adjusted, and wheher or not additional funding should be made available.

This is not, a very politically sexy subject, as you know. This is sort of the Lord's work that you're doing here, and nobody really gets excited about it,

Mr. HUME. We"re already doing a lot of thinking on that 1ine. Thank you.

Chairman HUMPHREY. David. do you have to leave urgently? If you do I have two or three additional questions that I'd like to ask you.

Mr. HUME. Not until 3 :30.

Chirman **HUMPHREY.** All right. We'll get Quentin in here first then. Dr. West ?

STATEMENT OF DR. QUENTIN M. WEST, ADMINISTRATOR, ECONOMIC RESEARCH SERVICE, U.S. DEPARTMENT OF AGRICULTURE

Dr. **West.** Thank you, Senator. It is a pleasure to be back, to talk with -you. The Economic Research Service is charged with supplying analytical information on the whole agricultural system. We work closely with FAS in putting together that informtion on the foreign side which impacts on not only our domestic system, but our whole foreign policy. So we have quite a wide charge As the new Administratator in 1972. I felt that we needed to take a fundamental look at our research, and how we were organizing it ***to*** bring ERS up to the level of performance we thought was needed. Two of, our divisions had existed since ERS was organized, and another one had existed since the thirties without too much change in the basic program. One problem was that our coverage of the commodities was divided into two different research divisions and one more division for the situation and outlook for the markets. So we brought in some people from the Departments, other Governrment agencies, and from t e universities, to look at what was ERS' role and how we were organized to carry it out.

Unfortunately that should have been done earlier because about the same time it began in 1972, some tremendous changes in agriculture and the economy broke upon us. The way we were set up and the flow of data that we had w-as satisfactory back in the 1920's and up through the 1960's. As you know, if you look at the chart of commodity prices and their variation, they go along fairly steady all during those decades, and suddenly in the seventies they become very volatile.

Chairnmn Humphrey. Yes.

Dr. **WEST.** So the way we were organized and the procedures which we used were acceptable during the earlier time period. But, they just did not serve as well when we got into the seventies when our tremendous surplus, which had insulated us from the world conditions had disappeared.

For example, we had been estimating farmers' seasonal pattern of selling their products on what they sold on the average for each month of the 3 preceding years. That was the information we had for making estimates of farm income. And for previous decades that worked quite well, because they had maintained similar patterns.

But as you know very well, the farmers don't follow the same marketing patterns that they did some years ago because prices are so much more volatile today.

Chairman Humphrey. Yes.

Dr. West. But we did get major changes in ERS underway early in 1973, with emphasis on refocusing of our research priorities. We also combined our outlook and situation work with the research function, and greatly strenghened this work by shifting some $600,000 and 19 people internally. We also asked Congress for some additional money, and we were given a half-million dollars to further improve our work in outlook and short-term forecasting. So we have substantially strengthened this work.

Not only have we put more people there, but we've changed our analytical approach. We have instigated what we call a quarterly memorandum that we use each quarter to run through the whole agricultural situation, what we think is going to happen in the area of production and how that relates with exports, or what the carryover will be of commodities and how that impacts on farm prices, and therefore on the farm income, and also how it impacts on food prices. It is quite a complex system.

In addition we look at the following crop year with what we call a contingency analysis In it we say, what happens if the weather is good, or if it's bad or what happens if economic conditions are bad, or other alternative assumptions.. We get several contingencies, and we look at them, and say what will be the impact on the food and agricultural system if these things happen.

We also meet quarterly with representatives from the Council of Economic Advisers, the Federal Reserve System, the Library of Congress, the Treasury, and OMB, to go over these analyses, We inform them of the way we see the outlook and also get their feedback on it—and how they see the impacts. A lot of this goes beyond the agricultural part of the economy.

Chairman HUMPHREY. How often do you do that, Dr. West?

Dr. West. Every quarter.

Chairman Humphrey. After you have gone though that exercise in the execuive branch of Government and the Library of Congress, would You be willing to do a similar exercise for the Joint Economic Committee!

Dr. West. We certainly would.

Chairman HUMPHREY. I think that committee has been derelict and negligent over the years on agricultural economics, which is so vital to the economy. I'm going to make note of this. When do you do your next briefing.

Dr. West. In the middle of October.

Chairman HUMPHREY. I'll keep that in mind since we're trying to get a better picture of the economic developments.

Excuse me for interrupting, go ahead, sir.

Dr. WEST. Let me mention again, just for the sake of information, that we are looking very carefully at our whole methodology. Now I think we have not had a bad record in our forecasting. But, we ran into so many forces in 1973 which—

Chairman HUMPHREY. A combination of events, yes.

Dr. Wm. Thus, we were low in our estimates of farm prices and the food price increase. Actually though as we look at forecasting we

do not expect to hit it on the nose. In fact, if forecasts are unfavorable for example, then either the farmers or the administration ought to do something about the situation through policy changes or program changes and so on, and therefore invalidate the forecasts.

But the thing we were not doing was to document what assumptions we used and to trace the course of events that canned our major assumptions and thus our forecasts to change. We have now set up a group to follow that through and to track and improve our forecasts and our methodology. This work is really moving forward.

Also as part of this effort we are trying to handle the large volumes of data more rapidly. It used to be that we only ran through this analysis once a year, but now we are doing it quarter. We **intend within 6 months to be able to run through this month y so that wc do not have to wait for new quarterly analyses.**

'To do that, we have centralized our data system at the agency level and we have placed a high priority on improving the data flow. We first worked on our analytical capability and set up our structure and our methodology for improving our analysis and then the second priority was put on our data flow. It really amazed me when I took over the agency that with our responsibility to provide data to the whole agricultural economic community, we had never had our own survey data to provide our kind of needs. We had always relied on others in piecemeal fashion.

Chairman HUMPHREY. Yes.

Dr. WEST. We had a couple questions on an SRS survey, we got Census to add a couple of questions, and we had a little information from the Internal Revenue and so on. So our first priority on this was to put together some resources that ERS and SRS had and request some additional resources which Congress is in the process of approving. We will start this year with an annual economic survey of farming that will give us a flow of needed information.

Also we do not want to limit this to just farming, because a real impact on this farming can come from the farm input sector such as for fertilizer use. And we need to know more about what goes on beyond farming in terms of processing, and distribution, and also in retail.

Chairman HUMPHREY. Yes.

Dr. WEST. For a long time, of course, the public and Congress have had a concern about where the consumer dollar is going, and how much of it is going to the farmer. We have programs to estimate this that have existed for a long time, but we need a lot more information on just what happens on the structure and the costs in the input industries and in the processing and distribution industries. So we asked for *some* additional resources this year and this request has been approved by both Houses of Congress. We expect to get underway in this new program very soon. These are the principal places we started on our flow-of-data needs.

To put out this information on a more timely basis we reviewed our whole flow of outlook and situation reports. There ***are*** many of these, the wheat situation, the livestock and meat situation, and so on.

Chairman **HUMPHREY. Oh, Yes.**

Dr. WEST. As a result we have started publishing the Agricnltural Ontlook. This is a monthly publication in which we try to synthesize all the information, and try to bring it up to date each month.

Chairman HUMPHREY-. Does every Member of Congress get one of these ?

Dr. WEST. Yes.

Dr. PAARLBERG. I am sure we have provided them to the House and Senate Agriculture Committees.

Chairman HUMPHREY. I want to make sure that they do.

Dr. WEST. We had quite a nice letter from Mark Andrews on this new monthly publication.

Chairman HUMPHREY. I talked to Mark on the plane going back to Minnesta and North Dakota about this. I've heard it's an excellent publication that summarizes the most important information of the month.

Dr. WEST. That's right. After our next quarter] in-house analysis, we will summarize it in the Agricultural Outlook. We have not released to the public previously this analysis. It has been internal. The "Agricultural Outlook" will include the essence of our quarterly review. And as I say. hopefully within 6 months we will be in a situation where we can run this analysis through once a month. So each month we can update our evaluation of the production, the supply, and the exports, and the impact on the prices, on income, and so on.

Chairman HUMPHREY. I suggest most respectfully that you send a copy of this to every Member of Congress.

Dr. West. Very well.

Chairman HUMPHREY. It's only 535 copies, and I think it would do a lot of good.

Dr. WEST. Right.

Chairman HUMPHREY. Around here you have to be sort of a general practitioner with the appetite of a centipede to be able to live.

