic product is projected to average about 3.5 percent per year over the next decade, compared with 2.6 percent in the previous decade. Almost all regions of the world are expected to realize above average economic

growth in the decade ahead. Rising world demand for agricultural products along with continued progress toward freer trade through ongoing unilateral policy reforms in foreign countries and existing multilateral trade agreement are projected to lead to steady increases in U.S. agricultural exports. The total value of U.S. agricultural exports is projected to rise 43 percent over the next 10 years, reaching \$76 billion in 2010.

In the absence of any new supplemental assistance, farm income would likely fall below recent levels during the next few years, as gains in commodity prices and cash receipts are not expected to offset the drop in supplemental government payments. Lower marketing loan payments could be offset by improvements in prices and receipts for major crops. Cash production expenses are expected to stabilize over the next couple of years as fuel prices moderate slightly but fertilizer and chemical expenses rise, reflecting the lagged effects of higher petroleum prices and modest increases in planted area. During this period of declining supplemental payments, farm financial stress for certain farmers may increase. Beyond the next few years, the outlook for the farm sector improves as expanding exports further strengthen farm commodity prices and increases in farm income and farm asset values help to moderate farm financial stress.

Mr. Chairman, that completes my testimony and I would be pleased to respond to questions.

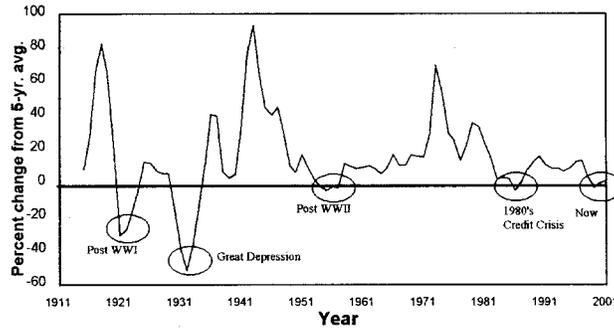
Farm Economic Indicators

Commodity Prices	Unit	1996/97	1997/98	1998/99	1999/00	2000/01
Wheat	\$/bu	4.30	3.38	2.65	2.48	2.65
Corn	\$/bu	2.71	2.43	1.94	1.82	1.85
Soybeans	\$/bu	7.35	6.47	4.93	4.63	4.75
Rice	\$/cwt	9.96	9.70	8.89	6.11	5.75
Cotton	cents/lb	69.30	65.20	60.20	45.00	55.1 1/
Hogs	\$/cwt	54.30	34.72	34.00	44.70	41.50
Steers	\$/cwt	66.32	61.48	65.56	69.65	74.50
Broilers	cents/lb	59.00	63.00	58.10	56.20	56.00
Milk	\$/cwt	13.36	15.46	14.38	12.33	12.80
Energy Prices 2/		1997	1998	1999	2000	2001
Gasoline	\$/gallon	1.24	1.07	1.18	1.53	1.48
Diesel	\$/gallon	1.19	1.04	1.12	1.48	1.51
Natural gas (wellhead)	\$per1,000 cubic ft	2.32	1.95	2.17	3.73	5.22
Electricity	\$/kwh	8.43	8.26	8.16	8.21	8.34
Agricultural Trade (Billion \$)	FY1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001
Total exports	59.9	57.4	53.7	49.2	50.9	53.0
Asia	26.0	23.9	19.7	18.5	19.7	21.2
Canada	6.0	6.6	7.0	7.0	7.5	7.8
Mexico	5.0	5.1	6.0	5.7	6.3	6.8
Total imports	32.5	35.7	36.8	37.3	38.9	40.0
Farm Income (Billion \$)	1996	1997	1998	1999	2000	2001
Cash receipts	199.1	207.6	196.6	188.6	196.0	200.0
Govt payments	7.3	7.5	12.2	20.6	22.1	14.1
Gross cash income	217.4	227.1	222.6	225.0	234.4	230.2
Cash expenses	159.8	168.6	167.2	170.4	178.0	179.5
Net cash income	57.6	58.5	55.4	54.6	56.4	50.7

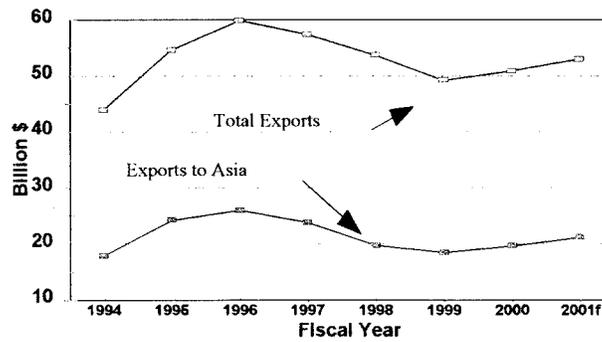
1/ August through November average.

2/ Source: Energy Information Administration, Short Term Energy Outlook, Jan. 2001.

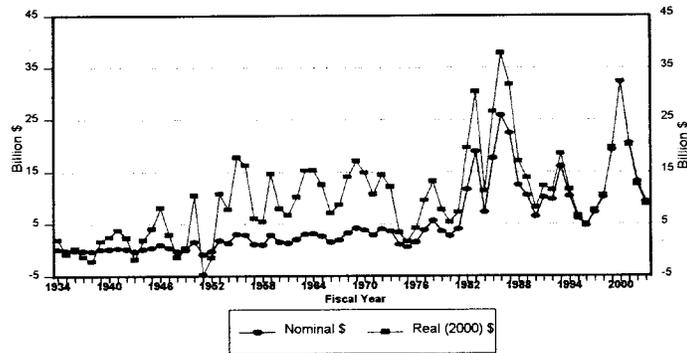
KEY PERIODS OF WEAK U.S. MARKETS (Change in cash receipts from 5-year avg.)



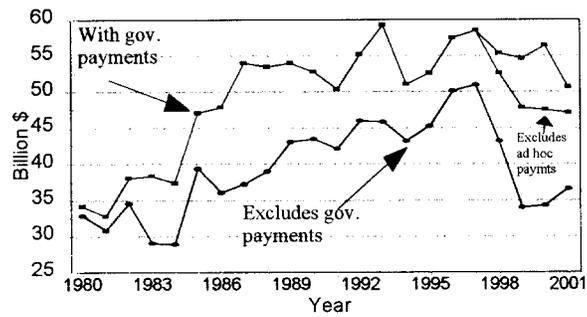
U.S. Agricultural Exports



Farm Program Outlays

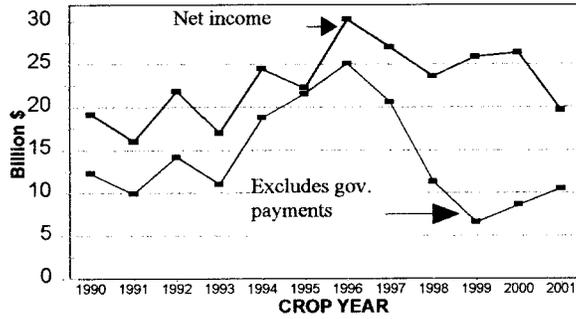


Net Cash Farm Income

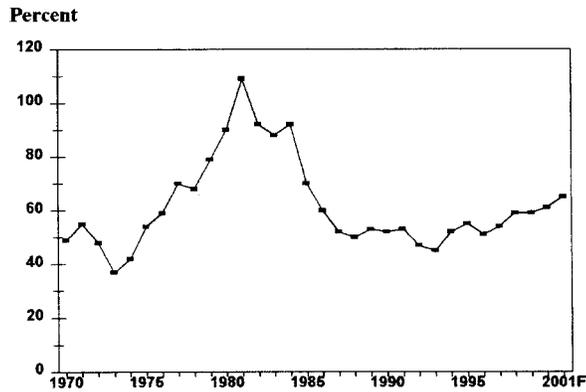


Net Income--8 Principal Crops

Food and Feed Grains, Cotton, Soybeans



Farmers' Use of Debt Repayment Capacity, 1970-2001



**Statement of Dr. B.L. Flinchbaugh
Chairman, Commission on 21st Century Production Agriculture
Before The
U.S. Senate Committee On
Agriculture, Nutrition and Forestry
January 30, 2001**

Mr. Chairman and Members of the Committee, thank you for the invitation to appear before you today to present the report of the Commission on 21st Century Production Agriculture. In my statement, I will provide an outline of the recommendations of the Commission with regard to the role of the Federal Government in support of production agriculture in the future. While the majority of the recommendations contained in the report are endorsed by all of the Commissioners, there are minority views on specific issues. These views are contained in the body of the full report.

The work of the Commission progressed in a number of steps. First the Commission identified a set of overall goals that agricultural policy should be designed to support. Next the Commission, as charged by statute, defined the appropriate role the federal government should play in providing support to production. The Commission then set forth to identify the issue areas that need to be addressed given the problems facing production agriculture now and in the future. Having identified a wide range of issues, the Commission then prioritized those issues into a manageable set of areas for in-depth review. The Commission relied on input from a diverse set of stakeholders, subject matter experts and background materials and analysis provided by staff to arrive at the specific recommendations for policy initiatives or other courses of action. The results of these efforts are contained in the report entitled "Directions for Future Farm Policy: The Role of Government in Support of Production Agriculture", provided to you in advance of this hearing.

The goals for American agricultural policy have not changed much over time. A historical review of declarations of agricultural policy converged to a common set of guiding principals. After due consideration the Commission adopted a set of four goals as summarized by the distinguished agricultural economist, Willard Cochrane. In this view appropriate agricultural policy should be that which enhances and supports the:

- Production of an abundant supply of high quality agricultural products at reasonable prices
- Maintenance of a prosperous and productive economic climate for the farmer producers
- Maintenance of the family-farm type organization as part of the production system
- Realization of a high quality of life for all individuals living in rural areas.

The recommendations and directions supported by the work of the Commission have been developed with a view toward consistency with these broad goals.

The Commission debated the appropriate function of the federal government in its role of providing support to production agriculture as charged by the statute which created the Commission. In general it was agreed that the role of the federal government should be limited to activities that involved issues that were unlikely to be solved through private sector initiatives. The Commission concluded that the proper role of the federal government should be to pursue policies and programs that promote the following concepts and/or accomplish the following outcomes:

- Ensure a competitive agricultural economy through monitoring of concentration, enforcement of antitrust laws and related regulatory authority, ensuring transparency of market behavior, including contracting

- Develop policies and programs that enhance the competitiveness of U.S. agricultural products, reduce trade barriers, open markets, and enhance the ability of producers to maximize value-added opportunities
- Base all policy on sound science and insist that foreign competitors do likewise
- Promote and enhance food safety and a clean environment
- Promote and enhance animal and plant health and safety
- Provide support for agricultural research and education
- Enhance the development and use of risk management tools
- Develop and fund programs that meet the special needs of small and limited resource farmers
- Provide an effective and adequate income safety net for farmers with minimal market distortion.

Having established the guidelines for the general goals for farm policy and the appropriate functions for federal government involvement, the Commission then defined a set of issues that needed to be addressed by future farm policy initiatives. To guide us in identifying the areas for consideration the Commission relied on input provided in a series of six public meetings held throughout the country in August and September of 1999. Public listening sessions were held in Fresno, California; Spokane, Washington; Denver, Colorado; Montgomery, Alabama; Chicago, Illinois; and Scranton, Pennsylvania. At these meetings the Commissioners heard testimony from 200 witnesses from 30 states and comments from speakers during the open microphone sessions.

Additional input was provided by public comments submitted directly to the Commissioners and via e-mail to the Commission's web site. Combined with the views of the individual Commissioners and aided by their interaction with other producers a set

of 15 issues for review was established. The initial list of topics for review included: Trade, Risk Management, Income Safety Net, Tax Policy, Conservation, Research & Education, Dairy, Peanuts, Sugar, Tobacco, Regulatory Policy, Industry Concentration, Small Farms Issues, Animal and Plant Health and Safety and Food Safety.

To aid the Commissioners in their understanding of the critical a series of informational meetings was held. Over the course of the Commission's tenure there were 14 meetings with over 60 expert witnesses providing input on the various aspects of each major issue. In addition, staff developed policy briefing papers, quantitative analysis of policy options and policy decision matrices to provide additional reference background and tools for analysis for the Commissioners.¹

Within the guidelines established and given the limitation of time and resources, issue priorities were set. The recommendations begin with income safety net followed by risk management, conservation and the environment, agricultural trade, the individual commodity policies; dairy, peanuts, sugar and tobacco and conclude with the issue of small and limited resource farms.

I. Income Safety Net

The persistence of very low commodity prices has rendered existing farm program support inadequate to address the level of distress experienced over the last few years. As a result the Congress has had to rely on emergency measures to provide additional support to the sector. The Commission has established a set of policies it believes will prevent the need for continued reliance on emergency measures, provide the

1. The policy background reports and decision matrices are available in Background and Analysis, Commission on 21st Century Production Agriculture.

flexibility necessary to address unforeseen changes in future market conditions while continuing to provide a solid foundation of support for production agriculture.

Income Support

The Commission recommends a continuation of a fixed AMTA payment in accordance with the existing baseline budget allocations in addition to a counter-cyclical income support program. The Commission specifically recommends a program referred to in our report as Supplemental Income Support or the SIS program. The SIS program along with the extension of the fixed AMTA payment would provide a flexible income safety net for agricultural producers in times of depressed market conditions and/or adverse weather events.

Marketing Loan Assistance Program

The Commission also recommends as part of the income safety net that the loan deficiency payments and marketing loan be retained, however adjusting the marketing loan rates to reflect a balance between the historical market value of individual crops. In addition the Commission recommends that the limitation on government payments to producers be removed.

Budget Implications of SIS Program

The Food and Agricultural Policy Research Institute (FAPRI) provided an assessment of the Commission's SIS counter-cyclical income support program.² FAPRI's analysis concluded that SIS, using a five-year moving average program crop gross income (PCGI), as the income trigger level would have an estimated average counter-cyclical payment of approximately \$2.8 billion in 2003. The average payments

2. See Appendix I. for complete analysis: FAPRI. *Preliminary Assessment of Counter-Cyclical Payment (CCP) Options*, November 2000.

are estimated to decline due to increased yields and stronger prices to \$318 million by 2009.

Trade Impacts of SIS Program

This counter-cyclical approach would be de-coupled from current prices and production and be distributed in a similar manner as the current Production Flexibility Contracts (PFCs). The de-coupled nature of the SIS payments along with the aggregate eight program crop gross income trigger yields a program that should be consistent with the U.S. commitment to international trade obligations namely the World Trade Organization's (WTO) Aggregate Measure of Support (AMS) in which the SIS would likely be categorized as a "green-box" or minimally distorting subsidy.

Impacts of SIS Program on Other Producers

The SIS program is envisioned to provide counter-cyclical income support for eight major program crops: wheat, corn, sorghum, upland cotton, soybeans, rice, barley and oats. Producers of non-program crops would not receive direct benefits from this program, however, non-program crops could be added to the aggregate. Planting flexibility as it currently exists would be maintained under this proposal.

Budget Implications of Marketing Loan Rate Adjustment

Aligning the marketing loan rates to market prices (five-year simple average of crop prices) for the eight principal crops relative to the soybean loan rate set at the maximum level, \$5.26, and allowing for an acreage response due to changes in Loan Deficiency Payments (LDP) payments, net an estimated increase in projected government outlays of approximately \$2.6 billion for 2001.³

3. See Appendix II for complete analysis: *Preliminary Assessment of Realignment of Commodity Marketing Loan Rates*, Office of the Chief Economist - USDA, November 2000.

Trade Impacts of Marketing Loan Rate

The adjustment to the marketing loan rates will not affect the trade implications of the program any differently than the current program. LDPs will continue to be classified as amber-box payments under the WTO classification scheme.

