

seniority and also will consist of a mix of policy-oriented social and production scientists. It is hoped that these individuals will return to their home institutions and provide a continuing collaborative link between national agricultural research and policy analysis and the IFPRI program.

RELATIONSHIPS WITH OTHER ORGANIZATIONS

The success of IFPRI in achieving its mission will depend upon the building and maintenance of contacts with research organizations and policy makers at the national, regional and international level. Thus, the active cooperation of such groups is being and will be sought.

Discussions have already begun regarding cooperation with FAO, the World Bank, the Consultative Group on Food Production and Investment, the World Food Council Secretariat, and the network of International Agricultural Research Centers. As staffing and program development proceeds similar collaborative arrangements will be sought with national and regional organizations.

Although IFPRI will periodically assess the world food situation, both short and long-run, and analyze its policy implications, IFPRI does not intend to generate primary statistics on food output. Instead, the Institute is intended to provide an independent source of research and analysis of the major food policy issues in both the current and long-run context.

THE FUNCTIONS OF IFPRI

The functions of IFPRI are research, analysis, and dissemination of information relevant to improving world food policy. At present it is not anticipated that 'the Institute will undertake a formal training program. As its competence in such research and analysis develops, it is hoped that its training function will be fulfilled through (a) the experience gained by short-term participants in the program and (b) the conduct of seminars and consultation on the major policy issues within the Institute's competence in response to specific requests from policy makers and researchers.

IFPRI FACILITIES

The offices of IFPRI are located at 1776 Massachusetts Ave., N. W., Washington, D.C. The address for communication purposes is: International Food Policy Research Institute, 1776 Massachusetts Avenue NW., Washington, D.C. 20036, telephone: (202) 833-1821, cable address: IFPRI, Washington, D.C.

Chairman HUMPHREY. Mr. Hjort, you are with John Schnittker and Associates here in Washington. Were you formerly with Secretary Freeman as well?

Mr. HJORT. Yes, indeed

Chairman HUMPHREY. Good, he would be happy to know that I have an old associate of his around. Orville is one of my closest friends.

You have listened here today and you also have a very extensive statement—one, that our staff has analyzed in considerable depth.

First, let me say we are very much indebted to you for the amount of work you have put into this statement, analyzing the information system, some of its needs, and structural weaknesses.

We will publish your entire statement, in the record. Could you please summarize it?

STATEMENT OF HOWARD W. HJORT, JOHN SCHNITTKER ASSOCIATES

Mr. HJORT. In view of that and since I have recently-prepared a detailed report, I will just highlight four or five major points.

The criteria I relied heavily upon for judging the strengths and weaknesses in the world agricultural information system were objectivity, reliability, timeliness, adequacy-in terms of coverage--efficiency and effectiveness.

When these criteria are applied it soon becomes evident that we don't have a world agricultural information system that ranks well in terms of all of them.

The main reasons, it seems to me, that our world information systems are held below potential are, first the deficiencies in the national agricultural information systems—several have already referred to such deficiencies of today.

Second, the adequacy of the information obtained by and reported to USDA and FAO through our attache network. These reports clearly are a primary source of intelligence for a world information system, but they are weak in some respects.

Third, the adequacy of the analytic ability to process the information, to trace its implications and to be able to get information on a timely basis to all those who need it for policy purposes or action programs or whatever.

Fourth, USDA operates both a national agricultural information system and a world agricultural information system. In my view, the manner in which the responsibility for those systems is assigned places objectivity in jeopardy, unnecessarily so.

Fifth, I believe that the organizational structure used by the Department of Agriculture in operating those systems seriously impedes the efficiency and effectiveness under which those two systems operate.

Now, going back over each point and being just a bit more specific about what I mean in each case. National information systems have deficiencies and will continue to have them for a long time. FAO has been working for years to help developing countries establish systems that can collect basic agricultural information and develop reliable supply demand estimates.

But that is a long-term task. We should continue to provide support to that effort, but we have to recognize that, it will take a great deal of time to bring all national systems up to the kind of standard that we will have to have for a reliable world system.

The near term alternative is to use analytic techniques where you take agricultural statistics, process them through a formal analytic model, verify it by seeing how well it performs historically, and then using model estimates to replace deficient ones from national systems.

An example of this is both the Central Intelligence Agency and the Department of Agriculture have a model, an analytic model, that they use to develop estimates of production in the Soviet Union. Neither one of those models has been sufficiently verified yet, but they are on the right track.

At the present time neither FAO nor USDA have the analytic capability to develop a sufficient model building and testing system. But the main point is that there is an alternative way of developing reasonably reliable estimates for a world system.

My second point, on reports from the attaches. First, I want to make clear that I recognize that USDA has been making serious efforts to improve the quality of those reports. But the fact of the matter is that few attaches are specialists in the collection of data- in analysis. And their mission, the attaches' mission, is not perceived to be the collection and analysis of data.

In addition, attaches are reposted frequently.

Now, these factors reduce efficiency and effectiveness and, in some cases, even reliability of the estimates that come from the attache.

We have two alternatives there, it seems to me, one is a long term, the other a near term selection. Over time the attaches can be replaced with a corps of specialists-people that are trained in the collection of statistics and in the analysis of agricultural information.

But in the short run, the only alternative is to obtain from the attaches sufficiently precise information so that it can be analyzed by analysts in Washington, more reliable estimates can be developed and reports to the world on the agricultural situation released.

We don't have anywhere near enough information coming from the attaches on the agricultural input situation. If you don't have information on inputs, it is very hard to get reliable information on outputs.

The other major weakness in the present USDA system, as far as analytic capability is concerned, is over the imbalance between their focus on production and Supply on the one hand, and the relative weak performance in terms of analysis of factors on the demand side.

The final point on the assignment of responsibility for operating the two USDA systems and need for reorganization, I believe that objectivity is presently threatened and efficiency and effectiveness clearly is held below potential.

Responsibility for the agricultural information systems is assigned to two different officials in USDA's office of the Secretary-the Assistant Secretary for International Affairs, who was here earlier today, and Don Paarlberg, the Director of Agricultural Economics.

There are three separate agencies in the Department that share the responsibility for the operation of those two systems. The world system is operated in part by the Foreign Agricultural Service and in part by the Economic Research Service.

The Foreign Agricultural Service has a mission and a set of program responsibilities that makes it unnecessarily difficult for them to be able to maintain the objectivity of the system. The analyst in that organization is placed in a difficult position, because of the mission of the organization and its action program responsibilities. FAS has responsibilities for export programs which gives them a vested interest in the export estimates.