Dr. WEST. Well, another publication is 'agriculture Supply and Demand Estimates:" which is put out monthly, following the crop reports that come out, from SRS. We run through an analysis in cooperation with analysts from ASCS, FAS, and others on the Interagency Commodity Committees. We sit down and run through this analysis of what they. see in the new crop report, what this means in terms of production, and what adjustment might be made in exports and carryover. and so on. This has been, I think, a very valuable Instrument.

Chairman HUMPHREY. Sort of an analysis of the crop report, and . what its meaning is in reference to the total supply situation?

Dr. WEST. Yes. We do this right after the crop production and grain stocks reports come out, and planting intentions reports. It's really a quantification of all the different things.

Chairman HUMPHREY. Oh, yes. it has beginning stocks, That's the kind of thing that Dave was talking about. Does anyone from the newspapers ever get these?

Dr. WEST. Oh, yes. There are lots of them.

Chairmnn Humphrey. Well. why don't they use some of that ?

Dr. PAARLRERG. Well, they do increasingly now.

Chairman HUMPHREY. Are they using more of it ?

Dr. PAARLBERG. Yes.

Chairman HUMPHREY. There is so much misinformation when I go home to our great agricultural State, and for example, speak to the chamber of commerce of a town. They have been reading, and listening to radio and TV, and it seems the local paper gets so much mis-

information. Maybe it is because they don't understand it. This is a complex matter.

Dr. West. We also put together in name form all of the information that flows to us weekly. I think that comes up to you. If not we could provide that to you.

Dave is doing something similar on the foreign side, and we try to combine some of that, with what's happening on the domestic side. This weekly - highlights memo includes reports that come out during tile week that relate to the outlook situation, even the weather for example.

Chairman HUMPhrey. Yes.

Dr. WEST. As we look ahead, some of our questions right now are to review our data series. Don mention@ that we have had this group in, including people from the universities, and the American Agriculture Economic Association to kind of coordinate this review with us.

Jim Hildreth was chairman of one group, and he had someone from Commerce who looked at our farm income statistics and came up with some recommendations on how we might improve not only the data that we use to do this, but also some of our concepts. This is important because some of these concepts are reaching back to the small farms, which are much different from the typical farm situations. This is a copy of that task force report.

Chairman HUMPHREY. Thank you.

Dr. West. We have one currently underway under the leadership of George Brandow looking at the farm retail price spread data.

Chairman **HUMPHREY.** Yes; we've had George doing a study for us in the Joint Economic Committee as well.

Dr. PAARlBERG. Yes.

Chairman **HUMPHREY. We are** are **to publish that study when it is completed. That doesn't interfere with anything he's doing for you?**

Dr. PAARLBERG. No.

Chairman HUMPHREY. No ?

Dr. WEST. In fact, we think we will do this type of review at least once a year, and take a look at some of these areas to make sure that they are relevant for the present situation in agriculture.

We need to pursue our data and needs in our long-term plans. We need to look at the consumer, for example, through a consumer panel to get the data and information on What happens in what people buy, and as this is reflected by prices and by income, or different goups, and so on. Also On how consumers shift from one commodity to another as price changes. because we need to update some of our demand estimates and what causes shifts in demands.

In the long term we are looking for an improved data base for all of our research programs and we feel a need to put proper emphasis on this. For example. I already mentioned the structnre and performance of input industries and food processing and distribution. We have money for starting a first step in this. and if that's successful we'd like to move on to get more data in this area.

Also we need to get some more data on land use, land and water use, and changes in the cost of improving our lands so that we can get a better estimate of what our capacity is to produce for future demands.

I mention other things in my statement, but I think these are most important.

Chairman Humphrey. We will include your complete prepared statement in the record.

I hava few general questions, end David, since" you're going to have to get away. I'll ask you first.

Why are world agriculture production and estimates not subjected to broad review similar the crop reporting board review in the Statistical Reporting Service, and the Outlook Situation Board in the Economic Research Service?

Why don't you give the world agriculture production and trade estimates the same kind of review?

Mr. HUME. Well, they do get a broad review. It's not a situation outlook board.

Chairman HUMPHREY. Do you participate in that ?

Dr. West. Yes.

Mr. Hume And there is an interagency group that does review these. " I don't think there would be any objection to what we have. I think it raised some questions as to time, an the situation rewiew takes a little time, and once in a while we feel that we 'are—accomplishing the same thing under our system as it exists, but it does take time to improve that.

Chairman HUMPHREY. We've had some suggestions to create a World Crop Reporting Board within USDA that would review all sources of country production information—attaché reports, foreign release statistics, weather yield analysis, other data, from all departments of the Government on a timely basis. This Board would produce a forecast or estimate that would be acknowledged within the Government; that is, with all our department USDA, State, et cetera, as the best number. Thus we would eliminate duplicate numbers floating within the Government.

What's your view on that?

Mr. HUME. Well, I will give you my view, and then I will ask Dr. Paarlberg to comment on that. But my view is that this would inevitably slow up the providing of this information. If I understand what you am talking about, it would bean interagency or an interdepartmental type of board.

Chairman HUMPHREY. Right.

Mr. Hume. And you would raise a committee and I'm sure that there would be differences of views, there would be headaches with language, and they would be arguing over semantics, and tins is a very big order to take in the whole world.

I would think that-maybe-I would just say that there would be too much bureaucracy in that to make it practical. I can see the idea. and I would support the idea if it could be organized and operated with the assurance that it would do so on a timely basis. I wouldn't object to the idea, but I don't see the operation being practical.

Chairman **HUMPHREY.** You feel the factor of delay here is vital and important here?

Mr. **HUME.** Well, to put it bluntly, Senator, I think I would compare this with trying to get a State Department clearance to clear some of our agricultural cables. We sometimes take a month to do that, and only a few words are involved. Now, if I understand it correctly, this kind of clearance would be much more complex than even that. So I would have to ask first, what are you going to get out of this kind of an operation that you don't have now.

Chairman HUMPHREY. The only thing you'd get out of it is an agreement upon the statistics and figures and analysis of projections.

Mr, HUME. Maybe we could publish it and let this take place in retrospect. They either confirm it or they correct it.

Chairman HUMPHREY. I tell you what I'd like to do. I just wanted to raise these questions because no one knows more about these things than you men.

Mr. Hume. We appreciate that.

Chairman HUMPHREY. You might want to take a look at that.

Mr. HUME. All right.

Chairman HUMRHREy-. Our aim is to get an idea of the 'big picture in a timely fashion.

Dr. WEST. Could I respond to that ? We do this on an informal basis. I am sure that CIA doesn't come out with a review, and we do discuss this, but there is no attempt to force the position.

Chairman Humphrey. To formalize it ?

Dr. **WEST. Well, to** reconcile the figures. For example, we have not been in agreement! all this year on U.S.S.R. and for a long time they held out for a much higher level. For U.S.S.R. grain production this year they were holding at 210 million metric tons and we had the estimate clown to 180, and they suddenly dropped to-well, first 165 and then 170. and they arc still at 170 while we're at 175. So the point you made is important. For this whole season we have not seen eye to eye on just how we've interpreted conditions in the U. S. S. R., but we do know what each other is doing.

Chairman HUMPHREY. I understand that. I'm not suggesting this all be clone by one agency. It's just like the intelligence services of the Government.

Dr. WEST. Right.

Chairman HUMPHREy. I don't like to have all of it concentrated in one hand. I think it's important to get different people looking at the same. situation. They have different perceptions and estimates.

Dr. West. See, we feel that in agriculture with our extensive attaché system, we have people out there who know the countries, and thus we have the best system in agriculture.

Chairman HUMPHREY. Right.

. Dr. West. Now to set up something, for example, that would have to be approved by the State Department and approved by CIA, before we could get any information would get us into a very difficult situation.

Chairnmn Humphrey. I'm afraid you're right.

Dr. PAARLRERG. If we had to all agree it would be less efficient.

Chairman Humphrey. I see.

Dr. WEST. If we could analyze the reasons why there is a little different interpretation on the situation, it might be more clear to people like YOU as to why, for example, CIA held at 210 for sometime, and then dropped down to 170. or why we are still differing. of course, we aren't estimating that close anyway, but-

Chairman Humphrey. Yes; that was a considerable variance

Dr. WEST. That was a variance which has impacted on our policy.