Impacts of Marketing Loan Rate Adjustment on Other Producers

Producers of non-program crops would not receive direct benefit from the proposed readjustment in the marketing loan rate for the eight program crops.

II. Risk Management

Producers have an array of tools at their disposal with which to manage risk. The Commission considered two categories of programs to enhance producers' ability to manage their business risks: insurance programs and savings account programs.

The Commission recommends that the possibility of creating an actuarially sound insurance program with coverage provided by private companies be studied. An actuarially sound insurance program is defined as one where the government does not underwrite a portion of the insurance companies risk but rather provides farmers with a voucher to offset the cost of insurance premiums.

The Commission also recommends the implementation of a FARRM account without a time restriction on how long money may be left in the account, thereby allowing the account to serve as both a cash reserve for low-income years as well as an alternative retirement fund for the producer. Further, the Commission supports a viable income averaging system for producers that is not negated by the effects of the Alternative Minimum Tax.

Budget Implications of FAARM Account

The Farm and Ranch Risk Management (FARRM) account allows producers to save money during years of higher net farm income to be drawn out in years with lower net farm income. The taxes on money in the account are deferred until they are withdrawn. The primary cost with such a program is the decrease in government revenue associated with tax deferral, estimated by USDA's Economic Research Service (ERS) at approximately \$2.8 billion dollars in 1994. This account may increase the financial stability for farmers and reduce the need for emergency government payments to producers.

Trade Impacts of FARRM Account

The use of the FARRM Account as a risk management tool would not likely be considered a trade-distorting program.

Impact of FARRM Account on Other Producers

Farmers who do not have a Federal income tax liability or report a farm loss are not eligible to contribute.

III. Conservation and the Environment

The Commission considered two categories of programs to enhance producers' ability to undertake conservation and environmentally beneficial practices in an economically viable manner: conservation reserve programs and conservation cost-share programs. Additionally, the Commission addressed other conservation and environmental issues affecting production agriculture citing the need for research in those areas.

The Commission recommends continuation of the Conservation Reserve Program and suggests that any possible increase in the acreage of the program be dedicated towards buffer strips, filter strips, wetlands, grass waterways and partial field enrollments.

The Commission recommends continuation of the EQIP program at funding levels initially proposed in the 1996 FAIR Act and for providing adequate support for NRCS staff to administer the EQIP program.

The Commission recommends that research be conducted that focus on the following conservation and environmental issues:

- Providing voluntary incentive-based programs to enhance agriculture's positive contribution to air and water quality and if necessary structuring a regulatory environment that allows farmers to prosper
- A means to provide compensation to producers who establish environmentally beneficial practices, with funding from a separate environmental program
- Establishing a baseline measure of agriculture's positive contribution to air and water quality
- Priority areas including, but not be limited to, carbon sequestration, control of greenhouse gases emissions, manure management and alternative fuels.

IV. Agricultural Trade

U.S. producers face challenges and opportunities in agricultural trade. A unified approach during international trade negotiations provides U.S. agriculture with the strongest position to achieve increased market opportunities for producers and favorable resolution to trade conflicts.

The Commission on 21st Century Production Agriculture endorses the comprehensive U.S. position on trade as it was tabled at the WTO in June 2000. In addition, the Commission stresses the need for agriculture negotiations to be part of a comprehensive negotiation conducted in a single undertaking approach. The Commission also recommends that Congress grant the President negotiating authority for the new round of trade talks. Lastly, it is the view of the Commission that negotiations on trade reform within the World Trade Organization are not the appropriate forum for negotiation of environmental and labor issues.

V. Individual Commodity Policies

Dairy, sugar, peanuts and tobacco are commodities that have evolved into specific and unique agricultural programs over the years. In reviewing each of these commodities' programs in detail, the Commission has identified areas of concern that will have an impact on the economic well being of the producers of each of these commodities. In an effort to provide direction for inquiry, the Commission has outlined a set of policy options for each commodity it feels should be reviewed and urges those within each industry to work together to develop solutions that will provide for a prosperous future for each of their respective commodities.

Dairy

Decisions regarding the course of future dairy policy must address at least four issues: federal marketing order reform, extension of dairy compacts, federal price support and international market opportunities and challenges.

Peanuts

The Commission recommends that the following options be examined: a phased reduction of the quota system with compensation to existing quota holders, allowing for transfer of quota across state boundaries, subsidies to manufacturers to stimulate purchase of domestically grown peanuts (similar to the Cotton Step 2 program), a marketing loan for peanuts, a direct payment type program for producers of quota peanuts, and greater incentives for increased industry competition to reduce concentration.

Sugar

The Commission believes that there needs to be serious consideration given to developing an alternative to the current sugar program. It is the view of the Commission that the following program options, individually or in combination, be evaluated: a marketing loan for sugar, domestic marketing controls, domestic production controls and some form of direct payment to sugar producers.

Tobacco

The options to the existing program the Commission feels should be examined include the following or some combination thereof: increasing transferability of quota across county lines and/or state lines, a buyout program designed to phase out the quota program, and a marketing loan for tobacco with a view to increased export competitiveness.

VI. Small and Limited Resource Farms

The Commission on 21st Century Production Agriculture recognizes the importance and value of the small family farm in production agriculture and rural

communities. The Commission further recognizes the significant impact government policy has on the economic condition of small family farms.

The Commission on 21st Century Production Agriculture acknowledges the work of the National Commission on Small Farms. The National Commission on Small Farms was created in 1997 by order of USDA regulation to “gather and analyze information regarding small U.S. farms and ranches and recommend to the Secretary of Agriculture a national strategy to ensure their continued viability in U.S. agriculture.”⁴ Their work continues in the activities of USDA’s Advisory Committee on Small Farms.

The Commission believes that the USDA Advisory Committee on Small Farms is well positioned to advise lawmakers on policy matters and should be the lead group in this issue area. The Commission also believes that it is the role of government to develop and fund programs that meet the special needs of small and limited resource farmers. Accordingly the Commission recommends that several specific areas warrant consideration by the Small Farms Advisory Committee as well as by legislators and policy makers.

The Commission recommends that the work of the Small Farms Advisory Committee be formalized as part of the U.S. Department of Agriculture by congressional authority, providing appropriate staff and funding. Commissioners Paige, Brumfield, DuPree, and Swenson wish to endorse the report of the National Commission on Small Farms in its entirety.

4. USDA Regulation No. 1043-43

*Minority View: Farm Income Safety Net**Leland Swenson**Endorsed by: Leland Swenson, Jim DuPree, Ralph Paige*

An alternative set of policy recommendations for an Income Safety Net has been provided by Commissioner Swenson.⁵ Commissioner Swenson's recommendations are based on the fundamental belief that the assumptions underlying the support for the passage of the Federal Agricultural Improvement and Reform Act of 1996 (FAIR Act) have proven not to be valid, nor will they likely have merit in the future. Commissioner Swenson maintains that: (1) The optimistic forecasts for expanded agricultural trade have been wrong; (2) Risk management programs have failed to adequately address price and production losses; (3) Reduced regulation has not improved production efficiency or reduced costs; (4) The farm program has reduced economic security for producers; and (5) Competition for export markets has increased due to the rational behavior of individual producers in response to declining prices and incomes.

Commissioner Swenson's Income Safety Net program combines a set of policies that involve changes to current provisions of the FAIR Act, reauthorization of authority for programs that were suspended and new initiatives in the areas of targeting and conservation. A fundamental part of Commissioner Swenson's program is a change in the calculations of existing commodity marketing loan rates. Commodity marketing loan rates for each commodity would be established utilizing a uniform methodology such as some minimum percentage of the 3-year moving average of USDA's full economic cost of production including dairy.

The program proposed by Commissioner Swenson would also include implementation of an inventory management program. The elements of the inventory

5. See Appendix III for *Supporting Materials for Minority View of Leland Swenson*

management program would include efforts to expand demand for, and the use of, agricultural products; incentives for management of existing inventories through farmer owned reserves program, and producer-stored reserves dedicated to renewable energy production and humanitarian food assistance; and a voluntary acreage set aside program where participants would benefit from increased marketing loans for the balance of program crops produced. The voluntary set aside would also provide authority for the reduction of marketing loan rates for non-participants if stocks-to-use ratios exceed specific levels.

The program as envisioned would also include mechanisms to provide for targeting of benefits, such as a limitation on the level of gross benefits from marketing loan receipts. Lastly the program would provide a set of incentives that encourage the application of long-term stewardship practices including authority to create and implement a multi-year land and soil rehabilitation program.

Minority View: Income Safety Net
John Campbell

An alternative set of policy recommendations was also provided by Commissioner Campbell. The views of Commissioner Campbell are a reflection, in part, of his belief that the recommendations of the Commission formalize, through the Supplemental Income Support (SIS) payment, increased support levels that have been provided by Congressional emergency assistance over the past three years. In Commissioner Campbell's view the SIS payment would prevent adjustment in land prices and land rents attributable in large part to the recent Congressional emergency assistance payments. As a result, in Commissioner Campbell's view: larger producers are able to optimize production at lower variable costs; are at an advantage over smaller

operations; and are increasing the rate at which these smaller operations are absorbed by the larger operators. The policy alternatives proposed by Commissioner Campbell are made in large part with a view to remove government incentives for farming operations to increase in size.

In addition, Commissioner Campbell emphasizes that while the farm economy has changed significantly over time, agricultural programs and policies have not. Commodity marketing loans, income support de-coupled from production and planting flexibility have been policy improvements. The difficulty is finding a non-distortive direct income support mechanism.

It is the view of Commissioner Campbell that three types of programs can be economically and socially justified in the future: (1) safety net programs for commercial producers that protect against catastrophic markets or weather situations, including market oriented marketing loans and a market oriented risk management program; (2) social and/or credit programs that help farmers on the edge transition to larger commercial operations, smaller specialty operations or to off-farm employment; and (3) environmental stewardship programs.

Minority View: Trade
Leland Swenson
Endorsed by Leland Swenson and Jim DuPree

An alternative viewpoint on agricultural trade issues was also provided by Commissioner Swenson. Commissioner Swenson's position on trade is guided by the belief that advocates of free trade in agriculture often overstate the benefits, ignoring the size and stable growth in domestic markets as well as the rapid growth in imports of competitive agricultural products. Further, Commissioner Swenson suggests that the

farm-gate benefits resulting from trade negotiations are likely to be mixed or inconsequential.

Specific recommendations provided by Commissioner Swenson include: a call for some mechanism to allow a nation whose agricultural producers suffer injury due to changes in relative currency values to offset those effects through border and export measures as well as domestic programs; elimination of the use of direct and indirect export subsidies; international harmonization of environmental, labor, intellectual property and competition policies and regulations; elimination of non-tariff barriers not based on scientific principles; increased transparency in reporting of support to agriculture, prices and industry concentration; international cooperation in economic development and inventory management; and a streamlined and expedited dispute settlement mechanism.

Minority View: Anti-Trust and Industry Concentration
Leland Swenson
Endorsed by Leland Swenson, Jim DuPree

While the Commission clearly stated that it is the role of the federal government to ensure a competitive agricultural economy, Commissioner Swenson provided additional views on these issues. Principal among Commissioner Swenson's views are that increased concentration in all sectors of the agriculture industrial complex have substantially reduced competition to the disadvantage of independent producers and the consumers of food and food products. Increasingly, in his view, the costs associated with excessive vertical and/or horizontal integration within the agriculture sector are being imposed on those upstream participants with the least amount of market power – agricultural producers.

Commissioner Swenson provides several suggestions to revitalize the U.S. effort to ensure and maintain that the level of market and sector concentration promotes open, competitive efficiency throughout the system and encourages market and transactional transparency. Specifics are provided in the full report. However, the main thrust of these recommendations are to: increase the review and enforcement capacity of agencies charged with antitrust responsibilities; provide for an on-going review process of both past and present mergers; and to provide additional authority to ensure that anti-competitive practices that fall outside current or traditional antitrust regulations and enforcement are continuously reviewed and appropriate avenues for redress provided.

Mr. Chairman, Members of the Committee, on behalf of the Commission, I would like to extend you our appreciation for allowing us to present you with our report. This concludes my testimony and I would be pleased to respond to any questions.

**Appendix I
PRELIMINARY ASSESSMENT OF
COUNTER-CYCLICAL PAYMENT (CCP) OPTIONS**

**PREPARED AT THE REQUEST OF THE
COMMISSION ON 21ST CENTURY PRODUCTION AGRICULTURE**

NOVEMBER 2000

FAPRI
**THE FOOD AND AGRICULTURAL POLICY
RESEARCH INSTITUTE**

Preliminary Assessment of the Counter-cyclical Payment (CCP) Options

The Commission on 21st Century Production Agriculture has requested that the Food and Agricultural Policy Research Institute (FAPRI) provide an assessment of two counter-cyclical payment proposals. The payments are designed to bring total gross income to the major program crops up to a selected target level. The payments are decoupled from production and are distributed among the crops based on the allocation of the recent supplemental packages.

Assumptions

- Program crops included are corn, sorghum, barley, oats, wheat, upland cotton, rice and soybeans.
- The program is analyzed over the 2003-2009 period.
- For each crop, the Program Crop Gross Income (PCGI) is calculated as the sum of cash receipts and loan deficiency payments (LDPs). All accounts are on a calendar year basis. The total PCGI is then calculated as the sum of the individual crop numbers.
- The Total Support Level is then calculated as the sum of the PCGI, AMTA payments, and Market Loss Assistance (MLA) payments.
- Table 1 shows the 8-Crop Total Support for the 1995-99 period. The first program option assumes that the reference period is fixed at the 1995-99 average. For the 8 crops, the targeted total support equals \$60.148 billion.
- The second option assumes that the reference period becomes a 5-year moving average. Targeted support levels using the moving average are given in Table 3 for the 2003-09 period.
- For each year 2003-09, $CCPs = \text{Base Support Level} - (\text{PCGI} + \text{Baseline AMTA})$.
- Each of the options has been evaluated over the 500 stochastic simulations generated with the FAPRI modeling system. Tables 2 and 3 provide average CCPs, as well the distribution of payments across various spending categories.

Preliminary Results

- With the base period fixed at the 1995 average, CCPs would average \$5.357 billion in 2003. Due to increasing yields and stronger prices, average CCPs decline to \$551 million by 2009.
- Allowing the base period to adjust with the 5-yr moving average causes a significant decline in CCPs. For example, CCPs for 2003 average \$2.825 billion under the moving average scheme. This is attributed to the fact that the target support level falls from \$60.148 billion down to \$57.243 billion.