I would recommend, to protect the objectivity and improve efficiency and effectiveness, that the responsibility for USDA's world and national agricultural information systems be clearly assigned. I would recommend that it be assigned to the Director of Agricultural Economics, who already has the responsibility of the U.S. system and shares the responsibility for the world system, and that the agencies that report to the Director should have no other responsibility except providing economic intelligence-providing economic intelligence on U.S. and world agriculture.

There is another problem. The chairmanship of the committees that develop estimates of the U.S. supply-demand situation should rest with those agencies that have the responsibility for economic intelligence. There is, in my view, a very fatal flaw at the present time, because the fact is that the chairmanship of the committees that develop supply-demand estimates for U.S. agriculture rests with the Agricultural Stabilization Conservation Service. That organization does not

have the overall responsibility for assessing and responding to the situation and outlook for U.S. agriculture.

There is a Crop Reporting Board that reviews and put its stamp of approval on the estimates coming through the Statistical Reporting Service. And I want to emphasize that in my view the Statistical Reporting Service in USDA is without parallel in the world with respect to the collection and reporting of agricultural statistics.

The Economic Research Service has an Outlook and Situation Board that reviews and approves U.S. agricultural situation and outlook reports.

The world assessments, either world production estimates or world trade estimates or assessments of the supply-demand balance that are made by FAS do not go through or to an overall board for review and approval. That also, I think, unnecessarily jeopardizes the potential objectivity of the systems.

Chairman HUMPHREY. Thank you. We have heard quite an extensive critique.

I didn't quite understand the reason to cut the Agricultural Stabilization Service out of the evaluations on production and demand.

Mr. HJORT. No; I would not cut them out, but at the present time they have the chairmanship for these committees. And the Economic Research Service and the Foreign Agricultural Service are the men hem.

Chairman HUMPHREY. Do you think the Economic Research Service should be in the chairmanship position while the others provide the input ?

Mr. HJORT. Right. We have this flaw in the system at the present time where the agency that has the responsibility for the overall assessments does not have the authority for the estimates. Now, to follow up on that, I fully agree that, the action agencies should be members of interagency commodity estimate committees, because it is important to know about the action programs.

But the chairmanship should rest with the agency that has the overall responsibility for the assessment and for reporting.

Chairman HUMPHREY. Do you feel that the Crop Reporting Board and the Outlook and Situation Board perform useful functions?

Mr. HJORT. Absolutely. I think it is essential to Have a body of senior experienced people that review the estimates and approve them before they are released for public consumption.

Chairman HUMPHREY. So you feel that a board to approve estimates of world agricultural production and trade would be useful?

Mr. HJORT. I think it would be highly desirable.

Chairman HUMPHREY. Tomorrow we will hear from Hosea Harkness of Cook Industries. He recommends that a world crop reporting board be set up within the, USDA to review all sources of country production information, attache reports, foreign-released statistics, weather-yield analysis, check data, et cetera. Based on this, in a timely manner, the board would forecast or estimate what would be acknowledged within the Government as the best figure. Thus, we would eliminate duplicate numbers floating around the Government.

This would eventually lead to more credibility for the private user. Do you concur in that basic suggestion?

Mr. HJORT. Yes; I think it is a very good recommendation that he has made to you and I believe that you will note from my own statement that his recommendation fits very well with what I have recommended. I think it is essential to have a board to review these estimates before they are released.

Chairman HUMPHREY. Do you recommend that senior analysts assume responsibility for issuing monthly digests of world agriculture for general distribution?

Apparently, now, junior staff issue these reports for internal use only.

Mr. HJORT. Yes. I think here again we are circling around the same kind of question. With junior staff only involved, I don't believe the product is going to be as good as if you use senior staff and review boards and processes set up for the overall reports.

There is another weakness in the material that is being referred to, and that is because it is essentially unanalyzed information. They are reporting facts as they come to the junior analysts, but the implications of the information is not analyzed or discussed.

Chairman HUMPHREY. Dr. Wilcox, what do you think about the suggestions that have been made here for the evaluation and analysis?

Dr. Wilcox. I personally am very happy that these are the kind of recommendations that are coming to you from outside the Government.

Chairman HUMPHREY. Very good. We thank you very much. This will all be very helpful. As you know, we are getting down to the point where we will be making some recommendations, I think these hearings will be of considerable help.

Mr. HJORT, you feel that the ERS is a well-organized instrument of the Department, is that right?

Mr. HJORT. I have in my main report some reorganizational alternatives. The important point, in my mind, is to have the organizations with responsibility for the world and national systems reporting to the Director of Agricultural Economics.

That comes out of my assessment and it comes from personal experience. I have worked very closely with every person that has ever filled that position since it was created, including one of the persons sitting in this room at the present time and including Don Paarlberg—I served with him for nearly a year after he came in.

That position, ever since being established, has been filled with a professional of high integrity. And that, to me, is the most essential point to have in any world information system.

Chairman HUMPHREY. Many of the smaller developing countries could certainly benefit from a more, reliable information system. The fact is, as one of the witnesses indicated, that even if the system wasn't too good in a small country with limited production and a small population, it is the larger developing countries that really determine the major degree of accuracy of your reports.

Mr. HJORT. Absolutely. But, of course, even in the big ones, we have unreliable or unavailable data. The Soviet Union, People's Republic of China, India—we didn't mention here and I didn't highlight it, but it is in my report again—there are certain countries that bias their estimates. They believe it to be in their interest from a political standpoint.

Chairman HUMPHREY. Yes, we know that is a concern.

Mr. HJORT. And it another reason, then, why you have to have people of high integrity, because whoever is operating the world system has to be able to change that estimate and put in one that is unbiased.

Chairman HUMPHREY. What is your view of the FAO system that is now being developed?

Mr. HJORT. I am very gratified by the way FAO is moving to improve their system. Their major deficiency far has been the lack of timeliness.

Chairman HUMPHREY. That is what I keep hearing.

Mr. HJORT. But they are moving, with their quarterly reviews and monthly updates, they are moving very well, in my mind, toward more timely information. They have a long way to go and they will have to work very hard to develop the analytic capability needed to operate their system.

But, in any event, they are moving in the right direction.

Chairman HUMPHREY. Thank you very much. We are most grateful to you. And may be tapping your brain power a couple of times more,

Mr. HJORT. Thank you.

Chairman HUMPHREY. Thank you. This concludes the first day of OTA hearing.

[The prepared statement of Mr. Hjort follows:]

STATEMENT OF HOWARD W. HJORT, JOHN SCHNITTKER ASSOCIATES

AGRICULTURAL INFORMATION SYSTEMS

Summary and Conclusions

1. World supply-demand estimates are the summation of country supply-demand estimates. Therefore, the performance of the world agricultural information system depends upon the availability and reliability of national estimates. Unfortunately, current supply-demand estimates obtained from national agricultural information systems vary from timely and reliable to nonexistent. Only the former can be used in the world system. FAO has been working with member governments for years to help them establish agricultural information systems and improve the reliability of agricultural statistics. These efforts must continue to be supported, but under the best of circumstances it will take years to bring all national systems to an acceptable standard. While this long-range program moves forward to generate analytic models of proven validity, the only alternative is to use timely and reliable estimates.