Chairman Humphrey. Indeed. The CIA indicates that major communication barriers within USDA have been somewhat overcome since 1973, but some barriers they say remain-namely economic and food intelligence information. This only reaches top level USDA deci-

sionmakers. The information that passes to the working level is well filtered. Not all senior analysts in the Economic Research Service are cleared to receive it, is that correct?

Dr. WEST. Well, on the foreign side, all of them are cleared to receive it. Not all of them on the domestic side are.

Chairman Humphrey. Likewise, what flows to Congress undergoes more interpretation from USDA. There are two lines that we might pursue here. one is to explore with USDA, the accuracy of CIA reports regarding the kind of information received from the CIA, the frequency, the quality, the flow; and second, explore how the Congress can obtain access to this intelligence data on a regular basis.

What we're really talking about here is the fact that the CIA is obtaining worldwide information through various means, which may or may not be as accurate as the Foreign Agricultural Service attache system. I think the use of electronics has limitations in providing this information.

Dr. WEST. Our relationship with CIA is quite close, and in normal analyses we have no problem in talking to their people and getting information. There have been certain times when there has been sort of a clamp put on things. The working relationship is very good at several levels. It's only sometimes when they learn things only at the top level and they come out saving this is sensitive.

Chairman HUMPHREY. What concerns us is not only assuring that the government has the most accurate information as possible, but timely market information. This means so much to our farm producers, since our farm people today are capable of holding the crop for a period of time in order to wait for better marketing conditions.

I'm essentially concerned about the producer in this area. I talk to many of our young farmers out home and they are well educated and really want accurate and timely data. The-y are not interested in reading last week's St. Paul Pioneer Press, I predict that within 10 years we will have computer printout services providing this information to many farm homes.

Dr. **WEST. This** is one thing that I had in my statement that I didn't mention. We have set up an arrangement with the extension service that provides our current information as soon as it's released. We put it on the computer and the outlook extension people can take that off immediately by tapping into the computer. So they don't have to wait for the mail service to get it.

Chairman HUMPHREY. Great.

Dr. WEST. And as you say, I think a lot of farmers will move in tlmt area, and there's no reason why they couldn't tap into this very same information.

Chairman Humphrey. It's vital to the credit system too. The banks make loans on projections as well as on reality. Don, you and I should turn the clock back about 20 years and we'd have a great time.

Dr. PAARLBERG. I think we've got that much time left.

Cairman HUMPHREY. I think we have too. We could get these kids all shaped up.

Dr. PAARLBERG. Right.

Dr. WEST. With the kind of price fluctuations we've been getting, a person if he sells right, can make as much as a year's crop, if he just sells at the right time.

Chairman HUMPHREY. David, I'll send you any other questions.

Mr. HUME. May I express my appreciation for your time.

Chairman HUMPHREY. It's good to have you here.

Mr. HUME. It's nice to be here. Thank you.

Chairman HUMPHREY. Dr. West. I'd like to ask you a few questions.

How is the responsibility for estimates of export demand divided between ERS and FAS commodity analysts

Dr. WEST. We work with them and they have the final responsibility. We have an interagency commodity committee and we provide a lot of information and analysis, and we discuss this, but they have the final authority.

Dr. PAARLBERG. We take their inputs and perhaps have some influence or carry some weight.

Dr. WEST. We do, there's no quest ion about that.

Chairman HUMPHREY. Do you have any plans for issuing monthly digests of world agriculture for general distribution?

Dr. WEST. We have a regular section on world agriculture in agricultural outlook, But also this past year we have moved from putting out the more comprehensive world agriculture situations once a year to three times a year.

Chairman HUMPHREY. That is very, very helpful.

Dr. WEST. Also four times a year we're putting out in conjunction with FAS an outlook for U.S. agricultural exports.

Chairman HUMPHREY. Do FAS and ERS worth together on this world agricultural outlook ?

Dr. WEST. We work very closely with them, but we do have the responsibility for, the world agricultural outlook.

Chairman HUMPHREY. You have prime responsibility ?

Dr. WEST. Right; on this outlook for U.S. agricultural exports, we work in conjunction with them,

Chairman HUMPHREY. Is it correct that only the fibers and tobacco analysts have clearance to receive classified information?

Dr. WEST. That could be true, for our domestic. analysts but I am not sure on that.

Chairman HUMPHREY. I think 1 know why, but go ahead.

Dr. WEST. In our foreign area. we just haven't had enough resources to cover all the commodities.

Chairman HUMPHREY. And my friends from the South have very powerful positions on the, Committee on Agriculture and they do see that cotton and tobacco are taken care of.

Dr. WEST. Our domestic commodity analysts do more of the analysis on tobacco and on cotton across the board including the foreign areas, so there's more reason for them to have a clearance. We have quite a group on the grains and the livestock products in our foreign demand and competition division. so there is less need for our domestic analysts in the commodity economics division to be cleared. However, I am quite sure that the program leader, Jim Naive, is cleared. Do you know. Mr. Gasser ?

Mr. GASSER. I think that's right.

Chairman HUMPHREY. I think you should find out why there aren't clearances at more levels. There's no reason for this.

Mr. GASSER. From the foreign division we do have all Our analysts who are cleared for at least confidential and all the program leaders are, cleared for secret and higher.

Chairman HUMPHREY. That's in the foreign area?

Mr. GASSER. That's right, in the foreign demand and commodity division.

Dr. WEST. This now runs up to about $1,000 to clear someone for secret. If they don't need that clearance then that's money you save.

Chairman HUMPHREY. I agree. But I think the question for you, Dr. West, is to determine if more people could benefit by having this clearance.

Dr. WEST. We'd be very glad to have more of them cleared,

Chairman HUMPHREY. I want to emphasize that you know whether - or not your work is in any way limited by this restriction..

Dr. WEST. It has not come to my attention that there is any problem in lack of clearances, because we do have the authority to clear who we want to.

Chairman HUMPHREY. OK.

Dr. WEST. So that has not been an issue that's been bought to my attention.

Chairman HUMPHREY. This is just another question that has been brought up in discussions by the OTA Food Advisory Committee which is headed by Dr. Wharton of Michigan State..

How are the reports of the Interagency Commodity Estimates Committee integrated with the ERS agricultural supply and demand instruments ?

Dr. WEST. They are one and the same thing.

Chairman HUMPHREY. They are?

Dr. WEST. This publication called 'agricultural Supply and Demand Estimates" is really the result of the interagency commodities committees. It goes through the Outlook and Situation Board which is in ERS. SO we do most of the analytical work, but these committees are chaired by representatives from ASCS.

Dr. PAARLBERG. I have overall responsibility, Senator Humphrey. I chair the entire operation. Each one of the commodities has its own chairman, and they report to me, so this is cleared through me, both the supply and demand estimates that are published here, and the interagency group that makes projections regarding yield and so on for the various crops.

Chairman Humphrey. Would it be feasible or desirable to organize . a food and agricultural intelligence unit made up of key commodity specialists from ERS, FAS. and ASCS ?

Dr. WEST. Well, we have that in each of the commodities, but not for food, per se.

Chairman HUMPHREY. The point would be to unify it into one panel.

Dr. PAARLBERG. Really they are here. There's a committee for each one of the major commodities, and they are integrated under my overall chairmanship and each one of these groups does, in effect, contain the experts on these commodities from ERS, FAS, ASCS, and AMS. when that's needful.

Chairman HUMPHREY. So you in a sense have a working unit?

Dr. WEST. We really have that.

Chairman HUMPHREY. Very good.

This has been a good review. Dr. Paarlberg. we would be happy to have any suggestions you would like to contribute to this report. By the way, I haven't mentioned today what you're doing to buttress

the FAO. We heard yesterday that the FAO is doing a better job, for example, on some of its projections, and on gathering agricultural information at the international level, Are you of that opinion?

Dr. PAARLBERG. We are. They are improving in their work and they work cooperatively with us. They can do some 'things that we can't do. and we can do some things that they cannot.

Dr. WEST. Could I mention a speific example ?

Chairman HUMPHREY. Yes.

Dr. WEST. We used to do food balances by country, for which we tried to get all the information on the crops that are produced, put together the total Consumption, and come Up with a number of calories per capita. We did this in the middle 1960's as a basis for what we called the world food budget.