Fig. 1 Distribution of Counter-cyclical Payments,
Based on 1995-99 Reference Period

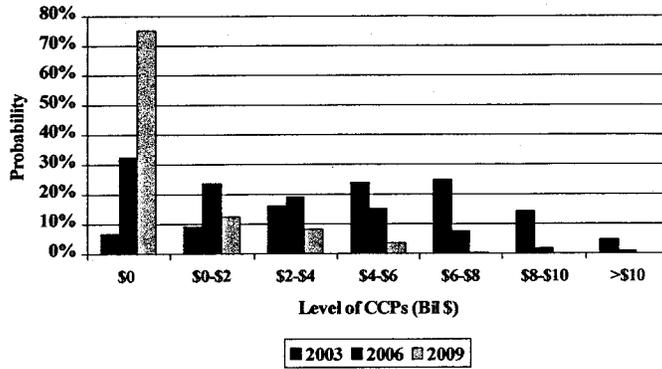


Fig. 2 Distribution of Counter-cyclical Payments,
Based on 5-Yr Moving Average

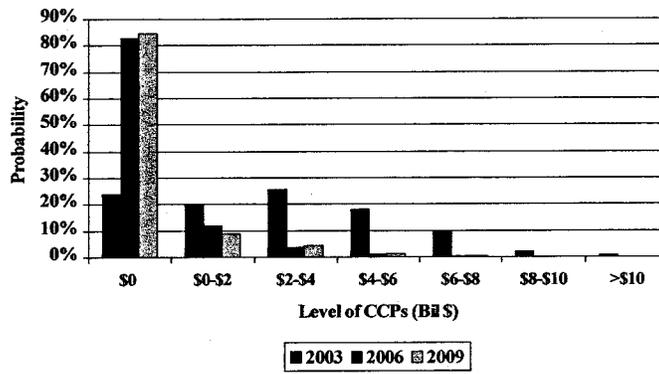


Table 1. Program Crop Gross Income & Total Support

Calendar Year	1995	1996	1997	1998	1999	1995-99 Avg
	(Billion Dollars)					
8-Crop PCGI	52.331	55.763	56.794	50.682	48.906	
8-Crop Total Support	56.756	61.736	62.914	59.494	59.841	60.148
Wheat PCGI	9.115	9.133	8.438	7.368	6.875	
Wheat Total Support	9.702	11.229	9.838	9.696	9.762	10.045
Corn PCGI	18.893	20.669	19.878	17.696	17.681	
Corn Total Support	21.479	22.871	23.100	21.794	22.765	22.402
Sorghum PCGI	1.377	1.508	1.561	1.015	1.014	
Sorghum Total Support	1.594	1.753	1.888	1.461	1.568	1.653
Berley PCGI	0.825	0.969	0.795	0.714	0.566	
Berley Total Support	1.018	1.119	0.907	0.901	0.797	0.948
Oats PCGI	0.122	0.137	0.109	0.098	0.108	
Oats Total Support	0.149	0.147	0.117	0.111	0.125	0.130
Cotton PCGI	6.851	6.983	6.346	6.163	5.810	
Cotton Total Support	6.881	7.746	6.946	7.158	7.041	7.154
Rice PCGI	1.282	1.568	1.681	1.741	1.660	
Rice Total Support	2.066	2.074	2.131	2.487	2.592	2.270
Soybean PCGI	13.865	14.797	17.986	15.886	15.191	
Soybean Total Support	13.865	14.797	17.986	15.886	15.191	15.545

* PCGI (Program Crop Gross Income) = Cash Receipts + LDPs

** Total Support = PCGI + AMTA + Market Loss Assistance

Table 2. Projected Counter-cyclical Payments (CCPs)* Using 1995-99 Base Period

Calendar Year	2003	2004	2005	2006	2007	2008	2009
	(Billion Dollars)						
Average CCPs	5.357	4.433	3.102	2.304	1.462	0.954	0.551
Probability of Payment Levels							
CCP = \$0	6.8%	11.4%	23.1%	32.3%	47.3%	60.1%	75.3%
\$0 < CCP < \$2B	9.0%	12.6%	18.6%	23.5%	21.8%	18.7%	12.5%
\$2 < CCP < \$4B	16.2%	20.6%	21.9%	19.0%	16.9%	14.2%	8.3%
\$4 < CCP < \$6B	23.8%	24.9%	19.5%	15.1%	10.1%	6.2%	3.5%
\$6 < CCP < \$8B	24.8%	17.9%	12.1%	7.6%	3.9%	0.7%	0.4%
\$8 < CCP < \$10B	14.3%	9.4%	3.8%	1.7%	0.1%	0.1%	0.0%
CCP > \$10B	5.0%	3.2%	0.9%	0.8%	0.0%	0.0%	0.0%

* Average levels and probabilities are based on 500 stochastic simulations.

Table 3. Projected CCPs* Using 5-Yr Moving Avg Reference Period

Calendar Year	2003	2004	2005	2006	2007	2008	2009
	(Billion Dollars)						
5-Yr Moving Avg Support Level	57.243	56.329	55.688	55.265	56.223	57.510	58.879
Average CCPs	2.825	1.510	0.558	0.292	0.252	0.268	0.318
Probability of Payment Levels							
CCP = \$0	23.7%	45.6%	70.3%	83.0%	86.0%	85.4%	84.7%
\$0 < CCP < \$2B	20.0%	24.6%	19.1%	12.1%	8.6%	8.9%	8.7%
\$2 < CCP < \$4B	25.7%	15.6%	7.1%	3.6%	4.1%	4.5%	4.5%
\$4 < CCP < \$6B	18.1%	9.6%	3.0%	1.1%	1.2%	1.3%	1.5%
\$6 < CCP < \$8B	9.7%	3.2%	0.5%	0.2%	0.1%	0.0%	0.4%
\$8 < CCP < \$10B	2.2%	1.3%	0.0%	0.0%	0.0%	0.0%	0.1%
CCP > \$10B	0.6%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%

* Average levels and probabilities are based on 500 stochastic simulations.

**Appendix II
PRELIMINARY ASSESSMENT OF
REALIGNMENT OF COMMODITY MARKETING LOAN RATES**

**PREPARED AT THE REQUEST OF THE
COMMISSION ON 21ST CENTURY PRODUCTION AGRICULTURE**

NOVEMBER 2000

USDA OFFICE OF THE CHIEF ECONOMIST

**Loan Rates Aligned with Soybeans for 2000 and 2001 Crops
(with acreage shifts)**

	2000-Crop Loan Rate Options			2001-Crop Loan Rate Options		
	Aligned Based on Market Prices			Legislated	Aligned Based on Market Prices	
	Announced	Maximum	Minimum	Maximum	Maximum	Minimum
Corn	1.89	2.12	1.98	1.89	1.99	1.91
Wheat	2.58	3.03	2.84	2.58	2.85	2.73
Soybeans	5.26	5.26	4.92	5.26	5.26	4.97
Upland	0.52	0.55	0.51	0.52	0.55	0.53
Cotton						
Rice	6.50	7.65	7.16	6.50	7.43	7.19
Sorghum	1.71	1.91	1.79	1.71	1.75	1.68
Barley	1.62	2.12	1.98	1.65	2.12	2.03
Oats	1.16	1.30	1.22	1.21	1.27	1.22

**Projected Change in Outlays with Aligned Loan Rates for
2000 and 2001 Crops (Million \$) (with acreage shifts)**

	2000-Crop Loan Rate Options			2001-Crop Loan Rate Options		
	Aligned Based on Market Prices			Legislated	Aligned Based on Market Prices	
	Announced	Maximum	Minimum	Maximum	Maximum	Minimum
Corn	0	2,981	1,369	0	1,808	809
Wheat	0	1,113	637	0	756	412
Soybeans	0	-669	-1,571	0	-725	-1,651
Upland	0	265	-47	0	249	57
Cotton						
Rice	0	297	171	0	236	176
Sorghum	0	112	53	0	63	16
Barley	0	193	137	0	179	138
Oats	0	30	14	0	16	5
Total	0	4,322	763	0	2,582	-38

Loan Rates Aligned with Soybeans for 2000 and 2001 Crops						
	2000-Crop Loan Rate Options			2001-Crop Loan Rate Options		
	Aligned Based on Market Prices			Legislated	Aligned Based on Market Prices	
	Announced	Maximum	Minimum	Maximum	Maximum	Minimum
Corn	1.89	2.12	1.98	1.89	1.99	1.91
Wheat	2.58	3.03	2.84	2.58	2.85	2.73
Soybeans	5.26	5.26	4.92	5.26	5.26	4.97
Upland	0.52	0.55	0.51	0.52	0.55	0.53
Cotton						
Rice	6.50	7.65	7.16	6.50	7.43	7.19
Sorghum	1.71	1.91	1.79	1.71	1.75	1.68
Barley	1.62	2.12	1.98	1.65	2.12	2.03
Oats	1.16	1.30	1.22	1.21	1.27	1.22

Projected Change in Outlays with Aligned Loan Rates for 2000 and 2001 Crops (Million \$)						
	2000-Crop Loan Rate Options			2001-Crop Loan Rate Options		
	Aligned Based on Market Prices			Legislated	Aligned Based on Market Prices	
	Announced	Maximum	Minimum	Maximum	Maximum	Minimum
Corn	0	2,164	857	0	1,147	149
Wheat	0	954	540	0	665	318
Soybeans	0	0	-897	0	0	-731
Upland	0	242	-35	0	283	55
Cotton						
Rice	0	210	120	0	217	135
Sorghum	0	89	35	0	46	-10
Barley	0	150	109	0	133	101
Oats	0	20	8	0	11	1
Total	0	3,829	737	0	2,502	19

	Crop Prices used to determine loan rates						
	1995	1996	1997	1998	1999	2000 Average (1995-99)	Average (1996-00)
Corn	\$3.24	\$2.71	\$2.43	\$1.94	\$1.80	\$1.90	\$2.42
Wheat	\$4.55	\$4.30	\$3.38	\$2.65	\$2.48	\$2.60	\$3.47
Soybeans	\$6.72	\$7.35	\$6.47	\$4.93	\$4.65	\$4.70	\$6.02
Upland	\$75.40	\$69.30	\$65.20	\$60.20	\$45.00	\$58.00	\$63.02
Cotton							
Rice	\$9.15	\$9.96	\$9.70	\$8.89	\$6.11	\$6.00	\$8.76
Sorghum	\$3.19	\$2.34	\$2.21	\$1.66	\$1.55	\$1.75	\$2.19
Barley	\$2.89	\$2.74	\$2.38	\$1.98	\$2.13	\$2.25	\$2.42
Oats	\$1.67	\$1.96	\$1.60	\$1.10	\$1.12	\$1.10	\$1.49

Appendix III
Supporting Materials for Minority View of Leland Swenson
TABLES

Effective AMTA Payments - FY 2000	Wheat	Corn	Sorghum	Barley	Cotton	Rice"
Marketing Loan Rate	2.58	1.89	1.74	1.56	51.92	6.50
Program Payment Yield [^]	34.7	102.8	57.3	47.2	6.08	48.17
Actual Yield/Harvested Acre*	41.9	137.7	60.4	61.1	6.22	62.36
Base Acreage Factor	0.85	0.85	0.85	0.85	0.85	0.85
2000 Nominal AMTA Payment Rate (nominal \$/unit) [^]	0.58	0.33	0.40	0.25	7.10	2.60
2000 Nominal Market Loss Payment Rate (nominal \$/unit) [^]	0.64	0.36	0.44	0.27	7.90	2.82
Total Nominal Payment Rate (\$/unit)	1.22	0.69	0.84	0.52	15.00	5.42
Nominal Safety Net (loan + Nominal AMTA & MLP)	3.80	2.58	2.58	2.08	66.92	11.92
2000 Effective AMTA Payment Rate (\$/unit) [^]	0.41	0.21	0.32	0.16	5.90	1.70
MLP Effective Payment Rate (\$/unit) [^]	0.45	0.23	0.35	0.18	6.56	1.85
Total Effective Payment Rate (\$/unit)	0.86	0.44	0.68	0.34	12.46	3.55
Effective Safety Net (loan + Effective AMTA & MLP)	3.44	2.33	2.42	1.90	64.38	10.05
2000 Actual Production*	2,223	10,054	463	318	84.05	192.4
Total AMTA Expenditures (AMTA % X \$5,000 million)	1,313.0	2,311.0	255.5	108.0	581.5	432.0
Total MLP Expenditures (AMTA % X \$5,544 million)	1,455.9	2,562.4	283.3	119.8	644.8	469.6
Total Expenditures: AMTA + MLP	2,768.9	4,873.4	538.8	227.8	1,226.3	901.6
AMTA Production-Based Payments (Prod. X Eff. Rate)	1,909.1	4,402.2	313.6	108.6	1,047.6	683.3
Non-production-based AMTA Payments (million \$)	859.8	471.2	225.2	119.2	178.7	218.3
Alternative: Outlays Based On Production:						
Payment Rate (per unit-AMTA expenditure/production)	0.59	0.23	0.55	0.34	6.92	2.25
MLP Payment Rate (per unit- MLP expenditures/production)	0.65	0.25	0.61	0.38	7.67	2.44
Total Production-based Payments	1.25	0.48	1.16	0.72	14.59	4.69
Marketing Loan Rate	2.58	1.89	1.74	1.56	51.92	6.50
Production-based Safety Net	3.83	2.37	2.90	2.28	66.51	11.19

[^]Adjusted for yield and acreage factors

*Includes add'l. AMTA contained in FAIR Act (\$8.5 million)

*USDA, WASDE Nov. 9, 2000

[^]FAPRI, "1999 U.S. Agricultural Outlook"

Modified Marketing Loan Program

	Wheat	Corn	Soybeans	Cotton	Rice	Sorghum	Barley	Total
2000 Crop (Actual)								
Acreage	53.0	73.0	73.0	13.52	3.09	7.7	5.2	
Yield	41.9	137.7	38.0	6.22	62.36	60.4	61.1	
Production	2,223	10,054	2,777	84.05	192.4	463	318	
Loan Rates	2.58	1.89	5.26	51.92	6.5	1.74	1.56	
Loan Program Crop Value (million \$)	5735.34	19002.06	14607.02	4363.88	1250.6	805.62	496.08	46260.
SCENARIO 1:								
2000 Modified Loan Program (0% Set-Aside)								
Acreage (105% of 2000 harvested acres)	55.65	76.65	76.65	14.196	3.2445	8.085	5.46	
Yield (99% of 2000 actual yield)	41.481	136.323	37.62	6.1578	61.7364	59.796	60.489	
Production	2308.4	10449.2	2883.6	87.4	200.3	483.5	330.3	
80% of 3-Yr. Ave. Cost of Production (planted a.)	3.75	2.41	5.28	69.36	9.41	2.53	2.80	
Loan Program Crop Value (million \$)	8656.57	25182.47	15225.27	6063.18	1884.86	1223.13	924.76	59160.2
LDP/MLG Outlays Over 2000 Projected (million \$)	2921.23	6180.41	618.25	1699.31	634.26	417.51	428.68	12699.6
SCENARIO 2:								
2000 Modified Loan Program (Ave. 10% Set-Aside)								
Acreage (effective 95% x 2000 harvested acres)	50.35	69.35	69.35	12.84	2.94	7.32	4.94	
Yield (100% of 2000-harvested)	41.90	137.70	38.00	6.22	62.36	60.40	61.10	
Production	2109.7	9549.5	2635.3	79.9	183.1	441.8	301.8	
105% of Base Loan (80% C of P-units/planted a.)	3.94	2.53	5.54	72.83	9.88	2.66	2.94	
Loan Program Crop Value (million \$)	8306.81	24165.00	14610.10	5818.21	1808.70	1173.71	887.39	56769.9
LDP/MLG Outlays Over 2000 Projected (million \$)	2571.47	5162.94	3.08	1454.33	558.10	368.09	391.31	10509.3
Renewable Energy/Humanitarian Food Reserves								
Reserve Quantity (million units)	300	600	100	na	25	na	na	
Price Paid (mid-point USDA 11/9/00 projection)	2.60	1.90	4.60	na	6.00	na	na	
Reserve Purchase Outlays (million \$)	780	1140	460	na	150	na	na	253
Annual Storage Rate (\$/unit/year)	0.30	0.30	0.30	na	0.60	na	na	
Quantity	300	600	100	na	25	na	na	
Annual Storage Outlays (million \$)	90	180	30	na	15	na	na	31
Total Reserve Outlays	870	1320	490	na	165	na	na	284
Scenario 2 - Reduction in Outlays (million \$)								
Cash Market Price Impact (LDP/MLG savings)								
Base Production (2000 crop production)	2223	10,054	2,777	84	192	463	318	
Scenario Production	2110	9,549	2,635	80	183	442	302	
Non-commercial Reserve Programs (RER/HFR)	300	600	100		25			
Production Change (base less scenario plus reserves)	413	1,105	242	4	34	21	16	
Market Price Impact	0.60	0.44	0.42	1.00	0.10	0.01	0.01	
Market Production	1810	8949	2535	80	158	442	302	
LDP/MLG Savings	1086.00	3937.56	1064.70	80.00	15.80	4.42	3.02	6191.5
Net Change in Outlays - Scenario 2 v. 2000 crop								7162.8