2. Neither USDA nor FAO possess the analytic capability to generate sufficiently timely and reliable supply-demand estimates for all commodities and countries where national systems are unreliable. In consequence, all too frequently estimates based on past trends, sometimes adjusted by judgment, are used instead of more reliable estimates from formal analytic models that take into account the full range of factors influencing the supply of and demand for agricultural products. A deeper analytic capability must be developed to improve the reliability of current world supply-demand estimates and assessments of the world situation and outlook for food and agriculture.

3. Reports received from USDA'S attache network are the primary source of foreign agricultural information for the world agricultural information system. Attaches prepare many reports and provide much information, but few are specialists in the collection or analysis of agricultural data, and these tasks are usually not perceived to be their primary mission. Frequent reposting of attaches adversely affects the quality of the information they provide. These weaknesses can be overcome by employing specialists in the collection and analysis of agricultural information who would be posted for extended periods, but this is a long-range and partial solution. The near-term solution is to require attaches to provide more precise data and information on the use of land, agricultural inputs, human and animal populations, income, prices, and other supply and demand factors so that analysts covering the world situation and outlook are in a better position to assess these factors, develop more reliable supply-demand estimates, and report more fully and frequently on the world food and agricul-

ture situation and outlook. Since inadequate analysis of available data already is a more serious constraint than inadequate data, the overall improvement of the world systems depends mainly upon how many and how effectively analysts are employed.

4. In the final analysis, objectivity is the essential attribute of an agricultural information system. The objectivity of USDA's world and national agricultural information systems is threatened, and efficiency and effectiveness held far below potential by the organizational structure used to operate the systems and the manner in which the responsibilities for them are assigned. The responsibility for the world agricultural information system is shared by two officials in the Office of the Secretary and the system is operated by two completely separate agencies, one with a mission and action program responsibilities that make it unnecessarily difficult to maintain objectivity. The responsibility for reporting on the U.S. agricultural situation and outlook rests with the Economic Research Service and the Outlook and Situation Board, but the chairmanships of the U.S. supply-demand estimates committees have been given to an agency that has responsibility for administering farm programs. To protect objectivity and improve efficiency and effectiveness, the responsibility for USDA's world and national agricultural information systems should be clearly assigned. The Director, Agricultural Economics, who already has the responsibility for the U.S. system and shares the responsibility for the world system, should be assigned the responsibility for both systems, and the agencies that report to the Director should have the sole mission of providing economic intelligence on U.S. and world agriculture. Chairmanship of interagency commodity estimates committees should be provided by the agency that has the responsibility for the estimates and assessments of the situation and outlook. Reorganization is a necessary condition to improving the efficiency and effectiveness of the agricultural information systems operated by USDA. The reorganization alternative that promises the highest efficiency and cost effectiveness is one that combines world and national commodity analysts in a manner that eliminates unnecessary duplication.

WORLD AGRICULTURAL INFORMATION SYSTEM

Introduction

On August 21 I was asked by the Office of Technology Assessment (OTA) to prepare a report containing "a critical evaluation of the world agricultural information system . . ." The objective of the report is to assist in the formulation of specific subject areas to probe, and questions to be explored during the forthcoming OTA hearings on food information systems. The report concentrates on specific gaps or weaknesses in the system that can be corrected within the short run at minimum cost, especially those where corrective measures can be taken unilaterally by the United States. Other improvements that should be made but that will take longer to implement and that require cooperation from others are identified and an implementation approach outlined.

Agricultural Information Systems

A world agricultural information system must have the capacity to develop world supply-demand estimates for all agricultural commodities and be able to accurately assess and interpret their implications. Agricultural statistics and analysis are the ingredients of the system; forecasts of the outlook are the outputs.

Agricultural statistics are the raw material—the basic input—for an agricultural information system. Agricultural statistics, collected either by taking a census or sampling a population, tell us what is happening or what has happened. An agricultural census, taken once every several years, provides the benchmark for the world agricultural information system. Estimates for the current and intervening years are developed either by sample surveys or through analytic methods that use statistics and interrelationships from the past to generate current estimates. World supply-demand estimates are now being developed from a combination of sample survey data and analysis. The basic data requirements for an agricultural information system are identified and alternative procedures for developing them outlined in Appendix I.

While agricultural statistics and supply-demand estimates are essential to an agricultural information system they, alone, are of limited value. These statistics must be carefully *analyzed* by specialists who can interpret their signifi-

cance. Finally, the results of their assessments must be made available to those who need to be informed about the world food and agricultural situation and outlook, and used by the policy officials. The ability to analyze and interpret agricultural statistics depends upon the number of analysts, their training and experience, and the analytic techniques they employ. Since agricultural production is influenced greatly by weather patterns and is, therefore, inherently unstable, the analysts and managers of the world agricultural information system must have the time and ability to continually reassess the situation and outlook for world agriculture.

In order to operate a world agricultural information system, it is necessary to maintain historic data, have the capacity to develop and publish reliable supply-demand estimates, possess the ability to trace the implications of the current situation, and to make those implications known to the world. While there are a number of private and public organizations that operate partial world agricultural information systems, only two operate full-fledged systems—the United States Department of Agriculture (USDA) and the Food and Agriculture Organization of the United Nations (FAO). USDA and FAO collect, maintain, and publish world agricultural statistics; develop and maintain world, regional, and country supply-demand estimates for agricultural commodities; continually analyze the supply-demand balances and the factors or events influencing supply and demand; and release reports containing the results of their assessments of the current situation, near-term and longer range outlook for food and agriculture. Both USDA and FAO depend heavily upon national agricultural information systems of varying sophistication and reliability, but both have the analytic capability to develop current supply-demand estimates in those situations where the national agricultural information systems fail to generate timely or reliable estimates. USDA and FAO draw upon sources outside their own system for agricultural information and intelligence.

Evacuation Criteria

The factors that must be taken into account in developing judgments about the relative strengths and weaknesses of a world agricultural information system are objectivity, reliability, timeliness, adequacy in terms of coverage, efficiency, and effectiveness. The ideal is a system that provides users timely, unbiased interpretations of the current situation and outlook based upon estimates of known reliability for all commodities and countries through the use of the most cost effective procedures known to mankind.