Chairman HUMPHREY Yes. I **remember that.**

Dr. WEST. This was a most comprehensive analysis of the level of consumption around the world. Now, we had not used FAO too closely up to that time, because they were pretty much restricted by what the Government said they could do. But as a result of the indicative world plan, that whole exercise, they set up a much better system of statistics in which they kind of filled in the gaps. Some of their information came from us. We had a struggle to put this out on the African countries, and then a few years later FAO crone out with some food balances for Africa, and I thought we could thus update ours. our food balance on Africa, and we looked at them and they were the food balances we had prepared earlier. They got theirs from us.

But anyway, they are putting out on a regular basis these food balances. and we felt that it would be best to put our resources on those things that are most critical in our whole export program. Rather than trying to periodically dig in to solve the many problems of other commodities that go into making up these food balances, we would let FAO do it.

Chairman HUMPHREY. Right.

Dr. WEST. So we are not now doing these comprehensive food balances.

Chairman HUMPHREY. Instead you rely on FAO ?

Dr. WEST. That's right, because I think theirs now is as good as we could do, and I might say, that's not too good, because you don't know how many bananas there are produced, -so all **this has to be pretty** much of an estimate. Unless we get a real breakthrough on some of these minor crops, you will still be **estimating** at **the same levels, or increasing it by population growth. or something like that. This is the best you can do, and so we thought it was better to concentrate on other commodities. Grains, of course, make up a big part of the diet of most people in the world. Grains are important in the trade and I think they are the best indication of what's happening in world food consumption.**

The last time we did Asia. for example, we ran through all this exercise, and we came out with some results that we couldn't believe. After looking at it and discussing it we decided, to estimate for India here, and put all the **countries in this relative order. and go back and adjust it to come up with these estimates. Because India was the best information we had. Information on minor crops was not that good, so we concentrated on the groins.**

Chairman HUMPHREY. Thank you very much, gentlemen.

Dr. PAARLBERG. Thank you. We appreciate coming up here, and we think this is a constructive report, and it gives a fresh look from the outside of our operations, and it provides the occasion for us to review this whole matter with you, which we are happy to do.

Chairman HUMPHREY. Thank you very, very much.

[The prepared statements of Dr. Paarlberg, Mr. Hume, and Dr. West follow:]

STATEMENT OF DR. DON PAARLBERG, DIRECTOR OF AGRICULTURAL ECONOMICS, U.S. DEPARTMENT OF AGRICULTURE

I believe that we in food and agriculture have one of the best information systems of any sector in our economy. And we have, without a doubt, the best food and agriculture information system in the world.

You have asked the administrators of USDA agencies dealing in world agricultural information to also appear at these hearings. I don't intend to duplicate their comments but I would like to make a few brief remarks in response to major recommendations in the report, "Food, Agriculture and Nutrition Information Systems: Assessment and Recommendations" made for the Office of Technology Assessment.

I believe the report is quite comprehensive and serves the very useful purpose to highlight concerns about inadequate information. Evaluation and assessment reports are always needed, especially when they also contain recommendations on what to do.

The first two recommendations address the question of how to obtain more analytical capability for Congress. We support the idea that Congress needs more help in dealing with the large information flow on food and agriculture. And we support both recommendations as reasonable ways to provide the increased capability.

More analytical capability on the staffs of the agriculture committees and in the Congressional Research Service should help to make the current information system more useful to the specific needs of Congress. In addition, we stand ready in the Department to be as responsive to analysis of information for Congress as our resources will allow. Recent examples of our response to these needs are testimony on various issues by top staff people plus reports on fertilizer, energy, transportation, and the structure of the food and fiber sector.

At the same time the effectiveness of additional analytical staff in the Legislative Branch or of our staff to address specific issues is dependent on our doing well in our basic mission. That is to develop and maintain a capital fund of knowledge on which economic intelligence for program and explicit policy analysis can draw at any time.

There are also a large number of very capable analysts in the land grant university system. I'm sure that Congress could benefit from increased liaison with these people and I believe you would find them to be very responsive to your needs.

A second major topic in the OTA report addressed the problem of obsolete data series. This is a pertinent problem, primarily caused by changing structure and changing flow of economic activity in our food and agriculture system. However, the solution lies not with more general statistical review committees but with action by the agencies having responsibility for our food and agriculture information system.

'The Department has a statistical review committee made up of members of the American Agricultural Economics Association (AAEA) and the American Statistical Association (ASA). Top staff people in ERS and SRS are members of the economic statistics committee of AAEA and have association with many other important users of agriculture information through membership on the *Census* Bureau's advisory committee on agriculture statistics. These are useful activities but not major agents for change.

We think the solutions to these problems are going to be very difficult at best. **Thus the managers of the key agencies. those who know the data problems and the difficulties of change most thoroughly, and who must carry through on commitments for change. are in the best position to modernize, coordinate, and standardize the food and fiber data series.**

In addition to the normal program evaluation process. our staff has been involved in a number of special activities toward this purpose. We worked a

long time with the Census Bureau to develop what we thought would be a more appropriate definition and classification system for describing today's agricultural producers. Other discussions with census staff will lead to improved information on corporations and partnerships involved in farm production, on identification of other major economic activity of large corporations involved in farming, and on the use of contracts and agreements in production and marketing.

Another approach we have taken to this problem has been to select a specific data series and have an ad hoc task force evaluate the series and recommend improvements. We had such a task force of university, foundation, and government personnel look at the farm income estimates series last fall. Currently we have university, industry, and government people on a task force studying the farm-retail price spreads, market basket, and market bill data series. We believe this ad hoc approach has been very useful.

The third major topic of discussion in the OTA report concerns the timeliness and reliability of data, especially as it relates to the Census Bureau. The question of needed changes in the Agricultural Census including possible transfer of the operation to SRS is a complex issue without an immediately clear answer.

What is clear is that the Agriculture Census program *needs* to be modernized to use current data gathering techniques, to more nearly meet the data needs in today's more specialized agriculture, and to develop ways to produce the results in a more timely fashion. It is also clear that much closer coordination between Census and SRS needs to take place and if the activities remain in two separate Federal Departments, there should be a greater provision for efficiencies of planning and operation.

The Census of Agriculture has a long history of providing useful data on the farming industry. At one time, the census figures were used by the Department to benchmark and revise our crop and livestock estimates. However, implementation of improved modern probability survey methods in SRS has resulted in crop and livestock statistics that surpass the quality of Census data. In fact, the Census Bureau has used SRS statistics in its 1969 and 1974 programs to measure incompleteness in the Census data.

The Census of Agriculture provides needed county data and other information beyond that produced by the Department of Agriculture. This includes detail on structure and organization of the sector that is becoming increasingly important. But we don't feel that a complete census of farms is the most cost-effective way to conduct the program, nor is continuing to get all the data once every five years the way to get the figures published in a timely manner. We believe that the Census should be replaced by sample surveys and that much of the Census data would be better obtained annually over a five year period with emphasis once each five years on generating county estimates.

The Department is prepared to enter into full collaboration and joint study of this issue with the Census Bureau.

I have only a *brief* response to the issue of a more fully coordinated fertilizer information system. We are participating in an Interagency Fertilizer Task Force that was established by the President's Economic Policy Board. This has been a useful activity and a forum for discussing problems in information on fertilizer. Our analysts have given quite a lot of thought to what gaps there are in this information system. They have had discussions with TVA, FAO and others and laid out plans to improve the information. This includes more detailed data on fertilizer inventories consumption and prices, data on the structure, costs and practices of the fertilizer industry to help in analysis of fertilizer supplies.

Beyond this, we look to the Statistical Policy Division in OMB as having the authority to bring about closer coordination in information that is scattered across several agencies of Government.

My final comments are on recommendations ten, eleven, and twelve in the OTA report. These refer to ways to make basic, long term improvement in foreign agricultural information system% We support all three of these recommendations since improvement in foreign statistics is so vitally important.

We believe that the Department's role in AID funded technical assistance programs has been very productive. This type of direct assistance is probably the best way to improve statistics in countries eligible for AID funds. AlD, FAO, tile Ford Foundation and the Rockefeller Foundation, among others, have also had an active and useful program of financing short-term training for foreign agriculture statisticians in the United States.

Thank you Mr. Chairman. I'll respond to any questions you may have.

STATEMENT OF DAVID L. HUME ADMINISTRATOR, Foreign AGRICULTURAL SERVICE, U.S. DEPARTMENT OF AGRICULTURE

Mr. Chairman, I should like to begin by posing three propositions:

Sound Intelligence and competent analysis are increasingly important to world agriculture being called upon to' feed more people better.