*Note: Analysis does not include oats or minor oilseeds

Milk Production: Economic Costs and Returns - 1997-1999

Gross Value of Production (per cwt)	1997	1998	1999	3-yr Ave.
Milk	\$ 13.43	\$ 15.51	\$ 14.40	\$ 14.45
Cattle	0.85	0.83	0.90	0.86
Other	0.59	0.55	0.54	0.56
Total Value of Dairy Production (per cwt)	\$ 14.87	\$ 16.89	\$ 15.84	\$ 15.87
Economic Cost of Dairy Production (per cwt)	\$ 18.37	\$ 17.25	\$ 16.47	\$ 17.36
Less: Non-milk Production Value*	1.44	1.38	1.44	1.42
Economic Cost of Milk Production (per cwt)	\$ 16.93	\$ 15.87	\$ 15.03	\$ 15.94

Dairy Production (\$17.36 per cwt)	
60% of 3-Yr. Ave. Cost of Production	\$ 10.42
70% of 3-Yr. Ave. Cost of Production	\$ 12.15
80% of 3-Yr. Ave. Cost of Production	\$ 13.89
90% of 3-Yr. Ave. Cost of Production	\$ 15.62
Milk Production (\$15.94 per cwt)	
60% of 3-Yr. Ave. Cost of Production	\$ 9.56
70% of 3-Yr. Ave. Cost of Production	\$ 11.16
80% of 3-Yr. Ave. Cost of Production	\$ 12.75
90% of 3-Yr. Ave. Cost of Production	\$ 14.35

*Assumes no residual margin to non-milk returns

source: ERS/USDA, "Agricultural Income and Finance", Sept., 1999, Sept., 2000

EXPLANATION OF TABLES**Effective AMTA Payments – FY 2000**

- Nominal Safety Net: Nominal value of per unit (bu., cwt.) program commodity payments, as estimated by FAPRI, provided farmers based on the FAIR Act contract payment schedule, and ad hoc payments Market Loss Payments (MLP) for this year as adjusted by the Act's allocation factors and adjustment provisions plus the commodity marketing loan rate.
- Effective Safety Net: Nominal payment rate per commodity adjusted for the effect of historically established (frozen) program payment yields and the 85% base adjustment factor for both the AMTA and MLP's plus the commodity marketing loan rate.
 - Actual national average yields per harvested acre are currently 20-30% higher, depending on the crop, than the historic program payment yields.
 - The base adjustment factor was a carryover from prior target price programs utilized to achieve budget targets. Under the FAIR Act, the factor provides an opportunity to greatly overstate the nominal AMTA payment rate to producers

making some growers and policy makers believe the payments per unit are higher than they are in actuality.

- **Production-Based Payments:** Equal to the Effective Production-Based Payment rate per unit times the current years actual production. No adjustment was made to reflect the production of producers who are not program participants. This calculation represents, by commodity, the aggregate amount of AMTA and MLP payments that were made to actual producers.
- **Non-Production-Based Payments:** Equal to the difference, by commodity, of the AMTA and MLP allocation/appropriation and the Production-Based Payments. The amounts represent payments that were made to those who did not produce the crop on which AMTA/MLP payments were based. These recipients would include program participants who: 1) cross-subsidized production of other crops under the planting flexibility provisions (i.e. oilseeds), 2) experienced reductions in production due to natural disaster or management and 3) did not plant any crops. Outlays in this category represent about 20% of the total AMTA/MLP outlays.
- **Alternative: Outlays Based On Production:** By commodity, the payment rate that could be provided program crop producers if the full AMTA/MLP allocation were paid based on actual production instead of yields and acreage bases determined by historical program participation, plus the commodity marketing loan. This format would result in the same level of annual outlays as the current program, but makes payments to those farmers who actually produced the crops for which the programs were established.

3-Year Average Cost of Production

- **3-Year Average Yield Per Planted Acre:** Calculation of the national average production per acre, by crop, based on total actual production divided by the total planted acres of that crop. The 3-year average yield is the simple average of the national average yields for the period.
- **3-Year Average Economic Cost of Production Per Planted Acre:** Calculation of the most recent, simple 3-year average of the ERS/USDA cost of production data published in "Agricultural Income and Finance". Forecasted costs for the current year are generally published in December preceding the crop.
- **3-Year Average Cost of Production:** Calculation of the per unit average cost of production based on the per planted acre 3-year average cost of production divided by the 3-year average yield per planted acre.

Modified Marketing Loan Program

- **2000 Crop Actual:** Calculation of the commodity marketing loan value for each crop based on actual production times the national average marketing loan rate. The value represents an estimate of the minimum gross value of each crop. No adjustment was made to account for production that was ineligible for the marketing loan due to

payment limitations or non-participation in the program. This provides one form of reference for changes in minimum crop values and potential outlays due to suggested program changes.

- Scenario 1: Estimate of the effect of establishing the national average commodity marketing loan at 80% of the 3-year average cost of production per planted acre. The scenario assumes that due to the increase in loan values, harvested acreage will increase 5% over the 2000 level and average yields will decline by 1% as less productive land is brought into production. Increased outlays are the difference between the crop value under Scenario 1 and the 2000 crop (actual).
- Scenario 2: Extension of Scenario 1 with the application of a voluntary set-aside program. Assumes producers would be able to choose from a range of 0%, 10%, 15% or 20% set-aside options. The base loan rate (80% of the 3-year cost of production) would be increased by 50% of the set-aside rate selected by those producers who elect to participate in the set-aside program. For example, a 10% set-aside election would provide a loan rate equal to 105% of the base loan. A 15% set-aside would result in a 107.5% loan rate, etc.
- Renewable Energy/Humanitarian Food Reserves: Estimate of the outlays associated with the creation of limited reserve programs that would be isolated from the commercial food production/processing market. Outlays represent the estimated government cost of purchasing commodities and one-year's storage expense.
- Scenario 2 – Reduction in Outlays: Estimate of the program savings through reduced outlays for loan deficiency payments and marketing loan gains (LDP/MLG) associated with the implementation of the Renewable Energy and Humanitarian Food Reserves and producer participation in the voluntary set-aside program. Reductions in the LDP/MLG's occur as the result of the positive impact of the reserves and set-asides on market prices received by producers for the commodities produced and sold. The estimated per unit market prices reflect generally assumed price responses to reductions in available market supplies. For example, wheat market prices are estimated to increase \$0.15 per bushel for each 100 million-bushel reduction in supply.

The level of market production in this section is below expected levels of utilization for most commodities. Existing ending stocks would flow into the market to replace production entered in the reserve programs or reduced by the set-aside program assuring adequate stocks are available to the market while improving the commercial stocks-to-use ratio for current and future years. Those stocks would also receive the higher market price, however it is assumed the producer has previously completed the marketing loan transactions on those quantities. To the extent this is not the case, the projected savings in outlays is understated.

Milk Production

Table provides cost of production information concerning the dairy sector that is calculated in a format similar to that provided in prior tables for the program crops sector.

Conclusion

For approximately \$2.4 billion in additional outlays, above the level spent on AMTA and MLP's, a counter-cyclical, production-based commodity marketing loan safety net could be established at 80% of the economic cost of production. This would provide greater program equity among crops, target payments to actual producers and enhance financial security for crop producers without other program modifications.

If proposed authority for inventory management - voluntary set-aside and reserve programs - is granted and utilized, the outlays fall by about \$3.4 billion compared to current de-coupled payment levels, while the average producer safety net on actual production remains at the 80% of economic cost of production level.

DOCUMENTS SUBMITTED FOR THE RECORD

JANUARY 30, 2001

SEN. CRAPO'S INSERTION INTO RECORD
 PER UC REQUEST IN
 HIS WRITTEN STATEMENT 1/30/01

**Concerns raised during Senator Crapo's 2000 agriculture town hall meetings
 and possible Congressional actions**

1. Farmers feel that neither the U.S. government nor its citizens support domestic agriculture as a priority in either the national or international arena. U.S. consumers do not worry about the possibility of a short food supply or even a safe food supply, as exemplified by the acceptance and purchase of imported food products that are grown and processed in a more relaxed regulatory environment.

Action: Along with a new Farm Bill, create a National Food Policy that emphasizes the priority of an adequate, safe domestically produced food supply that will ensure the stability of the domestic agriculture industry.

2. Agricultural industries are becoming very polarized and fragmented, between the production segment and the processing and distribution segment, with each formulating agendas for their individual bottom line profits, with less concern for the industry as a whole. Country of Origin labeling is opposed by processors and retailers. U.S. companies are locating overseas to take advantage of cheap labor and raw materials, and bringing commodities back to the U.S. to compete with domestic supplies, both raw and value-added.

Action: Encourage USDA to be more of an advocate for production agriculture both for consumer educational purposes and for legislative action resources. For example, production agriculture does not receive proportionate credit for its contribution to the U.S. balance of trade resulting in little political strength when asking for additional marketing development.

3. World trade encourages consolidation and conglomerates in order to provide essential internal infrastructure, financial resources, human resource expertise, and marketing capabilities. Fewer and larger market participants have increased opportunities to influence and/or manipulate market pricing. Production agriculture is receiving a disproportionately low percentage of the consumer dollars both in the U.S. and worldwide.

Action: Effective use of monopolistic monitoring to address the new business environment, especially in the area of world trade, but also in domestic markets.

4. Many blame the Freedom to Farm Act for creating oversupply and providing conglomerates with an inexpensive supply of raw food products. However, there seems to be a majority who still embrace the concept behind the Act and feel planting for the market is still a step in the right direction. Many blame the federal government for not expediting and accomplishing the accompanying agreements provided for in the 1996 Farm Bill in areas of trade, crop insurance, research, market development and reduced regulations.

Action: Strive for a much stronger position in the negotiation of agricultural trade issues. Continue to provide additional transition payments until trade inequities are eliminated. Increase funding for research especially in the area of alternative uses for agricultural commodities, and support increased market development efforts. Unused EEP money could be channeled into market development activities.

5. Participants at our meetings indicated a very real need for continuation of some type of government program help until the inequities in trade and marketing procedures can be worked out.

Action: Enactment of a farm program that would continue to support the agricultural economy on a short-term basis and that would not necessitate the unpopular supplemental appropriations. Additionally, loan price does set the market price of programmed crops. Barley growers are asking for an increased barley loan rate to reflect the higher market price of the malt barleys, which are not presently being averaged to arrive at the present barley loan rate. Some wheat growers are also asking for a higher loan rate. Pea and lentil producers want their commodities to be included as a programmed crop, participating in a loan program and a loan deficiency program similar to that for the wool producer and some potato growers. The concept of counter-cyclical payments is popular with our grain growers. A two-level subsidy program has been suggested, one for the domestic market and the other non-subsidized for the world market (that which is allowed to be planted over and above that needed in the domestic market).

6. There will probably never be a truly fair trade situation and the proverbial "level playing field" is going to always have lots of bumps, but we need continued and expanded export opportunities through market development and market access.

Action: Continue support of the WTO and the priority position of negotiating agricultural commodities within that framework. Increase market development and market access programs. Require more border inspections on imported commodities for quality and safety, to be paid for by the importer. We should give special attention to the negative effect of imports of honey and apple concentrate from China and the "stuffed molasses" and Mexican side agreement that is adversely negatively affecting the sugar industry and provide some type of protection to those domestic industries.

A national marketing order for potatoes and other vegetables would put the control by an elected grower committee over what quality and size of potatoes could be marketed fresh in this country. The marketing order could also set the minimum size and quality for what could legally be imported into this country. The marketing order would have oversight by the USDA.

7. Research is still identified as the tool to enable the U.S. to remain on the cutting edge in the competitive world trade arena and should be supported with increased funding. Ethanol production from a variety of agricultural commodities was the most commonly mentioned suggestion.

Action: With an oversupply of food commodities negatively impacting the marketplace, a shift of priority from production research to alternative use research should be supported. Energy production from biomass, including agricultural crops, would benefit fuel supply and the environment, while leading to positive changes in market pricing. Research in biotechnical applications should be continued in anticipation of market acceptance of genetically-enhanced products.

8. Crop insurance was considered by Congress for five years before the recent enactment of the Plant Protection Act of 2000, but is still not widely embraced by Idaho growers. It is identified as a tool to prevent unusual loss but not as one to produce an income or profit. Crop insurance is considered to be an incentive to over-plant and vulnerable to fraud and abuse.

Action: Crop insurance would be more useful if the terms of the policy were constructed on a basis of regional need. Pea and lentil producers are requesting a revenue insurance program, and potato growers continue to request not to be included in revenue insurance. There are currently pilot projects that are field testing Adjusted Gross Revenue as an alternative. New policies should be structured so that they do not encourage overproduction but move toward crop revenue and away from multi-peril. The Idaho State Department of Agriculture is proposing a cost of production insurance as an alternative to what is presently available.

9. The Farm Service Agency is becoming more centrally driven from Kansas City and/or Washington, D.C., with less flexibility resting with the county or state committees. There has been a simultaneous reduction in labor force of 40% in the FSA, which has been called upon to administer 17 new programs. Money also appears to have been spent without an effective system of checks and balances.

Action: As long as the FSA is asked to be the vehicle for the administration of supplemental transition payment, increased CRP acreage, the emergency sugar PIK program, additional livestock assistance programs, and perhaps a potato diversion program, etc., it should be funded and audited for responsible and accurate administration. Authority should be returned to the local and state committees who represent local decision-making opinion and contribute local expertise to that decision-making for program compliance, eligibility, and loan authority.

10. Environmental groups have been successful in their applications for federal grant money to carry on a variety of monitoring and data gathering activities that eventually support extension of the environmental agenda. Growers and ranchers feel their taxpayer money is funding programs that result in increased regulations and costs required by those regulations.

Action: Monitor the eligibility of those applicants for federal grant money and conduct oversight that ensures science-based recommendations from the results of such studies. Also continue to support agricultural industry requests for grants to study environmental policy impacts upon the environment and the industry such as the wolf predation study on wildlife and livestock.

11. Forget about saving the family farm as a conceptual objective. Farming is a business and a family farm can range from a small farming business to a corporative mega-business that is still controlled by a family.

Action: Farming is a business that is romanticized by the ideal of a close, healthy family working together to produce food and fiber and resulting in a desirable work ethic and a real appreciation for the creation of new wealth. Many still ascribe to the concept, but most can not afford to financially continue in agriculture. As our national work force becomes more specialized, fewer have an opportunity to experience such an adventure. Still, man is driven to

owning a piece of real property, having animals and working the soil, becoming more therapeutic than profitable, and more a part of a portfolio than a job.

We must create an agricultural business environment that is fair and encouraging to all types and sizes of farming business, which will continue to be attractive on the basis of the advantages, and special applications to take advantage of still unlimited opportunities.

12. Education both for the agricultural producers and the consumer they serve will be vital public relations effort to instill confidence and create relationship between the producer and the customer. Some consumers feel farmers wear black hats and ruin the environment to make a profit.

Action: Within the USDA, there should be an advocate for production agriculture that could represent the producer in the areas of biotechnology, chemical and fertilizer regulations, environmental compliance, and stewardship responsibilities.