Objectivity

Objectivity is the essential attribute of an agricultural information system, and the most difficult to ensure or measure. To be useful, the products of the system must be as free of bias as the state of the art will permit. Users must be convinced that the results are not tempered to prevent an outcome that is more or less favorable than is the real situation. In theory, the objectiveness of a system can be measured by comparing supply-demand estimates with the final outcome after adjusting the latter for changes in the estimates due to events that took place after the estimates had been prepared. In practice, it is extremely difficult to make such measurements. There are guidelines, however, that can be followed to help ensure objectivity. Objectivity is more likely to be obtained when the organization with responsibility for the information system has the operation of the system as its sole mission. Suspicions about objectivity automatically arise whenever an organization that has multiple missions or action program responsibilities also has the responsibility for operating the agricultural information system. The temptation to modify estimates is ever present, and some estimates are always biased for political purposes. In this circumstance, the organization operating a world agricultural information system must reject the biased estimate in order to maintain the integrity of the system. In order to protect the system, the responsibility for it should be assigned to an organization that has no other responsibilities and that is directed, administered, and operated by persons of high integrity.

Reliability

The reliability of an agricultural information system refers to the confidence that one can have in the supply-demand estimates developed within the system. It is easy to confuse the terms objectivity and reliability. In simple language, objectivity means to tell it like it is, while reliability means to find out what the

situation is and what it is likely to be. The reliability of the estimates is indicated why the methods used to develop them. Those of known statistical reliability developed from a representative sample of a population and those from analytic models of proven validity are superior to estimates developed from non-representative samples or from samples drawn from unknown populations, or through the use of untested or weak analytic techniques. Some national agricultural information systems develop and release current supply-demand estimates that can be relied upon by those operating worldwide systems; others generate current estimates of unknown statistical reliability that must be subjected to consistency checks before being used in the world system. Some countries never develop or release current estimates, so those operating the world system must use analytic techniques to develop the necessary estimates. Finally, some national systems are essentially without capability to generate agricultural statistics, which means those operating the world system must rely entirely upon analysis of factors influencing supply and demand for current estimates. The reliability of a system can be indicated by comparing estimates with final results.

Timeliness

Timeliness refers to the time that lapses between receipt and release of agricultural information. A system that can assess and report the implications of a changing situation days after the change becomes known is more useful than one that takes weeks or months. A system that releases unanalyzed information immediately upon receipt is more effective than one that delays release. A system that generates an estimate of, say, crop production ten days after data were collected from farmers is more timely and effective than one that takes thirty days to prepare the estimate for release. The timeliness of the national agricultural information systems is extremely variable. USDA's national system is without parallel in this regard in that estimates are released after a lapse of as few as ten days. There are others that do not even bother to collect agricultural statistics until after the season has ended. In order to provide timely information, therefore, those operating world agricultural information systems must be prepared to develop and release their own estimates.

Adequacy

The adequacy of a system refers to the scope and uniformity of coverage. A system that provides detailed coverage of the crops, but superficially covers livestock is less adequate than a system that provides uniform coverage of both crops and livestock. Similarly, a system that provides detailed coverage of agricultural production, but fails to adequately cover consumption is inadequate. Further, a system that covers some countries, but fails to cover others, is inadequate.

Efficiency and Effectiveness

Efficiency and effectiveness can be judged by determining if obsolete data are being collected, reviewing the methods used to collect and analyze data, the number and qualifications of analysts employed in operating the system, the number of organizational units involved in collecting and analyzing agricultural data, and the organizational structure used to operate the system. Collecting obsolete data is, at best, a waste of money and can lead to inappropriate and misleading conclusions. Reliable estimates can be generated by sampling a relatively small proportion of a population, a procedure much more cost effective than drawing larger than necessary samples. Sophisticated analytic models and computers can systematically handle more variables, but they cost more than less sophisticated techniques. The task is to use the analytic technique that generates reliable results at minimum cost. Too few analysts keeps the system's efficiency low, as does too many. A system operated by well trained, experienced analysts and statisticians will be more cost effective than one operated by poorly trained or inexperienced employees. Efficient use of manpower and cost effectiveness of the system are influenced by the organizational structure. When the responsibility for the system rests with a single organizational unit, efficiency and cost effectiveness are highest, all else being equal.

General Comparison of USDA's and FAO's Systems

USDA's world agricultural information system is backed by a larger field staff and has been providing information more timely than FAO'S. The statistical reliability of supply estimates appears to be about the same, in part because

they both rely heavily upon national systems, but USDA releases estimates and assessments more frequently. FAO allocates more resources to improving national data collection and processing capabilities than USDA. FAO provides comprehensive coverage of agriculture, including forestry and fisheries, and is the major source of comprehensive historical agricultural statistics. FAO seems to probe more deeply into factors influencing the situation and outlook for world food and agriculture, but takes more time to do so and tends to limit coverage to specific issues. Both USDA and FAO are relatively weak in assessing current consumption requirements. Serious efforts are being made both by USDA and FAO to improve their systems. Both have given increased attention to the number and frequency of reports and FAO is in the process of augmenting staff to handle the broader responsibilities assigned them after the World Food Conference of last November. While they both have increased the number and frequency of reports on various aspects of world agriculture, most of the additional information from USDA's system is data for analysis instead of the results of analysis.

Inadequate analysis appears to be a more effective constraint on both systems than inadequate data. FAO's mission and organizational structure suggest it is easier for them to maintain objectivity, and to make more progress in improving the reliability of agricultural statistics collected through various national systems. The major weakness in the FAO system has been the inability to provide information on a timely basis. This weakness is being overcome by the series of monthly and quarterly reports now being released. FAO's system is constrained by a serious lack of qualified analysts, especially in view of the additional tasks they were assigned last fall. The field staff is extremely limited and data from non-member countries difficult to obtain. However, they now obtain reports prepared by the U.S. agricultural attaches to augment reports from traditional sources. FAO does have a sensitive problem when it becomes necessary to adjust member government estimates that have been biased for political purposes, but they can and do substitute their own estimate for the "official" estimate when necessary. All in all, USDA's system clearly has been superior with respect to timely assessments of the current situation and near-term outlook, but unless steps are taken soon to improve USDA's system, the most reliable system will be the one operated by FAO.

USDA's World Agricultural Information System

Responsibility for the System

USDA operates a national and a world agricultural information system; here our focus is upon the world system. The rationale for USDA's world agricultural information system has never been clearly specified. In consequence, no one person, office, or agency has the responsibility for operating USDA's world agricultural information system. Presently, the responsibility for the system rests with two USDA agencies—the Foreign Agricultural Service (FAS) and the Economic Research Service (ERS). FAS's agricultural attaché network provides foreign agricultural statistics and intelligence and the Foreign Commodity Analysis Unit maintains, analyzes and publishes world agricultural statistics and reports on the situation and outlook for major commodities. ERS's Foreign Demand and Competition Division reports their assessment of the world and regional agricultural situation and outlook. The Administrator of FAS reports to the Assistant Secretary for International Affairs and Commodity Programs, while the Administrator of ERS reports to the Director of Agricultural Economics. The Assistant Secretary and the Director both report to the Secretary of Agriculture.