The reporting and analysis system carried on by the Foreign Agricultural Service-covering more than 130 countries and more than 200 commodities the world's best recognized and most used.

We have strengthened that system substantially in the past three years—and have work in progress to strengthen it further.

The Foreign Agricultural Service consists of 850 people, including 125 stationed overseas. It includes the Agricultural Attaches at American Embassies and Consulates in 63 foreign posts. FAS functions include food aid (PL 480), market development, international trade policy and negotiations, the (CCC Export Credit program, intelligence gathering, and export reporting. Commodity analysis is basic to all these operations.

The task of FAS commodity analysis is the collection, analysis and dissemination of agricultural commodity situation and outlook information relating to our foreign market and competitor countries. The emphasis is relating to our foreign market and competitor countries. The emphasis is on historical data series, analysis of the current commodity situation and short-term forecasts. The "model" in which we handle this information is 'the concept of supply-utilization balance. That is, beginning stocks plus production plus imports equal total supplies less consumption and exports equals ending stocks. This is the framework within which we approach all our commodity work albeit with some modifications to fit individual situations.

There are many users of FAS information-each with somewhat different needs. As we plan our work, we are constantly aware of these various users and their changing requirements. Their interest in FAS information continues to expand and intensify. They are progressively more demanding in their requests for information. Essentially, we can group these users into four types:

1. The general public; that is, farmers, the private trade, consumers and researchers.

2. U.S. Government agencies; that is, the administration policy and program decision makers, the Congress, and analysts of the overall domestic and international economic situation.

3. International or animations and foreign governments. FAS, along with the Food and Agriculture Organization (FAO), is recognized as a primary source of world agricultural data. Pick up any foreign publication which includes data on world agriculture and chances are this data will have come originally from FAS or FAO.

4. Internal FAS action offices; that is, Market Development, Trade Policy, P.L. 480 and CCC Credit. Here, the support work for the multilateral trade negotiations has placed a substantial burden on the Commodity Analysis - area, and we expect this load to continue for the foreseeable future.

The product of FAS reporting and analysis is published in a number of forms to meet the needs of different users. The traditional "bread and butter" outlets are still basic to our operation-Foreign Agriculture Circulars, Foreign Agriculture Repents, the monthly World Agricultural Production and Trade, and the weekly Foreign Agriculture magazine.

In FY 1975, we published 117 FA circulars and distributed them on 25 specialized commodity mailing lists open to anyone free upon request. Foreign Agriculture magazine carried 68 major articles originating in the FCA area and nearly 1,000 short items during the year. This magazine has a circulation approaching 10,000 and receives wide secondary circulation as source material for trade publications and the mass media.

Information generated by FAS analysis is also published by other USDA agencies, including the Economic Research Service, the Extension Service, the Agricultural Marketing Service, and the Agricultural Stabilization and Conservation Service. A primary outlet is the Outlook and Situation series of ERS, We also contribute, primarily in a review nature, to the publications of the Foreign Regional Analysis Division of that agency.

In addition--in order to get wider distribution of current information on a more timely basis-FAS has undertaken a number of new services:

The export sales Report issued weekly by FAS, summarizing reports received from exporters. This Report carries considerably more analysis and interpretation than was the case when publication was first begun by the Statistical Reporting Service.

The World Grain Situation issued at intervals of one or two months—an FAS publication that is unique in the world and which is greeted with intense interest by press, trade, and agricultural organizations."

Increased use of field information outlets of the Extension Service, and the Agricultural 'Stabilization and Conservation Service, and the centralized press and broadcast facilities of the Department, including a regular weekly roundup in the Agri-Tape service to about 600 radio stations.

A new weekly summary of developments in foreign agriculture and trade initiated last June in order to provide more timely information to farmers. This is issued as a Department press release and given wide distribution.

FAS information is reprinted and reported worldwide in the general, business, and trade press-with and without attribution. It becomes part of analysis nd interpretation developed by research staffs in industry, other government agencies, and international organizations. It is built into the planning of farmers processors, exporters, importers, railroads and shipping companies.

Our goal in the coming year is to review FAS publications with the objective of elimiminating duplication and at the same time providing more timeliness of information and improved analytical input. In conjunction with the FAS management, the Commodity Analysis area has reviewed publications of the Tobacco Division and is currently reviewing those in the area of Oilseeds and Products. The review in these two areas has the objective of determining end-user use and acceptability, and the ideas generated will be incorporated in our general review of FAS publications.

In addition to published information, FAS analysis provide major support to internal USDA and FAS operations. This work includes briefing and studies; spot reports on developing commodity problems; support of the CCC and P.L. 480 areas in determination of commodity availability, usual marketing requirements and prices; support of requests which come directly from our attache offices overseas; support to the Market Development area in preparing an analysis of day-to-day commodity trade problems which come up with our trading partners, and in support of the multilateral trade negotiations. In the area of MTN support, the commodity divisions have been involved in preparing offer and request lists, including item-by-item, country-by-country analysis of trade restrictions. They also provide the administrative support and analytical back-up for the Technical Advisory Committees pursuant to the Trade Act of 1974.

The backbone of FAS information collection is the system of Agricultural Attaches stationed in 63 overseas posts and reporting on 82 countries. In the past 3 years, we have undertaken a substantial strengthening of their organization. We have enlarged the professional Attache staff in Moscow and in other posts where political and economic change is altering the nature of world agricultural trade. We placed one Attache in Vienna with responsibility also for Hungary and Czechoslovakia, although we had to reduce our staff in The Hague. We also have expanded the Attache's work in Yugoslavia to include Romania. We have endeavored to place an agricultural officer in the U.S. Liaison Office in Peking, and are hopeful of positive results, Ambassador Bush and the Department of State have expressed interest in having an agricultural representative assigned to the team in Peking. We are now discussing with the Department of State the conditions under which such an officer could effectively represent U.S. agriculture in the People's Republic of China. We have also requested assignment of an Agricultural Attache to our Embassy in Cairo. We have also expanded and strengthened the reporting by Agricultural Attaches already assigned.

Most attache posts are *covered by a* scheduled reporting program for the attaches on a commodity-by-commodity basis, The number of these scheduled reports has increased dramatically in the past two years from about 1,400 in early 1973 to *over* 1,900, currently. The number, frequency and intensity of the individual commodity reports vary by country depending on the importance of the commodity and the particular country involved in terms of its world importance in production and trade. Our emphasis in the past two years has been

to revise these reports along the lines of the supply-utilization format, and to increase the emphasis on the current situation and the outlook for the coming season.

As an example. we receive regularly scheduled reports on the grain and livestock situations from major countries on a quarterly basis, but regularly scheduled, detailed reports from minor countries are due only on an annual basis. In addition to the detailed commodity reports we also receive numerous special reports on a frequent basis-for example, weekly grain prices in Rotterdam and weekly livestock prices in Tokyo.

Besides the scheduled reporting system, attaches are constantly alert to developing commodity problems in their areas, and they submit cabled reports on these situations. Our cable communication system facilitates constant interaction between Washington analysts and attaches in the field with respect to specific commodity problems and special requests.

This year we will be undertaking a detailed review of the attache reporting system with the objective of consolidating and refining it to tie information more closely to the needs of information users and to our analytical system. .

information from the attaches is supplemented in Washington from other sources. For example, attache reports provide leading indicators of foreign trade for major commodities and countries but detailed and complete statistics are compiled primarily from government publications of foreign countries. These are submitted directly to Washington, thereby saving the time of the attaches, while still enabling us to provide the detailed information which is so important to many of our users.

We also cooperate and share information with international organizations such as FAO, the Organization for Economic Cooperation and Development (OECD), and the International Wheat Council and other U.S. agencies such as the Census Bureau, which collects detailed data on U.S. trade; ERS, which analyzes the domestic agricultural situation and international questions of a longer-term nature; and the State Department, which provides general economic information on foreign countries.