13. Many agricultural producers for financial and/or personal reasons will not endure the imminent changes that the agricultural community is going through. Overproduction that is now influenced by foreign, as well as domestic, decisions will dictate individual courses of action. Also, many farms are being held until the death of the owner because they can not afford the capital gains tax if the properties are sold.

Action: We should help make the transition from the farm as painless as possible for those choosing to leave. Present tax policy influences decisions to sell or not to sell because of the resulting tax liability. Sales of assets might cover the debt load but not after the tax liability is satisfied. A one-time exemption on the sale of assets including machinery, real property and inventory could be a workable solution. This could follow the precedent set by the one-time home owners exemption.

14. General tax reform remains on the table, as well as specific agricultural tax initiatives that would help the agricultural community.

Action: Reinstatement of the investment credit and a further reduction in the capital gains taxes would help agriculture. Elimination of the estate taxes is particularly helpful for those heavily invested agriculture. Tax reductions and general tax reforms are areas for continued consideration. Tax policy that facilitates the creation of farmer cooperatives would have some special applications.

15. Increased energy prices affect agricultural production costs and transportation costs for supplies and agricultural commodities, especially for Idaho because of the geographic remoteness of our state from terminal markets. Significant energy cost increases place Idaho at a competitive disadvantage.

Natural gas pricing is affecting the operations of processing plants. Rapidly increasing electrical costs for irrigation pumping is aggravating the poor agricultural financial situation.

Action: Develop a national energy policy that would address the dependence the U.S. has upon foreign oil supplies by anticipating shortages and supplementing energy needs with domestic energy supplies. Support the development of alternative fuels from biomass and nuclear sources.

16. Potato diversion programs have historically been very unpopular, but the present devastatingly low potato prices call for some type of emergency response. The significant oversupply resulted from a very slight increase in acres planted with the following contributing factors:

- a. No other crops offer the potential of a profit.
- b. Unfair Canadian competition (allegations of a manipulated exchange rate in Canada) resulting in the U.S. now importing more potato products than we export.
- c. Insurance programs that encourage more production
- d. Consolidations and conglomerates reducing competition
- e. An ideally warm and long growing season that increased production per acre significantly.

Action: Support for a bundled package program that includes PL 480 purchases, government purchases, a food aid program utilization of processed potatoes, a quality program for potatoes as included in the appropriations process, and a diversion program that would affect market prices.

17. The Conservation Reserve Program (CRP), Wetlands Reserve Program (WRP), and other conservation programs are becoming a permanent part of the fabric of the nation's agricultural quilt and are providing a major part of the financial schedule of a part of the nation's agriculture. Such programs are becoming more effective for conservation objectives and less effective as a production restriction since enhanced world trade will provide additional acres to replace those taken out of production.

Action: The Conservation Title of the 1996 Farm Bill may be expanded, significantly in the new Farm Bill because conservation popular, and overproduction is a reality. Government payments for good stewardship are nationally more acceptable than supplemental payments for low commodity prices. Expanded CRP acres should be counterbalanced with innovative provisions to keep agricultural support industries in business and rural business centers from drying up.

The Conservation Security Act would offer landowners/growers a three-tiered program by which they would receive a payment depending upon the degree of conservation practices agreed to in a signed conservation security plan. The program would be bid similar to the present CRP program.

Farmland trusts and conservation/development easements attempt to retain the agricultural profile, but landowners are concerned that payments will not be adequate to cover the compliance expenses in the future. Perhaps long term agreements should include payments that are reflective of cost of living increases.

18. Relief for U.S. agriculture from the burden of social, environmental, and production regulations that places domestic producers at an unfair competitive position, needs to be

accomplished.

Action: Harmonization of registration and labeling requirements of pesticides, herbicides, chemicals, and fertilizers worldwide and/or with our trading partners. Monitor the scientifically-sound implementation of the Food Quality Protection Act. Ensure a reasonable, cost effective compliance with the Clean Water, Clean Air, and Endangered Species Acts.

FOR IMMEDIATE
RELEASE



Commission on 21st Century Production Agriculture
Room 3702 South Building
1400 Independence Avenue, SW
Washington, DC 20250-0524

**COMMISSION PRESENTS FINAL REPORT
TO HOUSE AND SENATE AGRICULTURE COMMITTEES**

WASHINGTON, D.C., January 30, 2001— The Commission on 21st Century Production Agriculture today presented the findings of its final report to the Senate Committee on Agriculture, Nutrition and Forestry. The report, "Directions for Future Farm Policy: The Role of Government in Support of Production Agriculture," provides policy recommendations for the next major farm bill, as well as a summary of the current state of the U.S. agricultural economy.

The Commission will present its report to Agriculture Secretary Ann Veneman following the Senate hearing and to the House Agriculture Committee during a hearing tomorrow morning.

"The Commission's findings are the result of many months of hard work and compromise with general agreement on most of the issues, with the exception of some respectfully dissenting views," said Dr. Barry Flinchbaugh, chairman of the commission. "The central focus of these findings is to define the role of the Federal Government in support of production agriculture and providing recommendations for an income safety net for farmers".

The Commission concluded that the proper role of the federal government should be to pursue policies and programs that promote the following concepts and/or accomplish the following outcomes:

- Ensure a competitive agricultural economy through monitoring of concentration, enforcement of antitrust laws and related regulatory authority, ensuring transparency of market behavior, including contracting;
- Develop policies and programs that enhance the competitiveness of U.S. agricultural products, reduce trade barriers, open markets, and enhance the ability of producers to maximize value-added opportunities;
- Base all policy on sound science and insist that foreign competitors do likewise;
- Promote and enhance food safety and a clean environment;
- Promote and enhance animal and plant health and safety;
- Provide support for agricultural research and education;
- Enhance the development and use of risk management tools;
- Develop and fund programs that meet the special needs of small and limited resource farmers; and
- Provide an effective and adequate income safety net for farmers with minimal market distortion.

The report calls for an overall income safety net for farmers. The Commission recommended a continuation of a fixed AMTA (Agricultural Market Transition Act) payment in accordance with the existing baseline budget allocations in addition to a new counter-cyclical income support program.

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"The Commission specifically recommends a program referred to in our report as Supplemental Income Support or the SIS program," said Flinchbaugh, a Professor of Agricultural Economics at Kansas State University. "The SIS program along with the extension of the fixed AMTA payment would provide a flexible income safety net for agricultural producers in times of depressed farm income."

The Commission also recommended as part of the income safety net that the loan deficiency payments and marketing loan be retained. However, the Commission said marketing loan rates should be adjusted to reflect a balance between the historical market value of individual crops.

As a final component of the income safety net, the Commission also recommended the implementation of FARRM (Farm and Ranch Risk Management) accounts, that would allow producers to build up a cash reserve for low-income years as well as an alternative retirement fund for producers.

The Commission also addressed several other issues in depth, including, risk management, conservation and the environment, agricultural trade issues, individual commodity programs (dairy, peanuts, sugar, and tobacco), and the issue of small and limited resource farmers.

The Commission held 14 meetings hearing from 60 experts on agricultural policy issues. The Commission also conducted six public listening sessions around the country, taking testimony from over 200 witnesses composed of farmers, ranchers, representatives of farm organizations and agribusiness, rural residents and other stakeholders representing 30 states.

In addition to Chairman Flinchbaugh, the members of the commission are Bruce Brumfield (Mississippi), Donald Cook (Oregon), Jim Dupree (Arkansas), William Northey (Iowa), Charles Kruse (Missouri), Don Villwock (Indiana), Ralph Paige (Georgia), John Campbell (Nebraska), Bob Stallman (Texas) and Leland Swenson (South Dakota).

A copy of the report will be available from the United States Department of Agriculture Office of the Chief Economist's web site at <http://www.usda.gov/occe/> on February 1, 2001.

The Commission will have a printed version of the final report available February 28.

CONTACT: Matthew A. Howe
Phone: (202) 720-4860
Fax: (202) 690-4420
Email: mhowe@mailoce.occ.usda.gov

Exchange Rates and Bilateral Trade: Examples from CUSTA

MinKyoung Kim, William E. Nganje, and Won W. Koo

**Northern Plains Trade Research Center
Department of Agribusiness and Applied Economics
North Dakota State University
Fargo, ND 58105**

Abstract

This study has examined how macroeconomic forces such as exchange rate affect the bilateral trade balance between the U.S. and Canada with particular attention given to the impacts on agricultural trade before and after CUSTA. This study found that changes in exchange rates have significant impacts on trades flows between the U.S and Canada, and continuous U.S. dollar appreciation against Canadian currency contributes to unfavorable effect on the U.S. agricultural sector.

Highlights

This paper analyzes the effects of U.S. and Canada exchange rate fluctuations on bilateral trade between the U.S. and Canada, with special attention given to agricultural trade for the post-CUSTA period. More specifically, both the U.S. agricultural and industrial sectors are examined and compared to identify the impact of changes in exchange rates on the agricultural sector relative to the industrial sector. In addition, the impacts of exchange rate shocks on the agricultural sector are investigated and compared between pre- and post-CUSTA periods to assess the effect of CUSTA on the agricultural economies in the United States and Canada.

Potential impacts on the U.S. farm sector, due to agricultural trade deficit against Canada, have been vigorously debated over the last two decades. The U.S. agricultural trade deficit has increased since the inception of the U.S. and Canada Free Trade Agreement (CUSTA). The trade deficit might contribute to shortfalls in agricultural income in the U.S. U.S. dollar appreciation against the Canada currency may be the most contributing factor affecting the increased trade deficit between two countries. For example, the U.S. agricultural trade deficit against Canada was \$820.66 million in 1999 but the U.S. had a trade surplus of \$205.84 million in 1981, implying 498.69 % increase in trade deficit. Meanwhile, U.S. dollar appreciated against Canada by 26% for the same period: the real exchange rate was 1.19 in 1981 and rose to almost 1.5 in 1999. U.S. dollar appreciated more substantially after CUSTA; a 33% increase for the last decade. Thus, it is important to identify factors causing the trade deficit and its impacts on agricultural income in the U.S.

A time series model, the Johansen algorithm, is used to identify the existence of cointegration among U.S. trade deficit with Canada, U.S. income, exchange rates, and interest

rates. The error correction model is used to discover the causality among cointegrated variables. Impulse response analysis is also conducted to assess the size of the macro economic factors on other economic variables.

I. Impact of Changes in Exchange Rate on Both Agricultural and Industrial Sectors

Impacts of exchange rates on bilateral trade between the U.S. and Canada are examined for the time period from 1981 to 1999. The U.S. agricultural sector is investigated to reveal the relationship among the following variables, agricultural trade deficit, agricultural GDP, exchange rates, and interest rates. The results are compared to that of the U.S. industrial sector, using macro variables, which are exchanger rates, industrial trade deficit, industrial GDP, and interest rates.

One cointegrating vector is found for both sectors based on Johansen test, implying these variables in each sector are interacting with one another. Exchange rates are found to have short run dynamic relationships with agricultural trade deficit, indicating U.S. dollar appreciation against the Canadian currency causes the U.S. agricultural trade deficit with Canada to increase. Meanwhile, the short run relationship between the exchange rate and the industrial trade balance is not significant. Rather, U.S. industrial trade deficit significantly causes U.S. dollar appreciation to move. This finding indicates the possible damage for the agricultural sector is given by the U.S. dollar appreciation relative to Canadian dollar, even though direct short run impact of changes in exchange rate on agricultural GDP is not clearly identified because of long run relationship with other variables.

Based on impulse response analysis, the mean response of agricultural trade deficit to 1% exchange rate shock reaches up to around 4% level, and the effect of exchange rate shock takes

almost 8 quarters for the agricultural trade deficit to reach equilibrium. This result is consistent with the finding of the causality test, which indicates the existence of a short run dynamic relationship between agricultural trade balance and exchange rates. Meanwhile, the mean response of agricultural GDP to 1% of U.S. dollar appreciation is apparent with 2% down in income level, and it takes 6 quarters to recover the impact. As found in causality test, the impacts of 1% exchange rate shocks on the industrial trade deficit and industrial GDP are 0.3% and 0.7%, respectively, and get neutralized promptly.

Exchange rate is found to be a dominant factor affecting agricultural trade deficit with Canada, but an insignificant factor affecting the industrial trade deficit with Canada. This indicates that the U.S. agricultural sector has more suffered than does the industrial sector by the U.S. dollar appreciation against the Canadian currency.

II. CUSTA Era on Agricultural Sector

The whole time period is divided into pre- and post-CUSTA periods to assess the impact of exchange rate shock on the U.S. and Canada bilateral trade since CUSTA. The pre-CUSTA period runs from the first quarter of 1981 to the last quarter of 1989, while the post-CUSTA period is from the first quarter of 1990 to the last quarter of 1999.

A significant discrepancy is found between before and after CUSTA periods. No significant linkage is found among the variables before CUSTA period. In the mean time, stronger cointegration is found among these variables for the post-CUSTA era than the whole time period, 1981 to 1999. This indicates that variables linked more clearly during the CUSTA period.

U.S. dollar appreciation is found to cause the U.S. agricultural trade deficit to increase in the short run, and this phenomenon is significant for the post-CUSTA period. The impacts exchange rate shock on both agricultural trade deficit and agricultural GDP are limited to around 0.3% up and 0.1% down, respectively, during the pre-CUSTA period, implying no apparent impact of exchange rate shock on agricultural sector.

For the after CUSTA period, 1% exchange rate shocks resulted in 6% increase in agricultural trade deficit and 2.7% decrease in agricultural GDP, which are greater than the whole time period. It takes more than a year to arrive at a new equilibrium.

The impacts of exchange rate shocks on agricultural trade deficit to increase and agricultural GDP to decrease in the post-CUSTA era, 1990 to 1999, are conspicuous compared to the pre-CUSTA period, and gets stronger than the whole time period, 1980 to 1999. This finding implies that agricultural sector has more suffered from exchange rate shock for the post-CUSTA period than for the pre-CUSTA time period. Thus, the concern about negative impact on agricultural sector after CUSTA inception should not be ignored.

I. Introduction

Potential impacts of bilateral trade of agricultural commodities between the U.S. and Canada on the U.S. farm sector have been vigorously debated over the last two decades. The total trade between these two countries has substantially increased since the inception of the U.S. and Canada Free Trade Agreement (CUSTA). U.S. import from Canada has more rapidly grown (848.03%) than U.S. export to Canada (270.13%), indicating 498.69% increase in agricultural trade deficit. This is true for agricultural trade with Canada; increase in agricultural trade deficit about 1,300 percent from \$58.36 million in 1989 to \$820.66 million in 1999.

A concern about the trade deficit was raised in the U.S. agricultural sector mainly because the trade deficit might contribute to shortfalls in agricultural income. The U.S. dollar appreciation leads to decrease in U.S. export and increase in import, which result in considerable amount of trade deficit followed by possible reduction in agricultural income. Orden (1999) pointed out that exchange rate fluctuations in excess of 40 percent could cause significant realignment in relative prices that would necessitate several years of economic adjustment. The U.S. dollar appreciation against the Canada currency is not dominant but may be the most contributing factor among several, leading to the increased trade deficit between the two countries. U.S. dollar appreciated against the Canada currency by 26% for the last two decades: the real exchange rate was 1.19 in 1981 and rose to almost 1.5 in 1999. Furthermore, the U.S. dollar appreciated 33% for the post-CUSTA period.

Several studies focused on the importance of exchange rate in international agricultural trade. Schuh (1974) argued that exchange rate should be considered in economic analysis of the U.S. farm sector. His research was based on a partial equilibrium framework, assessing the elasticities of price transmission among countries and of supply and demand that affected trade.