The mission of FAS "is to expand foreign markets for U.S. farm commodities." In support of that mission, FAS administers commercial export, food assistance, and foreign market development programs, participates in the development of agricultural trade policy, and collects, analyzes, and disseminates information on foreign agriculture. Agricultural attaches located in most major agriculturally important countries have, along with other duties, responsibility for reporting information of importance to local and U.S. agriculture.

Collecting Foreign Agricultural Information

Reports from the attaches are the heart of USDA's world agricultural information system. They are scheduled, coverage specified, and reporting procedures standardized by officials in Washington. The reports include assessments of the overall agricultural situation and the factors influencing production, consump-

tion, and trade such as prices, price and non-price policies and programs, and input supply availabilities. Monthly highlight reports provide updates to previous reports. Quarterly (grains for example), semi-annual (fats and oils for example), or annual (agricultural situation for example) reports are prepared on various aspects of the agricultural situation and outlook. Faster means are used to report events of major significance.

The *objectivity* of the estimates transmitted by the attache depends upon the objectiveness of the estimates released by the host government and the attache. When governments believe it to be in their vested interest to release biased estimates, the attaches report the "official" estimates but make their own when they have reason to believe the estimate is biased. Sometimes attache estimates are biased in the opposite direction, requiring consistency checks by analysts in Washington.

The reliability of the estimates attaches transmit is a function of the methods used to collect agricultural statistics and to assess them. The reliability of estimates from national agricultural information systems varies significantly from one country to another, as previously indicated. When the host country fails to collect or publish agricultural statistics, the attache is required to develop them. When estimates of known reliability are available on a timely basis, the attache's task is relatively simple--he need only transmit them along with brief explanatory notes. Estimates of questionable reliability must be subjected to consistency criteria and modified to make them internally consistent, either by the attache or the analytic staff in Washington. When estimates are not available, the alternatives are to conduct a judgmental type survey or use analytic models that have been verified by comparing model estimates with actual historic results to develop the necessary estimates. In general, the attaches submit estimates based upon their own and local staff's judgment, after reviewing the estimates with others on the scene. The reliability of the estimates transmitted by the attaches from countries who fail to provide reliable current estimates depends heavily upon their judgment, a function of experience, interest, analytic capability, and the importance they attach to the task of developing estimates. These attributes obviously vary significantly from one attache to another, but in general are influenced by what they perceive to be their mission and the length of time they are posted in a country. Few attaches perceive the collection of agricultural statistics and the development of supply demand estimates to be their primary mission; instead, just as is the case for FAS, the attache's primary mission is to expand foreign markets for U.S. farm commodities. The task of developing numbers and drafting reports is usually assigned to assistants or local staff, many of whom are more familiar with the data anyway. Attaches seldom are selected for their analytic capability; instead, it is their ability to represent U.S. agriculture that is the guiding criteria. Relatively short tours of duty may be advisable in the larger picture, but is a distinct disadvantage with respect to the development of reliable estimates.

Timeliness of agricultural intelligence depends upon directives from Washington, the initiative of the attache, and the ability of national systems to generate timely information. As previously indicated, there are a number of countries where estimates are never released in a timely manner. Most national systems rank poorly in terms of timeliness. Attaches must submit supply-demand estimates when scheduled and, therefore, frequently send "post" estimates. Attaches cable information of significance immediately.

The scope of the intelligence system operated by the attaches is broad, but *adequacy* is impaired by the lack of uniformity of coverage, both in terms of content and geography. Various efforts are under way to improve adequacy by requesting attaches to give greater attention to the factors that are or will influence supply-demand balances for agricultural products. Their discussion of the factors that influence production and supply tend to be more complete and frequent than on the factors influencing the demand for agricultural products. Analyses of these factors by attaches or their staff are based upon extremely simple analytic techniques or pure judgment, instead of formal models that generate results of known reliability. The adequacy of the intelligence system operated by the attaches is held below potential due to inadequate coverage of several important agricultural countries. The most notable gap is the lack of an attache in the People's Republic of China, but the intelligence gathering in many centrally planned economies is weak to nonexistent.

The efficiency and effectiveness of the intelligence system operated by the attaches is lower than it would be if specialists in data collection and analysis with

no other duties were located in the country and if they were part of an organization whose sole mission was to operate a world agricultural information system.

Assessing and Disseminating Information

FAS'S Foreign Commodity Analysis Unit and ERS'S Foreign Demand and Competition Division share the responsibility for analyzing and disseminating information on world agriculture. Both rely mainly upon attache reports but obtain intelligence from numerous other sources, including the Central Intelligence Agency.

FAS publishes world agricultural production and trade estimates for agricultural commodities, releases revised foreign estimates weekly, prepares reports on developments of importance to world agriculture, publishes a series of circulars that contain assessments of the current situation and near-term outlook for major groups of commodities such as the grains or fats and oils, and maintains historic supply-demand estimates for selected commodities.

ERS conducts a program of research and analysis that results in reports containing assessments of the current world and regional agricultural situation and near-term outlook, the longer range outlook for world agriculture, and the implications of changes in the international monetary situation, world agriculture and trade policies, and economic development and trade patterns. ERS also monitors and publishes foreign agricultural trade statistics of the United States.

Since the basic source of data for analysis is the same for both FAS's and ERS's analytic units, improvements in the objectivity, reliability, timeliness, and adequacy of the information released by them depend upon the other sources of intelligence they draw upon, their own analytic capability, and the consistency checks they employ prior to releasing information and reports. Estimates from the field are subjected to consistency checks, using data from prior years to improve reliability, and in some cases estimates are developed by the analysts using analytic models that have generated reasonably reliable results in prior years. For example, estimates of grain production for the Soviet Union are developed by specialists in the Foreign Demand and Competition Division of the Economic Research Service. FAS's analysts rely more upon simple consistency checks, experience, judgment, and trend analyses than upon models or sophisticated techniques of analysis in checking or developing estimates. They do not conduct in-depth analyses or issues of factors influencing supply and demand. The FAS analyst is a commodity specialist. The ERS analyst is a country specialist. ERS is more research oriented than FAS. ERS's analysts have received deeper training in research methodology and have more experience in the use of sophisticated analytic techniques and models. They conduct the in-depth analyses of issues and factors influencing supply and demand. ERS is the source of agricultural intelligence; FAS the source of agricultural statistics and commodity information. In recent months the flow of unanalyzed data from 17 USDA's system has increased significantly, much more than the increase in reports containing carefully reasoned assessments of the current situation and outlook.