There is an exchange of Information and views between FAS and economic analysts in the Central Intelligence Agency. The **Agency's Office of Economic Research Service provides us with certain classified documents-specifically the weekly economie intelligence report, the petroleum report, and other special reports. Analysts in our commodity division-for example, those having responsibility for data from the USSR—have informal contacts with their counterparts in the CIA. These are not regular contacts, but intermittent and personal. They are nevertheless helpful to both agencies.**

Another major source of FAS data is the private trade, Our commodity analysts review a large number of domestic and foreign trade publications. Personal contact with farm groups and business people is also very useful,

In addition to a constant refinement and strengthening of these techniques and services, we have assumed major new functions:

We have within FAS the Secretariat responsible for leadership in the U. S.-USSR Agreement on Agricultural Cooperation, signed in June 1973. This work will involve the exchange of about 25 economic and technical teams between the two countries during this calendar year. It is work that requires patience and endurance, but it has the promise of substantial mutual benefits as time goes on. A more detailed treatment of this effort is presented by Assistant Secretary Bell.

FAS has within the past year taken on the export sales reporting responsibility required by Section 812 of the Agricultural Act of 1970 as added by the Agriculture and Consumer Protection Act of 1973. For a time last fall and winter, we also carried on a system for the voluntary prior approval of large export sales of grains and soybeans. The export sales reporting system is providing the basic information for decisions now being made with respect to grain sales to the USSR.

FAS is also the lead USDA agency in the new experimental program aimed at assessing crop conditions by remote sensing afforded by the operation of satellites and analyzed with the aid of computers. This program is known as the Large Area Crop Inventory Experiment (LACIE).

This is an operational test of an information system which could significantly improve the continuity and content of international crop forecasts, using satellite data, meteorological and climatological data and historical trend data. Previous studies established the potential of using computer processing techniques of remotely-sensed data provided by satellites to classify crops, thus distinguishing among various crops grown in the same area. The LACIE project is a follow-up

of these studies, which will aid in determining the utility and cost effectiveness of using satellite and surface derived data to monitor wheat production over large areas.

The experiment will combine crop acreage measurements obtained from LANDSAT data with meteorological information from the National Oceanic and Atmospheric Administration satellites and ground stations, and will relate weather conditions to yield assessment and ultimately to production estimates. *The* utility of the information produced will be evaluated on the basis of its objectivity, timeliness and accuracy, and its expected value for policy and program decision making. We are presently 6 months into the 3 1/2 year experimental program.

Such a system could provide a new capability for the United States and other countries in making agricultural production and marketing decisions; to inform us of the spread of crop diseases and insect infestations which could affect world food supplies; flash an early alert if crop shortfalls are expected from adverse weather; and provide improved production estimates to international organizations.

Whatever the sources of FAS data, raw information becomes useful only when it is put together in a form that makes sense and that is easily understood. That is our objective. Putting information together in this way requires both economic training and commodity knowledge on the part of the analyst. In the past two years we have brought into the Commodity Analysis area 24 well-trained, mainly young (in their 20's) economists. These numbers do not, of course, represent a net gain. There is an offset through retirement and rotation out of the Commodity Analysis area. We have lost something *in* experience, but the people we are hiring are well-trained in economic techniques and the use of computers.

We have instituted a program to rotate our junior professionals through at least two different areas of the agency in Washington before sending them to the field. We feel that this program will provide better training for junior attaches. And if all of the young people whom we send to the field have had experience in Washington's Commodity Analysis divisions, the commodity information furnished from the field should he improved.

Most of our analytical work is currently based on simple trend models, experience and commodity knowledge, and common sense. We think this has given us a pretty good track record and with the re-emphasis on reporting, etc., we have shown improvement over the past two years. This is not to say, however, that we have achieved perfection. We have been criticized at times for shortcomings in providing timely data and for a lace of sophisticated, econometric input to our analysis. We think that with these new professionals we will be able to move forward in this area but we feel we should add a note of caution in that there are severe limitations in econometric **modeling and** in the data requirements for these models. Progress and improvement from this source will be slow.

We are moving forward in other areas as well. To date, most of our work has been on the production and trade side. We are now moving to emphasize the demand side. We have added a specialist in macro-economics to provide our commodity specialists with forecasts and analysis of the general demand situation in major countries.

We are moving to improve our automatic data processing facilities which are important to improving the timeliness and accuracy of the information we provide and we hope will result in a saving of clerical input. This should release personnel for additional analysis. While on the subject of data processing, it should be pointed out that the Reports and Statistics Office included in our Commodity Analysis area provides the data processing and computer support for the total agency. We have recently established an ADP Steering Committee at the Deputy Assistant Administrator level to coordinate this function.

I thank the Committee and the Chairman for the opportunity to **discuss the reporting** and analysis work of FAS. With me are several others of the FAS staff; we will be pleased to respond to questions.

STATEMENT OF DR. QUENTIN M. WEST, ADMINISTRATOR, ECONOMIC RESEARCH SERVICE, U. S. DEPARTMENT OF AGRICULTURE

I am very pleased with this opportunity to tell you about things we have done to improve the Economic Research Service (ERS). The last three years have been very dynamic for our Agency, just as they have been for agriculture.

We develop economic information for *use* by public and private decisionmakers, and provide it in a variety of ways to a diverse audience.

The audience is wide because our information covers many subject matter areas including farm inputs, farm production, and food processing and distribution as major components of the U.S. food and fiber systems; foreign agriculture production and trade; development and use of land and **water** resources; and the principal social and economic factors affecting life in rural America.

Thus a major part of our program is devoted to providing information on the subjects that were focused on in the Office of Technology Assessment's (OTA) report, "Food, Agriculture and Nutrition Information Systems: Assessment and Recommendation." More specifically, this is "information concerning national and world food production, trade, stocks, prices and disappearance, and on information needed for policy decisions made by Congress, , Federal agencies, State Governments, and agribusiness." (page 3 of OTA report)

The Economic Research Service and its predecessor agencies have a long history as a vital part of food and agriculture information systems. We are proud of our accomplishments and optimistic about the future. We believe that timely, accurate, and objective information on this important segment of our economy will continue to be in great demand for making sound decisions and policies. We look forward to meeting future demands for economic information.

But in the past few years, our task has become increasingly difficult. Many contributing factors have been converging: the depletion of surplus stocks of farm products, increasing concerns about meeting world food needs, rising demand, changes in the structure of agriculture, increased complexity of relationships with the rest of the economy, and scarcity of raw materials.

To highlight how we have been reacting to such challenges, I would like, first to discuss the improvements we have been making in the conduct of economic analysis. Then I will focus on improvements in the timeliness and type of information we provide and on our efforts to improve the flow of data as raw material or input to our analytical process. **Finally I will** touch on further improvements that we feel are most urgently needed,

IMPROVEMENT IN ANALYTICAL CAPACITY

Our basic contribution to the food and agriculture information system is economic analysis. To strengthen this role, we have placed our first priority on improving our analytical capabilities, especially in our major economic situation and outlook programs. This is because we felt the primary problem in 1972–73 was analytical, a conclusion also reached by Dr. Karl Fox in a special report to the Council of Economic Advisers. The OTA report also agrees with this conclusion and further clarifies the problem by stating "the economic models and supply-demand-price equations, which had performed satisfactorily in the more stable conditions of the 1950's and 1960's had little value in the light of the changes which occurred in the domestic and world markets when the size of the 1972 world grain crop became known" (page 40, OTA report).

We have taken three major steps to improve our analytical capabilities. The first was to reorganize the agency so that our resources were more clearly focused on important subject matter areas and to bring the research program into more direct support of the situation and outlook work. A second step was to reallocate close to $000,000 and 19 staff positions to the situation and outlook work and longer term projections program. The third major step was to request and receive about a half-million dollars in additional resources to provide an increased number of highly capable, quantitatively oriented economists.

We have used these additional resources to strengthen the commodity situation and outlook staffs and to establish forecast support units. These units have become the focal point for development of commodity, cross-commodity, and foreign country models that are becoming increasingly operational as a part of our forecasting work. These units are also developing a forecast information system in which documentation and evaluation of our forecasts are an integral part.

Some of our reallocated resources were used to strengthen our capabilities for making longer term projections in agriculture. We now include projections to 1980, 19$5 and beyond as a regular part of the economic information produced by ERS.

Another important change we made during the past three years was in forecast procedures, We have developed a regular program of producing new forecasts each quarter on what we consider to be the most likely assumptions for the three to four quarters ahead. Then we supplement this forecast with contingency analysis using alternative assumptions on such key variables as weather and

levels of exports. The results of these analyses and the underlying assumptions are then discussed in group meetings with other key staffs from USDA, Council of Economic Advisers, Federal' Reserve Board, Treasury Department, and Library of Congress. This interaction helps test the soundness of our assumptions and analysis.