Later, exchange rate related researches had been accelerated with the development of time-series analysis, but they were mainly conducted to identify a relationship between monetary impact and agricultural prices with or without exchange rate. Sims (1980), Bessler (1984), and Chambers (1984) used relatively simple dynamic time-series model and investigated monetary policy through business cycles. Fackler and Orden (1989) identified monetary impacts on agricultural prices using a VAR model using exchange rate as a proxy for international trade effect, and concluded the monetary policy shocks were not the main factor of agricultural price instability.

In 1990's, new approaches such as impulse response and Bayesian approaches are utilized to analyze monetary impact on the agricultural sector. Choe and Koo (1993) expanded a bivariate VAR model to tri-variate system and adopted dynamic response analysis to investigate the monetary impact on agricultural prices. Contrary to the results of Fackler and Orden, monetary shock was found to have persistent effect on agricultural prices. Dorfman and Lastrapes (1996) decomposed U.S agricultural prices into crop and livestock prices, and examined the response of these prices to money-supply shocks. In addition to the impulse response analysis, a Bayesian approach was utilized to investigate sensitivity of their results to various aspects of model specification. As found in Choe and Koo, they found both crop and livestock prices increased relative to general price level from positive money-supply shocks, implying that both agricultural sectors benefited in the short run by monetary policy shock. Based on impulse response analysis, the effects of U.S. monetary policy on exchange rates were investigated by Eichenbaum and Evans (1995). Shock in U.S. monetary policy was found to lead to persistent and significant appreciations in U.S. nominal and real exchange rates against five main currencies: Yen, Deutschmark, Lira, French France, and U. K Pound.

Limited number of studies examined direct impacts of exchange rate on agriculture (Bessler and Babula, 1987; Bradshaw and Orden, 1990; Orden, 1999). Bessler and Babula (1987) and Bradshaw and Orden (1990) evaluated exchange rate effects on agricultural crop prices and sales in terms of forecasting perspective. Bradshaw and Orden (1990) extended the work by Bessler and Babula, and conducted simple in-sample and out-of-sample Granger causality tests to determine whether real exchange rate helps to predict monthly real agricultural prices and export sales of wheat, corn, and soybeans, and provided mixed evidences of causality from the exchange rate to agricultural prices and sales. Orden (1999) measured exchange rate influences on agricultural import and export. Agricultural trade weighted real exchange rate and real exchange rate between the U.S. and two countries, Japan and Mexico, are utilized to measure the impacts of exchange rate shocks on the U.S. export based on the impulse response analysis. It was found that negative effects of agricultural trade weighted real exchange rates increased and never converged to the equilibrium level.

The regional trade agreement such as CUSTA might have a profound impact on U.S. national economy, through increase in trade volume among the member of countries. As the bilateral trade becomes more integrated with U.S. domestic economies, exchange rate risk emerges in trade between the U.S. and Canada. Although some of research has focused on identifying the impact of changes in exchange rate on specific level of agricultural sector, little research has been directed understanding the impacts of exchange rate on the U.S. and Canada bilateral trade, especially during the post-CUSTA period. It is important to analyze the impact of changes in exchange rate between the United States and Canada because real exchange rates between the U.S. and Canada have considerably appreciated in the last decade, which is the CUSTA period. This fact brings about a question of possible link between exchange rate

fluctuations and the U.S. and Canada bilateral trade. It is hypothesized in this study that U.S. agricultural and industrial trade deficit against Canada will continue to increase as the U.S. dollar continue to appreciate.

This paper analyzes the effects of U.S. and Canada exchange rate fluctuations on bilateral trade between the U.S. and Canada with particular attention given to agricultural trade after CUSTA, using the Johansen's cointegration and impulse response analyses. This study focuses on macroeconomic explanation of trade balances between the US and Canada as opposed to institutional differences between the two nations. More specifically, both the U.S. agricultural and industrial sectors are examined and compared to identify the impact of macroeconomic forces on agricultural sector relative to industrial sector. The impacts of exchange rate shocks are investigated and compared between pre- and post-CUSTA period to assess the effect of CUSTA on the structure of national economies.

The paper is organized into three sections. Section II develops a time series model that is used for the analysis and discusses the data sources. The empirical analysis and the results of the impact of exchange rate shocks are presented in Section III. Finally, a summary of the principal findings and conclusions of the research are discussed in Section IV.

II. Time Series Models and Data

Models

Recent advances in time series econometrics have facilitated empirical tests of dynamic linkage across different sectors of an economy. In particular, the concept of cointegration among nonstationary data was introduced by Granger (1981), and further developed in subsequent works by Engel and Granger (1987), and Engel and Yoo (1987). Johansen (1988) and Johansen and Juselius (1990) developed a full system estimation of models involving cointegrated

variables based on the estimation of VAR (vector autoregression) by maximum likelihood method.

Many economic time series follow random walk and have a tendency to move together in the long run. This is called cointegration, implying that series have a tendency to drift away individually, but move together over time, so that a linear combination of them fluctuates around a mean value. This is a property of stationary time series, and can be interpreted as a consequence of equilibrium relationships between variables.

Engel and Granger (1987) have shown that if there exists a cointegrating vector, there always exists a mechanism with an error correction form which can be used to generate forecasts. The error correction mechanism involves short run departure from a long run equilibrium. An important implication of cointegration and the resulting error correction representation is that if two time series are cointegrated, one can be used to help forecast the other's movement in the long run.

Engel and Granger's two-step procedure is well known for estimating cointegrating relationships. However, this procedure is somewhat limited when applied in a multivariate context because parameter estimates are dependent upon the normalization selected in the first step. Further, if more than one cointegrating vector exists, the procedure will not yield consistent estimates of the underlying relationships (Muscatelli and Hurn, 1992). Simultaneous discovery of cointegrating relationship is needed among several variables, and hence market linkages are assessed in a multivariate framework. The multivariate cointegration tests developed by Johansen (1988) are used to provide consistent estimates of the underlying stochastic relationships. The procedure provides a likelihood ratio test for cointegration in a VAR framework based on canonical correlation analysis.

Consider a vector X_t consisting of N nonstationary variables of interest, defined by a general polynomial distributed lag process as

$$X_t = \pi_1 X_{t-1} + \dots + \pi_k X_{t-k} + \varepsilon_t, \quad (1)$$

where $t = 1, \dots, k$ and ε_t is an independently and identically distributed N dimensional vector with zero mean and variance-covariance matrix, Ω . This type of VAR model has been advocated most notably by Sims (1980) as a way to estimate dynamic relationships among jointly endogenous variables without imposing strong a priori restrictions. Equation (1) can be reformulated into a vector error correction model (VECM) as follows

$$\Delta X_t = \sum_{i=1}^{k-1} \Gamma_i \Delta X_{t-i} + \Pi X_{t-k} + \varepsilon_t, \quad (2)$$

where $\Gamma_i = -\left(I - \sum_{j=1}^{k-1} \pi_j\right)$, $\Pi = -\left(I - \sum_{j=1}^k \pi_j\right)$, and I is a $N \times N$ identity matrix. VECM contains information on both the short-run and long-run adjustments to changes in X_t via the estimates of $\hat{\Gamma}_i$ and $\hat{\Pi}$ respectively. The cointegrating vector Π is of interest and given by

$$\Pi = I - \pi_1 - \pi_2 - \dots - \pi_k. \quad (3)$$

The number of distinct cointegrating vectors that exist among the variables of X_t , r , is given by the rank of Π . Π is a $N \times N$ matrix, and also defined as two of $N \times r$ matrices, α and β such that:

$$\Pi = \alpha\beta', \quad (4)$$

where α represents the speed of adjustment to disequilibrium, while β is a matrix of long-run coefficients. Although X_t is nonstationary, the linear combinations of $\beta'X_t$ are indeed stationary, and hence the rows of β form r distinct cointegrating vectors.

There are two types of likelihood ratio statistics to test the significance of the number of cointegrating vectors; one is the trace statistic, and the other is maximum eigenvalue statistic. The likelihood ratio statistic for the null hypothesis that there are at most r cointegrating vectors or the rank (Π) is less than or equal to r is known as the trace statistic:

$$\lambda_{\text{trace}} - 2 \ln Q = -T \sum_{j=r+1}^N \ln(1 - \hat{\lambda}_j), \quad (5)$$

where λ is an eigenvalue, T is the number of observations, and $r = 0, 1, \dots, n-1$. Meanwhile, the maximum eigenvalue statistic tests the null hypothesis that there are r cointegrating vectors against the alternative that $r+1$ exist, and is defined as follows

$$\lambda_{\text{max}} = -T \log(1 - \hat{\lambda}_{r+1}). \quad (6)$$

These procedures, described in detail in Johansen and Juselius (1990) and Harris (1995), can be used to analyze linkages between the different markets through the identification of distinct cointegrating relationships.

Granger causality can be identified using VECM. Following Granger (1969),

the variable x_t "Granger causes" variable y_t with respect to a given information set including x_t and y_t , if current values of y_t can be better predicted by using past values of x_t than by not including them.

In the absence of cointegration in VECM, the causal relationships can be interpreted as short run linkage across different markets.

Data

Six different variables are utilized: exchange rates between U.S. and Canada, U.S. agricultural and industrial trade balance between the two countries (trade deficit), U.S. agricultural and industrial GDP, and interest rates in the United States. Exchange rates are

defined as the values of the Canadian dollar/US dollar, and hence an increase in the exchange rate implies U.S. dollar appreciation. Trade deficit is defined as the difference between the value of import from U.S. to Canada (U.S. export) and the value of export to the U.S. from Canada (U.S. import). The interest rate is included because it affects capital flow between the U.S. and foreign countries and costs of operating loans, influencing exchange rates and GDP, respectively. All the data are quarterly from 1981 to 1999, and are converted into real values with 1990 as a base year.

Two different cases are examined to analyze relationship among the variables. For the first case, the U.S. economy is divided into the agricultural sector, which consists of agricultural trade deficit, and agricultural GDP, exchange rates, and interest rates, and the industrial sector containing exchanger rates, industrial trade deficit, industrial GDP, and interest rates.

For the second case, the whole data period is divided into two groups, pre- and post-CUSTA periods, to assess the impact of exchange rate shock on the U.S. and Canada bilateral trade in the two periods. These two periods are (1) from the first quarter of 1981 to the last quarter of 1989 (pre-CUSTA era) and (2) from the first quarter of 1990 to the last quarter of 1999 (post-CUSTA).

III. Empirical Analysis and Results

III.1. The Impact of Changes in Exchange Rate for Aggregated Periods

The movements of the different variables: exchange rates, trade deficit for both agricultural and industrial sectors, GDP for both agricultural and industrial sectors, and interest rates for the whole period, are illustrated in Figure 1. Casual observation suggests that exchange rates and both agricultural and industrial trade deficits tend to move together over time, implying dollar appreciation (depreciation) is likely to move together with the U.S. trade deficit (trade

surplus in the U.S.), while exchange rates tend to have an inverse relationship with agricultural GDP and interest rates over time.

Table 1 summarizes descriptive statistics of the data. Based on the results of coefficient variation that illustrates the significance of volatility, agricultural trade balance generates the coefficient of variation, 0.99, indicating this variable is most volatile, and exchange rates are the least volatile with the coefficient of variation of 0.08. This result may indicate that agricultural trade deficit incorporates information at a faster speed than the other variables, assuming that variances are directly related to information flow or that these variables are incorporating different information. In particular, the significant result of Engle's (1982) Lagrange Multiplier ARCH test suggests that all the markets used in both models follow ARCH type processes except interest rates.

The ratio of the skewness and kurtosis to its standard deviation can be used to construct normality tests of significance based on the Student's t table. The standard deviations for skewness and kurtosis are 0.2793 and 0.5448, respectively¹. Exchange rates and agricultural trade balance did not show any significant nonnormality while industrial trade balance, agricultural GDP, and interest rates exhibit positive skewness with the skewness ratios to its standard deviation, 3.35, 1.86, and 3.83, respectively; these are bigger than the critical value (1.67) at 5% level of t -statistic. Also, fat tail is detected for interest rates based on the result of kurtosis ratio to its standard deviation, 2.51.

Unit Root and Johansen Tests

Table 2 provides the summary statistics of unit root tests for these variables. In addition to the augmented Dickey-Fuller (ADF) test, the Philips-Perron (PP) test, including intercept with and without trend, is conducted because of the possible heteroskedasticity in these variables.

These tests indicate that all four variables fail to reject the null hypothesis of unit root and follow an $I(1)$ process, implying the first differences of variables become stationary. Lag lengths for the unit root test were determined using Schwartz Information Criteria (SIC).

The results of Johansen tests are reported in Panels A and B of Table 3, respectively, to analyze the relationships among variables (1) in the agricultural sector: exchange rates, agricultural trade deficit, agricultural GDP, and interest rates, and (2) in those industrial sectors: exchange rates, U.S. trade deficit, U.S. GDP, and interest rates. The null hypothesis is that the number of cointegrating vectors is less than or equal to r for the trace test, and the number of cointegrating vectors is equal to r for maximum eigenvalue test (λ_{\max}), where r is 0, 1, 2, and 3. Both test results indicate that the null hypothesis, $r \leq 0$ and $r = 0$, should be rejected at both 5% and 10% significance level, meaning that the variables in both agricultural and industrial sectors are cointegrated with one common stochastic trend. Although these markets in both agricultural and industrial sectors are nonstationary and drift apart in the short run, they share information and move together in the long run. These results imply that one variable can be predicted by using information in other variables. For instance, agricultural (industrial) trade deficit and/or agricultural (industrial) GDP could be predicted by using exchange rates, and/or vice versa.

Error Correction Model and Granger Causality

Since the markets in both sectors are cointegrated, they can be represented by an error correction model. The VECM and causality test results are reported in Panels A and B of Table 4. The lag length of one and two periods are selected for agricultural and industrial sectors, respectively, by using SIC and by following a procedure identifying the shortest lag which eliminates the temporal correlation in residuals as measured by the Box-Ljung Q statistic (Johansen and Juselius, 1990, and Franses and Kofman, 1991). According to the F -tests reported

in Table 4, error correction term, Π , is significant at 5% level in the agricultural GDP equation in Panel A and the industrial GDP equation in Panel B, with F -values of 4.8098 and 8.4488, respectively, greater than the critical value, $F = 2.77$. Meanwhile it is not significant in other equations for both sectors². Therefore, the disequilibrium errors are important components of the changes in agricultural and industrial GDP, but not in other variables. Alternatively, following Campbell and Shiller (1987, 1988), changes in the U.S. incomes can be predicted in the long run by using information provided by the error correction term. Since Π is not significant in the other markets, no such a long run dynamic exists.

Cross market terms in Γ for each equation are considered to identify the short run dynamics among markets. The null hypothesis of zero coefficients of exchange rates is rejected at 5% significance level of t -statistic in agricultural trade deficit equation in Panel A of Table 4, indicating that changes in exchange rates at $t-1$ “Granger cause” agricultural trade balance to change at t . Other cross market terms in each equation are not significant.

Thus, the source of causality is generated by changes in exchange rates and cointegration relationship among variables, indicating exchange rate causes agricultural trade balance with long term relation among other markets. However, the null hypothesis of zero coefficients of exchange rates is failed to reject at 5% significance level of F -statistic, 0.1334, in the industrial trade deficit equation as shown in Panel B of Table 4. That is, changes in exchange rates at $t-i$ do not significantly cause industrial trade balance to change at t , where $i = 1$ and 2. Instead, changes in exchange rates are caused by the industrial trade balance at $t-i$, presenting F -statistic, 3.0814 at 5% significance level as indicated in exchange rate equation in Panel B of Table 4.