ERS's world and regional agricultural situation and outlook reports are approved by the Outlook and Situation Board; FAS's reports on the world situation and outlook for the various commodities are not. Attempts to ensure objectivity and reliability are more evident with respect to the world agricultural information developed and released by ERS than is the case for the information developed and released by FAS.

Weakness in USDA's Systems and Means of Overcoming Them

Weaknesses Due to Poor National Systems

The supply-demand estimates produced by a few national agricultural information systems lack objectivity. To prevent this problem from impairing the objectivity of USDA's system. USDA's analysts must develop a deeper capacity to generate unbiased estimates for the country of concern and those managing the USDA world system must be prepared to defend the revised estimates.

The supply-demand estimates produced by national agricultural information systems vary greatly in reliability, timeliness, and adequacy. To prevent this variation from keeping the reliability, timeliness, and adequacy of USDA's world system below potential, there are two alternatives: provide additional technical and financial assistance to help improve *national* agricultural information systems with respect to these attributes, or strengthen the analytic component of USDA's world system so that more reliable and timely national estimates can be generated within the system. Both approaches must be pursued, but the former

will take longer to accomplish than the latter. In the near-term, the @y alternative is to improve the analytic capability of USDA's world system.

When countries fail to provide current supply-demand estimates, the only alternative is for USDA's analysts to develop reliable estimates through the use of analytic techniques. The longer-range solution is to encourage and assist these countries in the development of a reliable national agricultural information system.

Weaknesses Due to Collecting Inadequate Data

For various reasons, the reliability of the supply-demand estimates forwarded by attaches varies significantly. In addition to the problems with national systems previously discussed, reliability is reduced due to the low priority given the development of estimates by some attaches, the lack of knowledge about the country due to frequent reposting, and inadequate training or interest in the use of analytic techniques. In order to keep these problems from holding the reliability of the system's estimates below standard, there are two broad choices: replace the attaches with specialists in collecting and analyzing agricultural statistics, or requiring attaches to submit more precise statistics and information on the factors that determine production, supply, consumption requirements, and trade according to standardized formats so that the analysts in Washington can develop more reliable estimates. The latter is the alternative being pursued and must continue to be relied upon for the near-term. It must be pursued more vigorously.

Weaknesses in Analytic Component

The analysts in FAS rely almost exclusively on experience, judgment, and trend analyses in making initial forecasts of supply-demand balances for the commodities. As we have learned in recent years, trend analyses fail to provide reliable results. More detailed analyses of the factors that determine production and consumption are required to improve the reliability of USDA's world estimates.

There is a clear imbalance in USDA's system—more data for analysis are being provided from the field and other sources than are being adequately analyzed. In part, this imbalance stems from insufficiently precise data; in part, due to an inadequate analytic capability; and is partially a function of the organizational structure USDA uses to operate the world system. There is need for more precise reporting from the field on the input situations and outlook, and on the factors influencing consumption requirements. These field reports *must* be standardized as the data are the raw material for analysis and reports from USDA. Better data from the field is a necessary prerequisite to better reports from USDA on the farm input situation and outlook and on consumption requirements, but unless USDA possesses a deeper analytic capability and uses analysts more efficiently and effectively than now, better field data will be largely wasted. The present imbalance can only be corrected by reorganizing and by augmenting the analytic staff as necessary.

Weaknesses Due to Organizational Structure

The organizational structure used by USDA to operate the world agricultural information system impedes efficiency and effectiveness. It is extremely difficult to use analysts efficiently and effectively when the responsibility for the outputs of a system is assigned to two completely separate agencies.

Permitting the responsibility for the world agricultural information system to be shared by two different agencies, one with a mission, policy, and program responsibilities that makes it unnecessarily difficult to ensure objectivity, weakens the system appreciably. The mission of FAS is to expand foreign markets for U.S. farm commodities. The mission of ERS is to develop and carry out a program of economic research designed to provide economic intelligence for users. FAS has responsibility for administering action programs; ERS does not. The mission of FAS, and the vested interest that FAS thereby has in U.S. and world estimates, makes it difficult for those in the Foreign Commodity Analysis Unit or the attaches to maintain objectivity with respect to assessments of the world situation and outlook. It will be essentially impossible for USDA's world agricultural information system to reach potential under the present organizational setup.

In order to improve the efficiency, effectiveness, and objectivity of USDA's world agricultural information system, the responsibility for it must be clearly assigned. Using these criteria, the position of Director, Agricultural Economics is the logical choice for the assignment. The Director would then have the overall

responsibility for both the world and national agricultural information systems operated by USDA ERS, the agency with responsibility for reporting on the situation and outlook for U.S. agriculture, and the Statistical Reporting Service (SRS), the agency with responsibilities for collecting, processing, and publishing U.S. agricultural statistics, report to the Director of Agricultural Economics. Further, the Economic Research Service shares the responsibility for the operation of USDA's world agricultural information system. The Director, therefore, already has the responsibility for the national agricultural information system and shares the responsibility for the world system. Third, the position of Director has been filled, ever since being established, with a professional agriculturalist of high integrity, a necessary condition for objectivity.

There are alternative means of accomplishing the necessary reorganization. One would be simply to transfer the Foreign Commodity Analysis Unit from FAS to ERS and make it another division of that agency. Another would be to combine the Foreign Commodity Analysis Unit from FAS with the Foreign Demand and Competition Division from ERS into a new agency, one with the sole mission of providing economic intelligence on world agriculture. The third alternative would be to combine the foreign commodity analysts from FAS with the U.S. commodity analysts from ERS and the foreign and national analysts from ERS into a single economic intelligence agency with responsibility for assessing and disseminating information on world and U.S. agriculture.

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Objectivity criteria would be satisfied under either reorganization alternative. Overall efficiency and effectiveness would be highest under the third alternative, next highest under the second, and lowest under the first alternative. It would be higher, however, under the first alternative than at present, simply because it would become possible for the first time for a single agency to plan and carry out a coordinated program of analysis. Efficiency and effectiveness would be higher under alternative two because the system's operation would be directed by more senior professionals. The third alternative promises the highest efficiency and effectiveness. It provides the opportunity to eliminate the duplication associated with the operation of two systems. It is not necessary to have one group of commodity analysts for the world and another for the U.S. The U.S. analyst cannot perform his duties unless he takes the world situation and outlook into account; the world analyst cannot perform his duties unless he takes the U.S. situation and outlook into account. Efficiency and effectiveness would obviously be improved by combining the knowledge of these analysts.