Most of these changes may sound like they are focused on U.S. agriculture. But we have also placed increased emphasis on evaluating the foreign outlook and its impact on the domestic economy during the past three years. As. Dr. Clifford Wharton, Jr. pointed out in his preface to the OTA report, "the growing world interdependency has highlighted the information systems describing that interdependency. Nowhere is this need clearer than in the areas of food, agriculture and nutrition." (p.v., OTA report)

Our domestic and foreign analysts work very closely together on many subjects. In addition, ERS analysts work closely with the Foreign Agriculture Service on questions of foreign agriculture demand, production and trade. Analysts from both agencies serve on Department level commodity estimates committees as well as more recently established committees that focus on the questions of production, demand and trade in Russia and The People's Republic of China. Our analysts have also been fully cooperative with the Food and Agriculture Organization of the U.N. in its development of an early warning information system.

Two specific questions you asked us to respond to concern the use of remote sensing and weather data to estimate agriculture production in those areas of the world where other information is lacking and how we work with CIA information. Since 1972 we have established a separate research area in world weather and crop production. The focus of our recent work here has been to strengthen the use of world weather information in situation and outlook reports and conduct a few selected studies such as forecasting wheat production in Turkey, analyzing the effects of weather on spring and winter wheat yields in the USSR, and studying trends in weather and grain yields in 25 world regions.

Weather data are also used extensively by our analysts in making forecasts of Soviet grain production. Weather indices are estimated and combined with trend yields of individual grains and estimates of areas planted to produce grain production forecasts.

The use of weather data and remote sensing to measure crop production prospects is the major focus of an experimental project our Department is conducting jointly with the National Aeronautics and Space Administration and the National Oceanic and Atmospheric Administration. This project, called the Large Area Crop Inventory Experiment, is a study of the degree to which computer assisted analysis of data acquired from space can contribute to crop forecasting. ERS participation includes the assignment of six people to the project and other support activities such as the preparation of *crop* production calendars to be incorporated into computerized yield models.

Our analysts specializing in such areas of the world as the Soviet Union maintain regular, informal communications with units In CIA working on Soviet agriculture, food, and trade. Much of the information available to the CIA is also available directly to Soviet analysts in the Department, Usually there is general agreement between ERS and CIA analysts on principal agriculture estimates. When different estimates arise, the [differences are examined and discussed informally but there is no attempt to force a common position.

IMPROVEMENTS IN OUTPUT OF INFORMATION

A major improvement has been in our publication program. Most conspicuous is our new monthly "Agricultural Outlook" situation report. This serves as an outlet for brief reporting on our continuing appraisal of the situation for commodities, farm income. farm inputs. foreign production and trade, transportation. and farm-retail price spreads. Our target is to furnish through this new publication frill updates of our forecasts each month to provide our best assessment of the agricultural situation. This would also meet one of the OTA report recommendations that "the Economic Research Service should improve its world information analysis capability by strengthening its ability to analyze, evaluate, and interpret current world information on a monthly basis during the crop growing and early harvest season" (page 9, OTA report).

Other changes in publications to provide more timely information include issuing the report. "Agricultural Supply and Demand Estimates" containing updates about monthly on important basic commodities, going from once a year to three times a year in publishing "World Agriculture Situation" and from annual to

quarterly assessment and publication of "Outlook for U.S. Agricultural Exports." This latter one is done cooperatively with FAS.

We have also worked to improve the timeliness of our information through closer cooperation with the Federal Extension Service. The State extension outlook economists can now obtain the most important data in "Agricultural Supply and Demand Estimates" and other situation report summaries through a computer hookup on the same day that we release the estimates. This has made the information far more useful to these outlook economists than when they had to wait to receive the printed publication in the mail,

One of the comments in the OTA report was that our food and agriculture information **system is "basically an impersonal,** production oriemted system'" (page 6). Although we don't integrate nutrition information into ***our*** **analysis. we have made a couple of other** improvements in the past three years that we think are consumer oriented. The first was to greatly increase the detail of our information on price spreads and components of marketing costs. This is an effort to explain more fully the reasons for changes in food prices, who gets what from the consumer's food dollar, and to identify areas of research for improving the efficiency of the system.

A second effort to communicate to consumers is **our recent introduction of a monthly TV news service on current agriculture information. We have been successful in getting these outlook oriented features used on prime-time evening news shows in most major television markets.**

One area of improving information that is of common interest to ERS and FAS is a more rigorous and systematic appraisal of foreign demand for U.S. agricultural products. We have requested additional resources to establish such a program of continuing information and analysis of the longer term prospects for foreign trade. Our current information on foreign demand is far less rigorous and comprehensive than information on the supply side.

Dr. Paarlberg has already commented about the Department's concerns on obsolescence of agricultural data systems. ERS and the economics profession in general **have become increasingly concerned about this problem.** We **feel that ERS should take the lead in reviewing and changing data series that no longer provide the most meaningful descriptions of food and agriculture. As Dr. Paarlberg has already mentioned, we have had special task forces to assess the farm income and price spread, market basket and market bill statistics and make recommendations for improvement.**

IMPROVEMENT OF DATA FLOW AS AN INPUT TO ECONOMIC ANALYSIS

My third major topic is a brief discussion of what we have been doing to improve the flow of data needed to conduct timely and objective analysis. After setting our first priority on improving our analytical capacity, the second priority logically was to develop a flow of data that would fill our most major gaps in data available to conduct analysis with. We set about to identify these major data gaps, determine agency priorities for meeting these needs, and develop plans for meeting these needs. This has included joint planning with other agencies who are major suppliers of the data we use. We added resources in the Office of the Administrator to lead this planning effort and to be in more continual contact on data problems with other agencies.

In looking at our most important data gaps we decided that the first priority was to combine some programs of ERS and the Statistical Reporting Service, add some resources, and implement an annual economic survey of the farming sector. This would provide data for improving our supply response **analysis, farm income estimates, capital accounts, consumption of major inputs, and some environmental impact analysis.**

A **second priority was** to **start obtaining data that would allow significant improvements in our analysis of the structure costs and performance of the farm input food processing, and food distribution industries. The final implementation of these two plans awaits Congressional approval of the Department's appropriations for FY 197&**

Our staff has also done a lot of work in planning how to meet some of our other major data problems. One of these is a continuous survey of consumer food purchases so we can improve our forecasting and analytical capability with respect to food prices through better measures of price and income elasticities and demand shifters. A second longer range plan is to fill in the many economic and **social data needs on the use, the changes in use, and potential capacity of our**

land and water resources. Analysis of the capacity of the U.S. agriculture production sector depends on obtaining more of this type of data.

A third longer range plan is further improvement in the data to analyze the structure, performance, and costs of the input, Processing, and distribution industries. Many important questions on the supply and costs of farm inputs and the costs, services performed, economic concentration, and efficiency of the food processing, wholesaling and retail industries need this type of data.

We still have work to do in improving data on foreign agriculture. We have worked closely with FAS to establish a more complete data base on world production of grains. We have also worked with FAS and FAO to improve informiltion on fertilizer. We are continuing discussions with FAO about more access and use of an extensive supply-utilization information system they have been developing over the past four years. We will be *giving* more emphasis to this area of data needs in the months ahead.

An increasingly important part of our effort for improving data flow is to more frilly apply current computer technology and capabilities in managing and analyzing the large volume of data we work with. We believe that this will free more of our resources for analyzing the important questions and issues. It will also make our staff more flexible and our work less vulnerable to turnover in key staff positions. We recently centralized our data processing activities to facilitate this area of improvement.

FURTHER IMPROVEMENTS MOST URGENTLY NEEDED

These highlights of our improvement activities demonstrate that ERS has been a dynamic agency in the last three years. We have been doing these things at the same time that there has been a sharp increase in the magnitude and complexity of economic issues to be analyzed. We believe that despite the problems we are a much stronger agency then we were three years ago.

So what are the major areas for further improvement? Our first priority is to bring to fruition the plans we have laid out for improving the flow of data. 'This includes both the plans for getting more of the data we need and for more effectively managing and analyzing the data we already use. Our ability to produce timely, objective economic information will be greatly improved when we fill the data needs identified in our longer range plan. Our ability to minimize *obsolescence* in agricultural data systems is also dependent on having the flow of data to draw on for making necessary changes.