U.S. Agricultural trade deficit with Canada is significantly affected by continuous appreciation in the U.S. dollar against the Canada currency, while the U.S - Canada exchange

rate is not a dominant factor to affect industrial trade deficit to increase. Although the source of causing agricultural GDP is not identified due to the long run relationship found in the agricultural GDP equation, this finding indicates the possible damage in the U.S. agricultural sector due to the U.S. dollar appreciation relative to Canadian dollar.

In the same equation of exchange rate in Panel B, U.S. interest rate is found to cause exchange rate to move at 5% significance level of F -statistic, 5.0646. This implies that increases (decreases) in interest rate attract (deter) Canadian investors to invest in the U.S., generating inflow (outflow) of capital, and hence the U.S. dollar appreciates (depreciates) against Canadian dollar due to the high (low) demand for the U.S. dollar.

Dynamics of Markets

Impulse response analysis is adopted to assess the magnitude of the tested market responses over time to various shocks. Dynamic responses over twelve quarter periods of a 1% positive exchange rate shock on agricultural and industrial sectors are shown in Figures 2 and 3, respectively³. The Monte Carlo integration method with 1000 draws has been used to compute the confidence interval for the posterior distribution of the impulse responses.

The effect of exchange rate shock on agricultural trade deficit is realized immediately, and it takes almost eight quarters to get to equilibrium as shown in Figure 2. The mean responses of agricultural trade deficit are apparent, and reach up to around 4% level. U.S. dollar appreciation against the Canadian currency affects U.S. agricultural trade deficit with Canada, and it takes about two years to get back to equilibrium. This result is consistent with the finding of the causality test, which indicates the existence of a short run dynamic relationship between agricultural trade deficit and exchange rates.

To detect the dynamic effects of exchange rate shock on agricultural income, 1% of exchange rate shock is given to agricultural GDP. The mean response of agricultural GDP to 1% of exchange rate shock in Figure 2 is apparent with 2% down in income level. This means U.S. dollar appreciation against the Canadian currency resulted in decreased agricultural income, and it takes six quarters to recover the impact. This might be due to the fact that increases in the agricultural trade deficit, caused by US dollar appreciation, result in a negative effect on agricultural income. Interest rates in Figure 2 do not respond considerably to exchange rate shocks, but they react gradually over time and diverge from equilibrium after 8th or 9th quarter. Caution is needed for the period because the impulse responses become insignificant after about 8th quarter.

The mean response of exchange rate to 1% industrial trade balance shock reaches down to around 5 to 6%, but quickly recovers from the shock after 4th quarter as presented in the first graph of Figure 3. Meanwhile, the impact of 1% exchange rate shock on the industrial trade balance is 0.3% and gets neutralized promptly as shown in the second graph of Figure 3. This finding confirms the results found in causality test that changes in the industrial trade balance initiates exchange rates to move, but the reverse direction does not work. One implication can be drawn from this result. One of factors causing exchange rate is the macro level of the U.S. trade (Eichenbaum and Evans, 1995). The 1% shock of exchange rate is given to the U.S. industrial GDP to examine how the industrial GDP responses over time. As shown in the third graph of Figure 3, the impact of the exchange rate shock is not prevailing with around 0.7% down of the GDP.

Exchange rate is found to be a dominant factor that affects agricultural trade balance to change but not the industrial trade balance. This finding indicates that the agricultural sector has

more suffered than does the industrial sector by the U.S. dollar appreciation against the Canadian currency.

III.2. CUSTA Era on Agricultural Sectors

To investigate whether there is any effect of CUSTA on agricultural sector for post-CUSTA era, the whole period is divided into two sub-periods, before and after CUSTA, and the two periods are compared. The pre- and post-CUSTA periods cover from the first quarter of 1981 to the last quarter of 1989 and from the first quarter of 1990 to the last quarter of 1999, respectively.

Johansen tests

The augmented Dickey-Fuller and the Philips-Perron tests are conducted to identify the nonstationarity of variables. Two data sets, before and after CUSTA, are found to be nonstationary. This is same result found in the previous section, and hence the results of stationarity are not presented for brevity. Again, Johansen tests are conducted to analyze the relationship among exchange rates, agricultural trade deficit, agricultural GDP, and interest rate markets. A significant discrepancy is found between before and after CUSTA periods. No significant linkage is found among the variables before CUSTA period, while two cointegrating vectors are found in the variables after CUSTA, and the results are reported in Panels A and B of Table 5.

For before CUSTA period, both trace and maximum eigenvalue test results indicate that the null hypotheses, $r \leq 0$ and $r = 0$, are failed to reject. This finding implies no apparent linkage among the variables, so that these variables neither share substantial information nor influence one another before CUSTA. Meanwhile, both trace and maximum eigenvalue tests generate 48.56 and 31.51, respectively, for the after CUSTA period. Thus, the null hypotheses,

$r \leq 1$ for the trace test and $r = 1$ for the maximum eigenvalue test, should be rejected at both 5% and 10% significance level, meaning that the CUSTA has resulted in much closer economic relationship between the two countries than before CUSTA.

Error Correction Model and Granger Causality Test for with CUSTA

Since two cointegrating vectors are found, these markets after CUSTA are represented by an error correction model. The VECM and causality test results are presented in Table 6. The lag length of 1 period is selected based on the same procedure used when the whole time period was analyzed.

Two equations, agricultural GDP and interest rate, have significant error correction terms, Π , presenting F -statistic, 4.5133 and 5.9319, respectively at the 5% level of significance. Since the error correction term provides information, changes in agricultural income and interest rate variables can be predicted in the long run by using the information. Cross terms in Γ for each equation are tested to identify the short run dynamics among variables. The past value of exchange rate is significant at the 5% level in the agricultural trade balance equation. The current value of agricultural trade balance can be better predicted by using past values of exchange rates than by not including them, and thus exchange rates “Granger causes” agricultural trade balance in short run. U.S. Agricultural trade deficit with Canada at t can be predicted by dollar appreciation at $t-1$. Therefore, the cointegration found among these variables is generated by short run relationship between agricultural trade balance and exchange rates and two long run relationships.

No significant linkage was found among the variables for before CUSTA period. while significant relationship was detected after CUSTA, indicating that agricultural markets are significantly affected by macroeconomic forces since the inception of CUSTA.

Dynamics of Markets

To investigate and compare the size of dynamic impact of exchange rate shocks on agricultural sector before and after CUSTA, impulse response analysis is conducted as in the previous section. The dynamic response of agricultural trade deficit, agricultural GDP and interest rates to exchange rate shock for the pre- and post- CUSTA periods are shown in Figures 4 and 5. As indicated in the Johansen and causality tests, no apparent impact is found in response of agricultural sector for the pre-CUSTA period, while the responses of the markets to the exchange rate shocks are considerable for after CUSTA period.

The responses of both agricultural trade balance and agricultural GDP at the first period are limited to around 0.3% up and 0.1% down, respectively, as in Figure 4, implying no apparent impact of exchange rate shock on agricultural sector before CUSTA.

For the post-CUSTA period, the patterns of the responses are similar to the one of using the whole period, but response behaviors are different. The largest impact of exchange rate shock on agricultural trade balance is realized at second period as displayed in Figure 5, while it was realized at third period when the whole time period was used. One percent of exchange rate shock on agricultural trade balance is immediate, and affects agricultural trade balance to respond by more than 6%. Then the responses of agricultural trade deficit decay over time, and are neutralized after seven quarters. The U.S. agricultural trade deficit against Canada immediately reacts to U.S. dollar appreciation, and takes more than a year to arrive at a new equilibrium. Again, this result is consistent with the finding from the causality test. A short run dynamic relationship is found between the agricultural trade deficit and the exchange rate, and the exchange rate “Granger causes” the agricultural trade deficit.

The mean response of agricultural GDP to a 1% exchange rate shock reaches down to around than 2.7% as in Figure 5. Unlike the response of agricultural GDP for the whole period, the response of agricultural GDP after CUSTA gradually perishes, and takes more than 10 quarters to be neutralized, whereas it returns to equilibrium after five to six quarters. The response of interest rates in Figure 5 is not prominent as seen in Figure 2.

IV. Conclusion

The U.S. agricultural and industrial trade deficits with Canada have dramatically increased, especially during the post-CUSTA initiated. A concern about the agricultural trade deficit was raised because of its negative impacts on agricultural income. The purpose of this study is to evaluate the impacts of exchange rate on the agricultural and industrial sectors, mainly trade balance between the U.S. and Canada, and U.S. farm income.

Considerable trade deficit and U.S. dollar appreciation relative to Canadian currency were realized for the post-CUSTA period. As bilateral trade between the United States and Canada is free under CUSTA, U.S.-Canada exchange rate plays a significant role in trade flow between the two countries.

This study has examined how macroeconomic forces such as exchange rate affect the bilateral trade balance between the U.S. and Canada. More specifically, the question of exchange rate impacts on bilateral trade between US and Canada is examined with particular attention given to the impacts of CUSTA on agricultural trade.

The variables used in the U.S. agricultural sector are exchange rates, agricultural trade balance (deficit), agricultural GDP, and interest rates, while industrial trade balance (deficit) and industrial GDP are used instead of agricultural trade balance (deficit), agricultural GDP in the U.S. industrial sector. The variables in both agricultural and industrial sectors are found to

interact with one another. Exchange rate has short run dynamic relationships with agricultural trade balance but not with industrial trade balance, indicating U.S. dollar appreciation against the Canadian currency causes the U.S. agricultural trade deficit to increase. These results are confirmed by impulse response analysis. The impacts of exchange rate shocks on agricultural trade deficit are found to be substantial, while the impacts on industrial trade deficit were minimal. Industrial trade balance is found to affect exchange rate, which is consistent with the results of Eichenbaum and Evans (1995). U.S. agricultural GDP is also found to respond more significantly than industrial GDP to 1% positive exchange rate shock. Thus, exchange rates are not always dominant but can be most contributing factor, leading to changes in agricultural trade balance and decrease in agricultural GDP. This phenomenon gets more significant under the post-CUSTA period.

No significant link is found among variables in the agricultural sector before CUSTA, and the impacts of exchange rate shocks on agricultural trade balance and agricultural GDP are found to be not significant. Meanwhile, stronger cointegration is found in the post-CUSTA period than the whole time period. The impacts of exchange rate shocks on agricultural trade balance and agricultural GDP in the post-CUSTA era (1990 - 1999) are conspicuous compared to the pre-CUSTA period (1980-1989) and the whole time period (1980 - 1999). This found indicates that agricultural sector has more suffered from exchange rate shock in the post-CUSTA period than the pre-CUSTA time period.

The regional and international trade agreements such as CUSTA and NAFTA might have a profound impact on the U.S. economy. Trade disputes between the U.S. and Canada have mostly focused on institutional differences in marketing system and agricultural policies. However, this study found that macroeconomic factors like exchange rates have substantial

impacts on trades flows. Thus, macroeconomic factors should not be ignored in formulating trade policies.

Table 1. Descriptive Statistics of the Variables Used in the Study

Panel A: Simple Statistics						
	Ex.Rate	Ag.TD	In. TD	Ag.GDP	In.GDP	IR
Mean	1.30	240.44	6448.93	84.25	5708.45	7.05
St. Dev	0.10	237.34	3861.70	15.36	807.47	2.65
Coef. Var.	0.08	0.99	0.60	0.18	0.14	0.38
Skewness	0.21	0.48	0.93*	0.52*	0.16	1.07*
Kurtosis	-0.79	-0.24	0.01	-0.10	-0.75	1.37*
ARCH Effects	26.13(1)	5.23(1)	17.56(1)	7.99(1)	40.46(1)	No ARCH

Ex.Rate, Ag.TD, In.TD, Ag.GDP, In. GDP, and IR denote exchange rates, agricultural trade deficit, industrial trade deficit, agricultural GDP, industrial GDP, and interest rates, respectively. Coef. Var. implies coefficient variation, and is denoted as standard deviation/mean. Figures in parenthesis are the order of ARCH process. * Indicates significance at 5% level of significance.

Table 2. Unit Root Tests of the Variables

	Ex.Rate	Ag.TD	In.TD	Ag.GDP	In.GDP	IR	Critical Vaules
ADF	-1.25	-2.58	-0.92	-2.48	-1.04	-2.31	-3.42
PP	-1.26	-3.01	-0.97	-3.10	-0.93	-2.40	-3.42

ADF and PP imply that augmented Dickey-Fuller and Philips-Perron unit root tests, respectively.

Table 3. Johansen Tests of the Agricultural and Industrial Sector Models

Panel A: Exchange Rates, Agricultural Trade Deficit, Agricultural GDP, and Interest Rates						
r	Trace	λ_{\max}	Critical Values			
			Trace		λ_{\max}	
			5%	10%	5%	10%
0	51.28	36.13	48.4	45.2	27.3	24.9
1	15.16	10.66	31.3	28.4	21.3	19.0
2	4.50	4.42	17.8	15.6	14.6	12.8
3	0.08	0.08	8.1	6.7	8.1	6.7

Panel B: Exchange Rates, Industrial Trade Deficit, Industrial GDP, and Interest Rates						
r	Trace	λ_{\max}	Critical Values			
			Trace		λ_{\max}	
			5%	10%	5%	10%
0	55.31	28.97	48.4	45.2	27.3	24.9
1	26.34	15.37	31.3	28.4	21.3	19.0
2	10.97	8.68	17.8	15.6	14.6	12.8
3	2.29	2.29	8.1	6.7	8.1	6.7

Critical values are tabulated in Johansen and Juselius (1990), Table A2. The results are the similar over different lags at 5%, and hence a result with two legs is presented here. r denotes the number of cointegrating vector.

Table 4. Estimated Error Correction Models and Granger Causality

Panel A: Exchange Rates, Agricultural Trade Deficit, Agricultural GDP, and Interest Rates												
Dependent Variables	Γ						Π					ARCH
	μ	ΔAg.TD _{t-1}	ΔEx.Rate _{t-1}	ΔAg.GDP _{t-1}	ΔIR _{t-1}	Ex.Rate _{t-2}	Ag.GDP _{t-2}	IR _{t-2}	F-test			
ΔAg.TD _t	12.2984 (1.4746)	-0.2320* (-1.9926)	473.1844* (1.7767)	0.2636 (0.2794)	-17.5447 (-1.5380)	-7.6866 (-0.0786)	-0.8918 (-0.7261)	5.1886 (0.8256)	0.2310			N/A
ΔEx.Rate _t	0.0026 (0.7178)	0.0001 (0.9058)	0.0358 (0.2910)	0.0001 (0.2638)	-0.0045 (-0.8961)	0.0001 (0.0761)	-0.0003 (-0.5669)	0.0002 (0.0844)	0.3449			N/A
ΔAg.GDP _t	48.419* (2.6398)	0.0118 (0.9437)	-18.6023 (-0.6088)	-0.6571* (-5.4539)	0.4402 (0.3333)	-16.4860 (-1.5992)	-0.4594 (-3.5498)	1.4857 (2.2435)	4.8098*			9.9261 ARCH(1)
ΔIR _t	0.3948 (0.2413)	0.0003 (0.2094)	-3.3253 (-1.5120)	0.0066 (0.6060)	0.1893 (1.5981)	0.0043 (0.0038)	0.0004 (0.5223)	-0.0066 (-0.6816)	1.4346			17.1356 ARCH(5)

Panel B: Exchange Rates, Industrial Trade Deficit, Industrial GDP, and Interest Rates												
Dependent Variables	Γ						Π					ARCH
	μ	ΔID _{t-1}	ΔID _{t-2}	ΔER _{t-1}	ΔER _{t-2}	ΔGDP _{t-1}	ΔGDP _{t-2}	ΔIR _{t-1}	ΔIR _{t-2}	ER _{t-2}	GDP _{t-2}	
ΔIn.TD _t	-4836.89 (-1.87)	-0.2503 (-1.97)	-0.0576 (-0.42)	2061.44 (0.47)	928.99 (0.22)	1.7042 (0.37)	7.4871 (1.66)	42.5704 (0.37)	27.5158 (0.25)	918.79 (0.60)	0.6902 (2.41)	162.46 (2.07)
F-stat				0.1333		1.4753		0.1079			2.1581	
ΔEx.Rate _t	0.1231 (1.36)	0.8573 (2.41)	0.5430 (-0.07)	0.0073 (0.06)	0.0261 (0.21)	0.0001 (0.46)	0.0001 (0.98)	-0.0085 (-1.87)	-0.0057 (-2.49)	0.0846 (1.74)	0.0004 (0.10)	-0.0018 (-0.78)
F-stat		3.0814*				0.6084		5.0646*			1.2149	
ΔIn.GDP _t	147.70 (1.59)	0.0034 (0.87)	0.0040 (0.96)	-122.01 (-0.91)	-91.97 (-0.72)	0.1929 (1.37)	0.0491 (0.36)	-4.91 (-1.40)	-9.8035 (-2.90)	42.41 (0.91)	-0.0186 (-2.13)	-7.9221 (-3.32)
F-stat		0.6846		0.6915				5.5804			8.4488*	
ΔIR _t	2.6051 (0.85)	0.0005 (1.21)	0.0002 (0.11)	0.1544 (0.04)	0.5082 (1.21)	0.0003 (0.0709)	0.0142 (1.51)	-0.0485 (-0.42)	-0.3290 (-1.94)	-1.5441 (-1.01)	-0.0001 (-0.35)	-0.0892 (-1.13)
F-stat		0.7467		1.4098		1.8990					1.1058	

White's (1980) heteroskedasticity-consistent covariance matrix is used to calculate the *t*- and *F*-statistics. Figures in parenthesis are *t*-stat. * Indicates significance at the 5% level. *F*-test in Panel A indicates the significance of error correction terms denoted as Π. N/A implies ARCH does not exist.