Under either reorganization alternative, the responsibility for collecting foreign agricultural information would have to remain with FAS's attaches until arrangements can be made to relieve them of the responsibility by employing and posting specialists in the collection and analysis of agricultural statistics. But the responsibility for the content, frequency, and format of *attache* reports would have to be assigned to the agency with responsibility for operating the world agricultural information system. As soon as feasible, a separate agency under the Director's guidance should be created, or the responsibility for collecting, processing, and publishing world agricultural statistics should be assigned to the Statistical Reporting Service.

SRS is among the premier agencies in the world with responsibility for collecting, processing, and reporting agricultural statistics. It is the world's best with respect to timeliness, and among the very best with respect to statistical reliability of the results. SRS is a professional organization whose sole mission is to collect, process, and report agricultural statistics. They never attempt to interpret the *results*; they do run elaborate consistency checks before the results are released they are constantly trying to improve methodology; and the security procedures they employ are exceptional. In short they take their mission seriously and constantly strive to improve the quality of the information they generate. They must be relied upon for at least advising those with responsibility for collecting statistics to be used in USDA's world system.

As previously indicated, it is necessary to develop a deeper capability for analysis of the factors influencing world agriculture. It may be necessary to employ additional analysts, but doing so and using them inefficiently, the present approach toward improving the world and national agricultural information systems, is not a cost effective solution to the problem; reorganizing is. It may be necessary to increase the number of analysts and field staff of the new or augmented agency, but the potential from reorganization must be tapped first. The need for developing, verifying, and using more sophisticated analytic techniques is evident, but this need not increase the number of analysts. Instead, the task is to make more effective use of the analysts and positions now available.

Weakness in USDA's National Agricultural Information System

This report has focused on USDA'S world agricultural information system. There is, however, a serious flaw in the *national agricultural information system* operated by USDA. The responsibility for outlook and situation reports rests with ERS and the Outlook and Situation Board, but the authority for U.S. commodity supply-demand estimates is outside ERS. The reliability of the U.S. agricultural information system is, as a result, seriously impaired. U.S. supply-demand estimates are developed by Interagency Commodity Estimates Committees (ICEC) chaired by the Agricultural Stabilization and Conservation Service. Members of the committees are drawn from the Economic Research Service and the Foreign Agricultural Service. Responsibility for foreign trade estimates rests with the member from the Foreign Agricultural Service; the responsibility for domestic estimates rests with the representative from the Economic Research Service. The Agricultural Stabilization and Conservation Service has the responsibility for administering price support programs for farmers, and the Foreign Agricultural Service has responsibilities for administering export expansion programs. Both, therefore, have a vested interest in U.S. supply-demand estimates. USDA's Outlook and Situation Board approves outlook and situation reports on U.S. agriculture, but the ICEC'S supply-demand estimates are taken as given by the Board. USDA'S supply-demand estimates for the United States have been wide of the mark in recent years. While both domestic and foreign demand estimates have been in error, the magnitude of the error in the export estimate has been much larger, either due to changes in the basic situation, faulty analysis, or bias. Investigations of the reasons for errors in the estimates have centered upon ERS, the agency with responsibility for the estimates but without authority. This flaw must be corrected. It is necessary to take program operations into account, when developing supply-demand estimates but the responsibility for the estimates must rest with the agency with responsibility for them. That is, the Chairmanship of the ICEC's should be assigned the agency with responsibility for operating the agricultural information system and the members should be drawn from the agencies with responsibilities for programs that have an impact on supplies or demand.

The creation of an economic intelligence agency, and combining commodity analysts from FAS and ERS into *one unit* provides the opportunity for improving reliability of U.S. supply-demand estimates, but this major flaw in USDA's national agricultural information system will continue to impair reliability unless the Chairmanship of the ICEC's is taken from ASCS.

Longer-Range Improvements That Require Cooperation

FAO has concentrated on improving the quality of agricultural statistics through standardization of census procedures and the use of proven statistical methodology in developing estimates from samples. FAS has not been able to help host governments improve the statistical reliability of their agricultural statistics and estimates. The United States has an interest in reliable agricultural statistics and the world agricultural information system operated by USDA has its effectiveness reduced and costs increased by unreliable statistics and estimates and the lack of data. The United States should provide financial support to FAO'S program of improving agricultural statistics. The alternative is to encourage the Statistical Reporting Service and the Economic Research Service to develop an expanded technical assistance program for, respectively, the collection and analysis of agricultural statistics.

Note on Recommendations Contained in Report of the Food Advisory Committee

I am in full agreement with recommendation three, on eliminating obsolescence in food and fiber data series. Maintaining obsolete data series is wasteful. Analyzing obsolete data is, at best, unproductive, and is of negative benefit when reliance on obsolescent data leads to inappropriate conclusions. For these reasons the place to start improving the national system is by removing excess and outdated information prior to overloading the system with additional data.

Recommendation four, on the integration of staff and activities of the Agricultural Census and the Statistical Reporting Service, has considerable merit, but probably should be broadened to include data collection activities in addition to the Census. The Statistical Reporting Service, in my view, is the premier government data collection and processing agency. They obtain high marks with

respect to reliability and the high marks with respect to bliness. I am convinced SRS could significantly reduce the time lag between collation and release of agricultural data now being collected by the Census Bureau.

The situation with respect to the fertilized information system is an example of how difficult simple tasks can be made. We find it far easier to obtain reliable information on fertiliser stocks, production, supplies, prices and consumption for India or Pakistan than we do for the United States. Obviously, I support recommendation five.

For reasons given in the report, I am in full support of recommendation ten, concerning assistance for FAO information activities, and especially recommendation twelve, providing for increased technical assistance to improve agricultural information systems in the developing countries.

APPENDIX I

AGRICULTURAL INFORMATION SYSTEM

BASIC REQUIREMENTS AND ALTERNATE PROCEDURES

I. Land Use Pattern:

A. Area used to produce crops:

1. Cropped area.
2. Idle/fallow area.

B. Area used to produce livestock.

C. Nonagricultural area.

II. Crops:

A. Crop Production:

1. Area planted to each crop:

- a. Sample survey.
- b. Analysis of factors influencing plantings:
 - i. Area available for crops.
 - ii. Policies of governments.
 - iii. Price relationships between various crops and between inputs and outputs.
 - iv. Input supply availabilities.
- c. Area for harvest.

2. Yield per unit:

- a. Objective yield survey.
- b. Judgmental yield survey.
- c. Analysis of factors influencing yields:
 - i. Quantities of inputs applied and their relationship to yield.
 - ii. Weather patterns.

3. Production estimate (area times yield).

B. Stocks:

1. Old crop stocks at beginning of crop year:

- b. Analysis of supply-demand factors.

2. Old crop stocks remaining at end of crop year.

C. Consumption requirements:

1. Food use:

- a. Food consumption surveys.
- b. Food processing industry surveys.
- c. Analysis of factors influencing demand for food:
 - i. Growth in population.
 - ii. Change in income and its distribution.
 - iii. Change in product price and its relationship to prices of substitute foods.
 - iv. Government policies and programs--food distribution and regulations.