I already discussed several of these important data needs. Our most immediate needs are for a continuous survey of food purchases by consumers, a flow of data on the economic aspects of land and water resource use, and data on the structure, costs and practices of the farm input, food processing and distribution industries.

To improve the flow of foreign data, we plan to critique the grains data base improvement work we have been doing with FAS. This should lead to discussions with FAS on undertaking more of this type of work which is primarily to develop a *more* consistent set of data out of the numbers available.

Three recommendations in the OTA report refer to improving foreign information through more support of international agencies such as FAO and through more AID funds for technical assistance in developing data collection programs. We fully support these recommendations as a way to bring almost longer-term improvement in foreign data. But we believe that more immediate improvements are also needed. We plan to enter into more comprehensive discussions on this problem in the near future with FAS and others.

Our priority on improving the management and computer assisted analysis of data will he largely handled by redirection of our current resources. We believe this improvement is needed to free our analysts from some of the more routine aspects of the research process.

As I already indicated, we have placed priority on more complete monthly analysis of the world agricultural situation. *Our* target is that six months from now this more complete monthly analysis will be the basis for material in the '"Agricultural Outlook." We are also planning to devote more resources to the weather-crop production research and continue with our involvement in the Large Area Crop Inventory Experiment.

Our forecast support units are already heavily involved in developing economic models on production, trade, utilization and prices. These are models on major commodities and on countries that are important foreign markets. We

plan to move this work along rapidly and add to it the work we will be initiating to provide more systematic and comprehensive analysis of foreign demand.

Other initiatives we have taken in the past three years also continue to be high priority. These include hiring top quality, quantitative economists for our staff, periodic examination of economic and statistical data series for ways to improve their quality and relevance, and continued improvement in the ways we make information available to decisionmakers.

Thank you Mr. Chairman, I will be happy to respond to any questions.

[The following questions were submitted by Senator Humphrey to the U.S. Department of Agriculture and their answers thereto:]

Question 1. At the present time the *Digest of World Agriculture is* a "monthly overview" prepared by junior staff members of the ERS and FAS for internal use only. What, if any, plans do You have for issuing monthly digests of world agriculture under the supervision of senior staff for general distribution?

Answer. The Digest of World Agriculture is used to disseminate information and preliminary analyses of international agricultural subjects to USDA analysts and officials without the full review that is required of formal publications. As such some of the conclusions may be very tenuous and may not have been adequately reviewed in the Department for release to the general public. Some articles have been included even after serious objections from specialists of the subject.

The Digest provides a broad preliminary picture of the current international agricultural situation. Much of the material is issued in official publications of ERS and FAS with very little delay. ***Agricultural Outlook,*** **a new ERS monthly publication, has a section on world agricultural developments. Moreover, international events are given consideration whenever appropriate in the analyses of the domestic economy.**

Foreign ***Agriculture*** and a news release on important events in world production and trade **issued weekly and Foreign** ***Agriculture Circular issued*** **frequently by FAS give general distribution to information on world development that affect U.S. agricultural trade.** ***World Agricultural Situation,*** **which is published three times a year, and the annual agricultural situation reports giving more detail by regions of the world provide more comprehensive treatment of world agriculture.**

Other possible ways to provide world agriculture information on a timely basis are being considered as part of a continuing review of the ERS publication program.

Question 2. Would it be feasible and desirable to organize a current food and agriculture intelligence unit made up of key commodity specialists from the Economic Research Service, the Foreign Agriculture Service, and the Agricultural Stabilization and Conservation Service and have them issue monthly world crop reports from the planting season until harvest in the major producing areas of the world?

Answer. At the present time the world outlook and situation activities are performed in two separate agencies. FAS has the ***dual*** role to **expand foreign markets for** U.S. farm **commodities and provide information on the world agriculture** situation. ERS has the role of conducting a Program of economic research to provide information on both domestic and foreign agriculture.

With the increased interdependence between the U.S. and world economies, it has become very important for domestic and foreign analyses to be closely integrated. Analysts from ASCS, FAS, ERS and SRS serve on commodity estimates committees to assess the total supply and demand picture which is then cleared and released through the Outlook and Situation Board. This is an effort to integrate the foreign and domestic analyses. Currently these committees do not give detailed attention to the world agricultural situation except as it implies changes in U.S. exports.

Other Departmental working groups such as the task forces on USSR and PRC and ERS-FAS working groups provide some of the t'ecus needed on current world intelligence. These groups meet frequently concerning information and statistics on world production, trade consumption, and stocks of grains and other commodities.

Mechanisms already exist in the Department, such as the Outlook and Situation Board, to Provide timely information in world agricultural conditions. Some further clarification and coordination of the three Agencies roles and activities coupled with improved data and information systems are appropriate.

Question 3. **In order to assure the accuracy and timeliness of information on world commodities, would it be feasible and desirable to create a joint FAS-ERS Board with responsibility for approving the information included in these reports?'**

Answer. USDA has an Outlook and Situation Board responsible for reviewing and approving outlook and situation material for the Department. This Board reviews and approves the release of the outlook for U.S. agricultural exports on a quarterly basis. *The World Agricultural Situation,* which is issued three times a year, is also cleared by the Outlook and Situation Board. Since the Outlook and Situation Board consists of members from agencies throughout the Department creating a new ERS-FAS Board would mainly duplicate the functions this Board is already responsible for.

At the present time, much of the information and statistics on world commodity production, trade, consumption. and stocks are also discussed on a regular basis between ERS and FAS. A statistical review committee has frequent meetings to clear statistics on grains. During the very active times of grain production, these meetings are held on a weekly basis. And there are regularly scheduled meetings for clearing statistics of the other major commodities.

USDA task forces have been created to review the agricultural situations in the USSR and the People's Republic of China. The USSR task force makes periodic releases on agricultural conditions and grain production and trade estimates of USSR, generally in Press Release.

Question 4. **To what** extent have recently increased current economic intelligence activities of international agencies improved the data base for **FAS and ERS reports on world agriculture?**

Answer. The recently increased economic intelligence activities of international agencies have helped improve the FAS and ERS data base primarily by providing supplementary information about certain countries and commodities which USDA does not collect directly. The international agencies provide a useful check on USDA data as well as provide a different perspective in analysis. Recently increased focus by international agencies on early warning and outlook and situation type of information also provides another perspective that is useful to USDA analysts. The USDA also benefits indirectly in those cases where international organizations have assisted individual countries **in issuing new types of data** or in improving the reliability and **timely distribution of existing data. ERS hopes to develop a more comprehensive and timely data base on world agricultural trade by extracting agricultural trade data from computerized U.N. trade data and thus avoid the complicated and lengthy process of compiling and reconciling trade data from individual** country sources.

At the present time, ERS relies most heavily on international organizations-although not necessarily new activities--for~~in~~ternational monetary and financial information such as balance-of-payments, foreign exchange, financial flow, price index, and national 'account data from organizations like the International Monetary Fund and the Organization for Economic Cooperation and Development

Question **5. There is general agreement that estimates of world demand for food are far less satisfactory than estimates of supplies. What new programs have FAS and ERS undertaken in recent months to improve forward estimates of tile demand for agricultural commodities by countries and regions? What are your plans for strengthening this area in the next year or two?**

Answer. The Foreign Demand and Competition Division of ERS has recently undertaken work to improve and expand its effort for making forward estimates of foreign agriculture demand and U.S. agricultural exports. .4 new trade forecast group has been established to develop analytical methods to forecast the aggregate level and commodity composition of U.S. agricultural exports. Further realignment of resources and programs to strengthen country and commodity demand analyses is under consideration. This improved research capability in collaboration with commodity intelligence and expertise of FAS will improve our capacity to make forward demand and trade estimates. These forecasts are in turn imcorporated into domestic commodity and aggregate economic models.

We will continue to improve our trade forecasting capability. ERS and FAS have held discussions on how to improve the longer term forecasts of foreign demand and have implemented some plans toward this objective. For fiscal 1976. ERS requested an increase in its budget of $790,000 to do in-depth studies of demand for U.S. agricultural exports in major country markets. This new research effort was proposed to develop basic economic relationships that affect agricultural production, consumption and trade of food and fiber in foreign countries. This research will contribute directly to forecasting and projecting U.S. agricultural exports by country and commodity. However, Congress reduced