Table 5. Johansen Tests for Variables for the Post-CUSTA Period

Panel A: Pre-CUSTA Period				
r	Trace	Critical Values		
		λ_{\max}	5%	10%
0	19.26	10.31	48.4	27.3
				24.9

Panel B: Post-CUSTA Period				
r	Trace	Critical Values		
		λ_{\max}	5%	10%
0	100.30	51.71	48.4	27.3
1	48.56	31.51	31.3	21.3

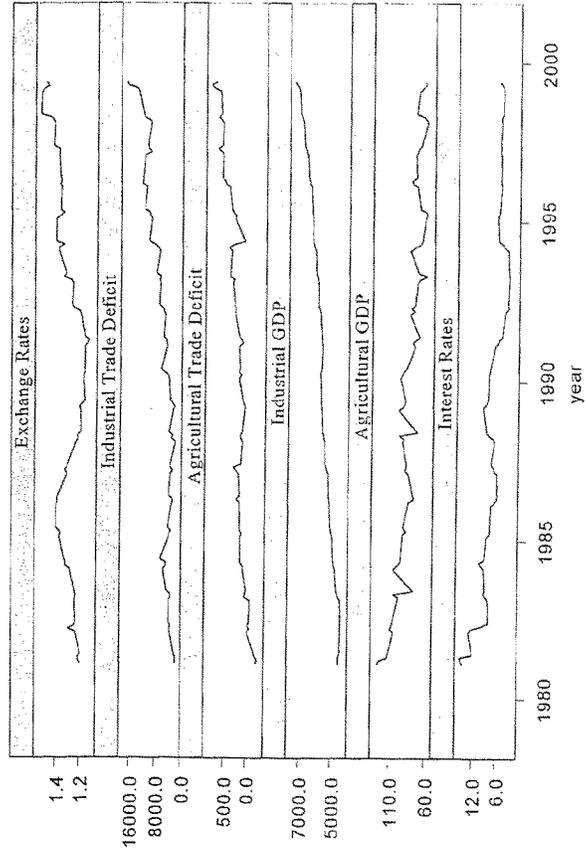
Critical values are tabulated in Johansen and Juselius (1990), Table A2. The results are similar over different lags at 10%, and hence a result with two lags are presented here. r denotes the number of cointegrating vectors.

Table 6. Estimated Error Correction Model and Granger Causality for the Post-CUSTA Period

Dependent Variables	Γ					Π			F-test	ARCH
	$\Delta Ag.TB_{t-1}$	$\Delta Ex.Rate_{t-1}$	$\Delta Ag.GDP_{t-1}$	ΔIR_{t-1}	$\Delta Ex.Rate_{t-2}$	$Ag.GDP_{t-2}$	IR_{t-2}			
μ	86.5641 (0.2567)	-0.1795 (-0.9310)	743.5436* (1.7576)	0.4751 (0.1943)	3.1053 (0.0751)	-17.6488 (-0.1027)	-1.4090 (-0.6618)	10.2971 (0.8632)	0.3278	N/A
$\Delta Ag.TB_t$	0.2426 (2.0004)	-0.0001 (-0.9656)	-0.3426* (-1.8682)	0.0004 (0.4641)	-0.0050 (-0.3349)	-0.0926 (-1.4989)	-0.0010 (-1.3132)	-0.0062 (-1.4525)	2.0902	N/A
$\Delta Ex.Rate_t$	58.8119 (2.4989)	0.0168 (1.2518)	-5.0827 (-0.1428)	-0.3138* (-1.8385)	-1.6154 (-0.5595)	-17.7665 (-1.4819)	-0.5215 (-3.5100)	0.3919 (0.8325)	4.5133*	N/A
$\Delta Ag.GDP_t$	-2.734* (-2.023)	-0.0008 (-1.0033)	-2.9761 (-1.4556)	0.0160 (1.6312)	0.1207 (0.7280)	1.9275 (2.7992)	0.0136 (1.5919)	-0.1567 (-3.2763)	5.9319*	N/A
ΔIR_{t-1}										

White's (1980) heteroskedasticity-consistent covariance matrix is used to calculate the t - and F -statistics. Figures in parenthesis are t -stat. * Indicates significance at the 5% level. F -test indicates the significance of error correction terms denoted as Π . N/A implies ARCH does not exist.

Figure 1. Movements of Variables, 1980 ~ 1999



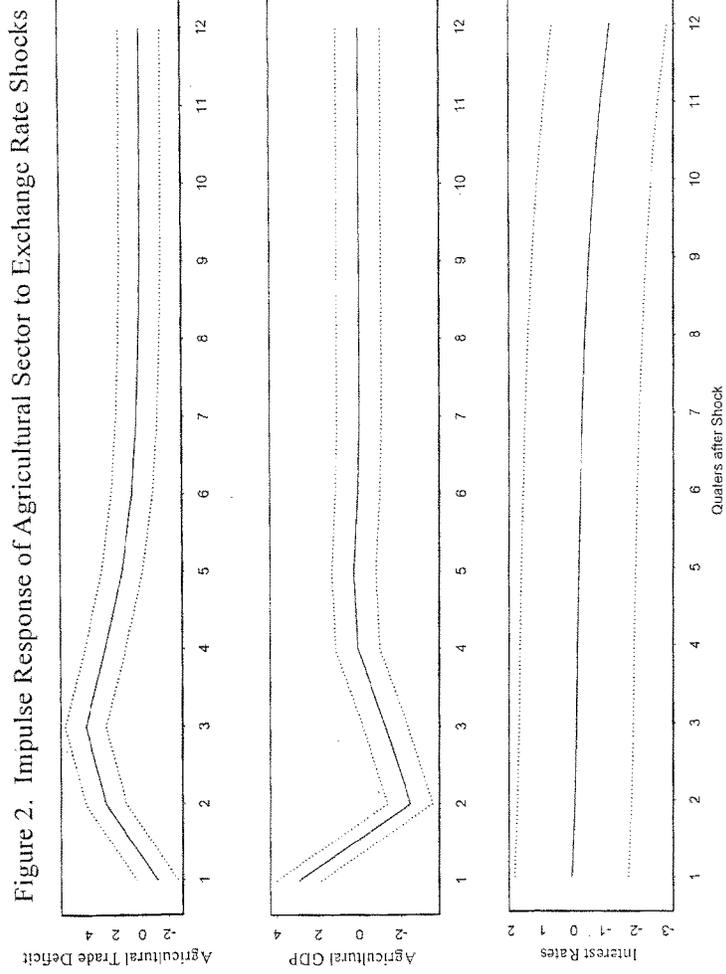


Figure 3. Impulse Response of Industrial Sector

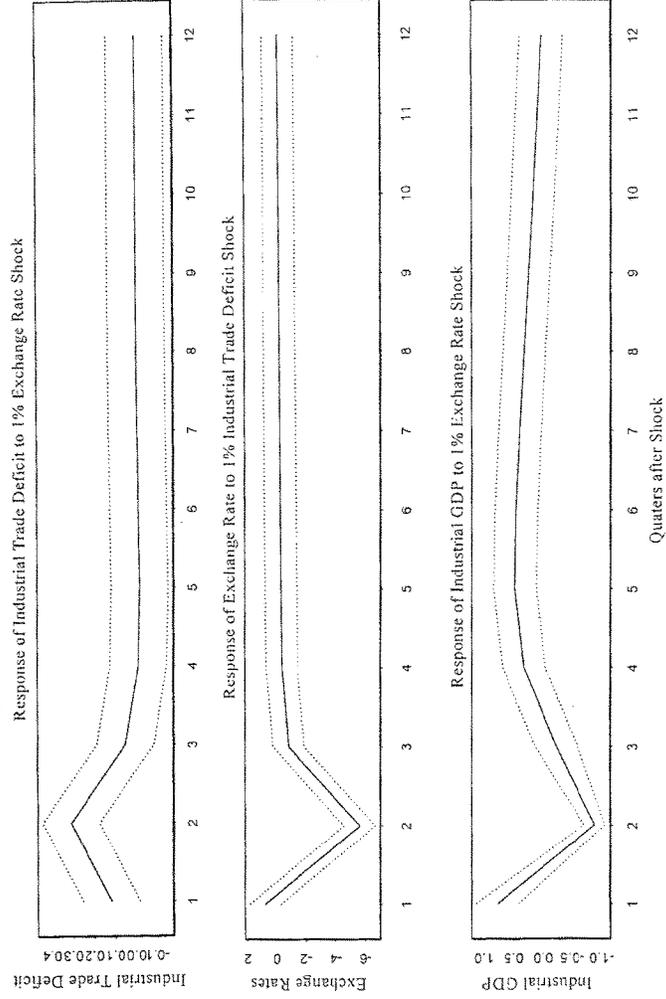


Figure 4. Impulse Response of Exchange Rates for the Pre-CUSTA Period

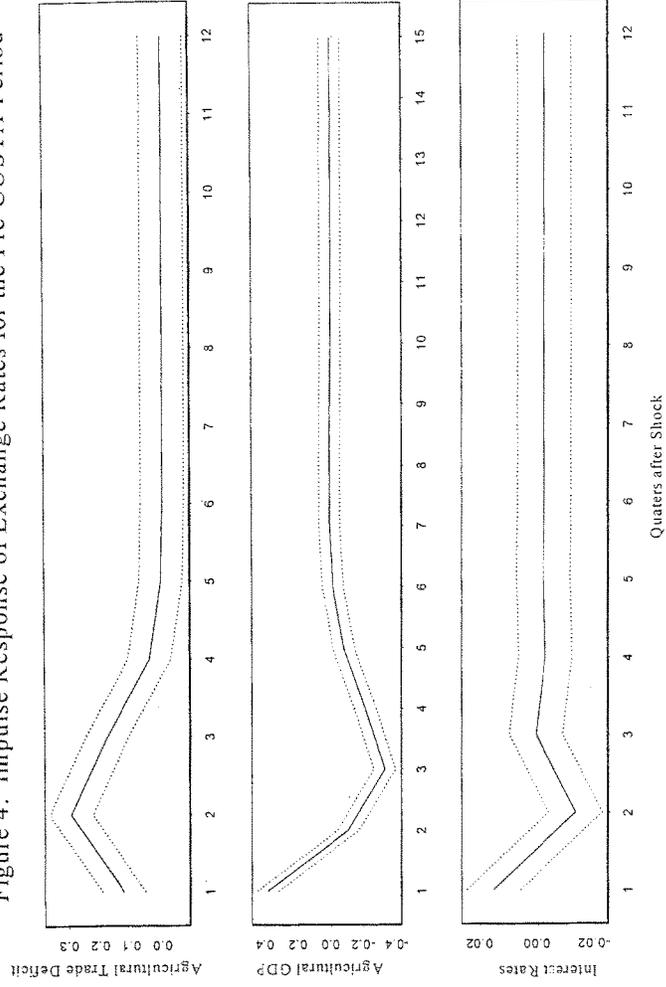
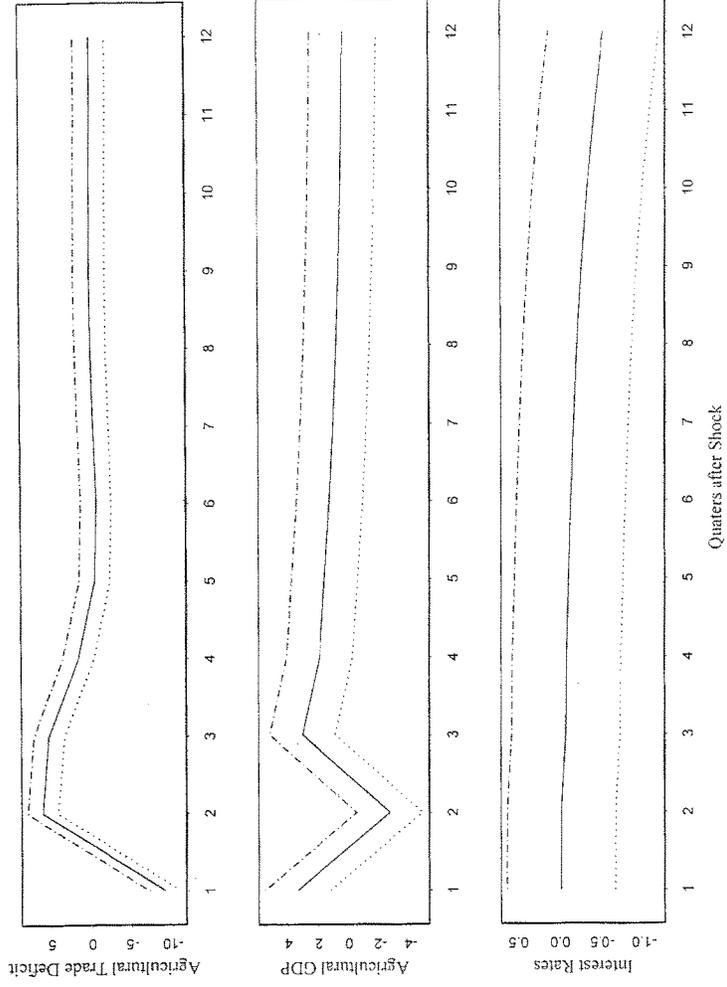


Figure 5. Impulse Response to Exchange Rates for the Post-CUSTA Period



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¹ The standard deviation of skewness and kurtosis are as follows

$$\text{skewness} = \sqrt{\frac{6n(n-1)}{(n-2)(n-1)(n+3)}} \text{ and } \text{kurtosis} = \sqrt{\frac{24n(n-1)^2}{(n-3)(n-2)(n+3)(n+5)}}.$$

² The covariance matrix is estimated using White (1980) to allow for heteroskedasticity.

³ Twelve quarter periods are selected because the mean responses of presented markets are apparently the same to exchange rate shocks after about twelve quarter periods.