- 2. Feed use:
 - a. Feed user surveys.
 - b. Feed processing industry surveys.
 - c. Surveys of stocks.
 - d. Analysis of factors influencing demand for feed:
 - i. Demand for animal products (population, prices, policies, and programs).
 - ii. Animal units to be fed.
 - iii. Price relationships between livestock product prices and feed prices.
 - iv. Price relationships between feeds.
 - 3. Industrial use:
 - a. Survey data.
 - b. Analysis of factors influencing industrial demand.
 - 4. Seed use:
 - a. Estimate of area to be planted in subsequent year.
 - D. Exports or imports:
 - 1. Export availability or import requirement:
 - a. Beginning stocks plus production less consumption and ending stocks requirement.
 - 2. Exports or imports:
 - a. World supply-demand-price prospects for crop of concern and for substitutes.
111. Livestock:
- A. Introduction:
 - 1. Number of animals by class of livestock:
 - a. Sample survey or census.
 - b. Analysis of factors influencing animal population:
 - i. Government policies and programs.
 - ii. Area available for livestock.
 - iii. Price relationships between various classes of livestock.
 - iv. input-output price relationships and returns prospects.
 - 2. Production per animal:
 - a. Sample survey.
 - b. Analysis of factors influencing productivity:
 - i. Slaughter weight and carcass yield.
 - ii. Feed conversion ratios,
 - iii. Weather patterns.
 - iv. Supply of feeds.
 - 3. Production estimates:
 - a. Meat production (number slaughtered times carcass yield).
 - b. If ilk. eggs, etc., production (production units times per unit yield).
 - B. Stocks:
 - 1. Beginning of year:
 - a. Survey.
 - b. Analysis of supply-demand.
 - 2. End of year:
 - a. Analysis of supply-demand.
 - b. Policy considerations.
 - C. Consumption requirements:
 - 1. Food use:
 - a. Food consumption surveys.
 - b. Processing Industry data.
 - c. Analysis of factors influencing food use (same as II. C. 1. c. i-iv above).
 - 2. Industrial use:
 - a. and b. (Same as II. C. 3. a. and b. above.)
 - D. Exports or imports (same as II. D. above).

Chairman HUMPHREY. Mrs. Holt, a member of the Technology Assessment Board has a prepared statement she would like to insert.
[The statement follow:]

STATEMENT OF HON. MAJORIE S. HOLT, REPRESENTATIVE IN CONGRESS FROM THE
FOURTH CONGRESSIONAL DISTRICT OF MARYLAND

Mr. Chairman, I appreciate the opportunity to present my views on the report entitled "Food, Agriculture and Nutrition." I intend to make my remarks as concise and as precise as possible.

My basic observation is that while the report contains some positive and workable suggestions, it is very weak in other areas.

Let's start with the positive side.

The recommendation on page 20 to move toward the "modernization, coordination and standardization of older food and fiber data" seems to me to be a good one.

If there is anything that we have now as legislators, it is too *much* information. Reams and reams of reports come to us every day. Most of this material goes unread and eventually is discarded. The basic problem is not having enough information; it is having enough useful information.

Therefore, I believe the present "information industry" both within and outside government would more fully serve itself and those it professes to assist by beginning to ask itself just how much of what it generates is really useful and relevant.

I hope also that these hearings will direct more effort toward mining the existing mountains of informational literature, rather than generating additional volumes of what is basically irrelevant trivia that only confuses, in the words of the report on page 14, "busy members of Congress who are not familiar with many food, agricultural and nutritional issues".

A second constructive idea in the report discussed at page 21 is the merger of the Agricultural Census with the Statistical Reporting Service of USDA.

I would point out that this effort was attempted several years ago by the Administration, but it was blocked by Congress in Public Law 93-80, the Omnibus Farm Bill of 1973. I hope therefore that our colleagues will now take to heart this suggestion.

Another good idea is the suggestion on page 24 to improve our use of satellite and other new technologies. The LACIE program promises to be very useful in measuring crop output throughout the world and should be most beneficial to all concerned.

Now, some negative aspects of this report:

In its general thrust the report seems to concentrate on one word . . . and that word is "MORE." It calls for—

- More expenditures on information systems;
- More staff in the Congress and in the Executive Branch;
- More foreign aid; and
- More paperwork.

As I mentioned earlier, I would hope we would be able to use what is already in the Department of Agriculture and related agencies of the Executive Branch more efficiently rather than to go off on new tangents. The same is true of the Congressional Committee staffs, all of which are ballooning in size already. The last thing we need to do, it seems to me, is to expand them further.

I also question whether OTA should get itself in the position of telling the various committees of the Congress how to organize their internal affairs anyway.

On the foreign side of the equation the United States now pays 25 percent of the (lost) of operating the Food and Agriculture Organization of the United Nations. That is one reason why I disagree with the recommendations on page 10 and page 36 for the United States to increase its contribution to FAO which, as everyone knows, is basically a statistics-gathering organization. I think it's about time some of the other 130 countries of the world contribute a little more to the UN and its operation anyway.

My final criticism lies with the thrust of the report which is aimed at a so-called "National Food Policy."

To start off, the evidence cited in the report for such an effort is at best meager.

On page 11 the report blandly states that the "need" was reemphasized in hearings held by Senator McGovern's Nutrition Committee in June 1974.

It would be interesting to know who the witnesses were who established this "need", wouldn't it?

But regardless of who they were, I don't believe the OTA should embrace such a radical policy without arriving at its own independent decision. And I would

like to state that OTA again appears to be making recommendations contrary to its legislative authority.

I note also from a Washington Post news story that Herbert Stein, the former chairman of the Council of Economic Advisors, pointed out last week to the Joint Economic Committee that "National economic planning could tend to change the operation of government and the economic system away from the interests of efficiency and democracy."

Stein said the bill would likely result in more inflationary policies that would do nothing to solve the problems of unemployment and commodity shortages.

"I don't think the bill will be passed, and I suspect the sponsors don't either," he said. "I see it more as an educational platform."

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I would only add the observation that one, if not the single most important, reason that Russia buys wheat from us is because of that nation's dedication to central economic planning on grain.

I hope we don't embrace that *same* economic philosophy, because if we do there won't be *anyone* around from whom to buy grain.

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In summary, Mr. Chairman, I urge that this report not go forward unchallenged. Instead, it should be noted for its positive aspects, and then be stored in that mountain of curious but basically irrelevant literature that already overwhelms us all.

[The hearing was adjourned at 5 :20 p.m., to reconvene at 2:30 p.m., September 25, 1975.]