FOOD INFORMATION SYSTEMS

WEDNESDAY, SEPTEMBER 24, 1975

CONGRESS OF THE UNITED STATES,
TECHNOLOGY ASSESSMENT BOARD,
OFFICE OF TECHNOLOGY ASSESSMENT,
washington D.C.

The Technology Assessment Board met at 2 :55 .m., -pursuant to notice, in room 324, Old Senate Office Building, % on. Hubert H. Humphrey (member, Technology Assessment Board) presiding.

Present: Senator Humphre and Senator Kennedy.

Staff present: Mr. Emdio J. Daddario, director; Mr. Daniel V. De Simone, deputy director; Mr. ,J. B. Cordaro, food program manager; Dr. Walter W. Wilcox, consultant; Ms. Ellen Terpstra, research associate; Ms. Ann Woodbridge, administrative assistant.

STATEMENT OF HON. HUBERT H. HUMPHREY, A U.S. SEMATOR FROM THE STATE OF MINMESOTA

Chairman HUMPHREY. G"ood afternoon. 1 vvould like to welcome everyone to the first day of hearings on food information systems. We have three witnesses with us today-Assistant Secretary of A@culture for International Affairs and commodity Programs, Richard E. Bell, Dale Hathaway, Directoq, International Food Policy Research Institute, and Howard W. Hjort, ,John schmittker Associates—who will begin the Office of Technolo~ Acsssrnent% hearings on the accuracy and timeliness of world and IJ.S. food, agriculture, and nutrition information systems. Through this hearing process, we will additionally hear comments on the OTA Food Advisory Committee)s repoti, entit]ed "Food, Agriculture, and Nutrition Information SyStems: Assessment and Recommendation." [1]

It is a privilege for me to chair the first hearings the Office of Technology Assessment has held on a specific assessment area.

In early 1974 I requested, with the endorsement of the ch'airman of the Senate &riculture and Forestry Committee, Senator Herman Talmadge, that OTA make an assessment of agriculture and information systems and their adequacy for policy planning. The numexwus events that occurred in 19'72 and 19'73 to trigger the necessity for this assessment have been well chronicled. Althou@ these events may be elated, their consequences and effects am still being felt today.

There has been increased attention given to the importance of agricultural information in recent years. In 1972 Senator Bellmen and I visited the Soviet Union, and our report, "Observations on Soviet and

[1] See p.4

Polish Agriculture," offered a number of recommendations such as increasing the number of agricultural attach& assigned to the Soviet Union.

The World Food Conference of November 1974 was intimately concerned with this issue, and I wrote to Ambassador Edwin Martin urging our delegation to support the establishment of a World *Food* and Agricultural Information Center.

These hearings come at a most opportune time. The recent Russian grain purchases, their impact cm food prices, and their disruption of our agriculture marketing processes have again underscored how fragile our information systems are to deal with unexpected events. Many have asked:

> Why did the U.S. food and agriculture information systems fail during the 1972-'73 period? What are the defects in our system ?
>
> In view of this and subsequent developments, do existing food and agricultural information systems meet today's needs? What improvements should be made to correct the deficiencies in the system ?

A report submitted to the Office of Technology Assessment by OTA'S Food Advisory Committee detailed several options for the Congress to consider. These hearings follow through on the options in the committee's report. The committee, a distinguished roup of academicians, scientists, and industry and media leaders, wiY1 participate in hearings scheduled for February 4, 1976.

Because Congress is intrinsically dependent upon outside sources for information upon which it bases decisions, it is necassary to focus on these sources, especially the U.S. Department of Agriculture. These hearings will underscore the importance of this subject area, explore ways in which the options identified by the Food Advisory Committe~ might be implemented, and clarify them.

The importance of the% hearings grows out of the recent depletion of world food reserves. As long as apparently limitless reserves were available, there seemed little need to gather exact information on the world food situation. Emergencies could always be met. .

That is no longer the case. Only through adequate planning and careful coordination of national food policies in the light of systematic ~ and timely information on the current food situation can the world overcxune the present crisis.

We must diminish the realm of the unpredictable. We must take some of the guesswork out of agricultural policymaking. Only in this . . way can we provide a sound basis for world food policy.

Systematic information on the world food situation is particularly important for the United States, the world's major food exporter, because of its open, free market system.

In view of recent and prospective Soviet grain purchases in U.S. markets and the great uncertainties that have been created for U.S. producers and consumers, I decided that the first 2 days of hearings be devoted to an evaluation of the accuracy and timelmess of information on U.S. and world agricultule in 1975.

It was the Soviet grain purchases in 1972, and the chaos in U.S. grain markets which resulted from these purchases, which led me to request an assessment of our food and agricultural information systems for food policy planning.

I am pleased that President Ford has taken the initiative in negotiati a long-term grain purchase agreement with the soviets. 1n thesT earings 1 plan to probe the information demands that a sound agreement must address. If we are to depend primarily on the free n]arket system, 1 believe our producers should learn of the soviet intentions to buy specific quantities of grains in united states and world markets at the same time that private traders are informed, rather than weeks later. I hope to learn that the Soviets have agreed to space their purchases throughout the marketing year> rather than creating meat market uncertainties by making large annual purchases during the harvest season before the full domestic and export requirements for the marketing year are known.

These hearings substantially implement option No. 6 of the Food Advisory Committee's report., which states:

> We recommend that the Agricultural Committees of the Congress schedule hearings to determine what improvements **in the Foreign Agricultural Service** and the Economic Research Service have been made since 197!2-73, and what further improvements are feasible.

I note that there has been a substantial increase in the number of reports issued by both the Foreign Agricultural and the Economic Research Services. It no longer is possible to separate the domestic from the world food situation. Yet my contacts with staff and constituents who depend on the Department of Agriculture for current information question the continued lack of integration of the staff which gather and analyze the world and the domestic information. They question whether this administration is placing as high a priority on economic intelligence as current conditions warrant.

Our first witness will be Assistant Secretary Richard Bell, who will bring us up to date on the improvements in our information on a~i-cultural production and food import requirements of the Soviet Union resulting from the information exchange agreement entered into with the U.S.S.R. in June 1!)73. We find our U.S. grain markets in the summer of 1975 disrupted again, much as they were in 19'72, by rumors as to the Soviets> buying plans.

I hope filr. Bell will be able to report on the progress of the U.S. effort to negotiate a long-term grain sales a~eement with the U.S.S.R. I hope it meludes a provision which rcqmres that prior to entaring negotiations with private grain exporters, U.S. informational agencies will be informed as to the amount of the planned purchs.

It is my hope that as a result of these hearings, the people will learn how much of the confusion regarding Soviet food recpnrements that occurred these past few weeks can be avoided in the future.

After reviewing the current situation with respect to information available on food and agriculture in the Soviet Umon and the People% Republic of China, we will look into the improvements in the informational activities of the international agencies in response to the resolutions of the 1974 World l?ood Conference.

Tomorrow afternoon we will have a panel from the Department of Agriculture r$_{el}$rie$_{w}$ the Department's world information gathering and analytical capabilities, followed by several witnesses from the private grain trade and industry who wdl report on their experiences m to the accuracy and timeliness of the information needed by their firms in con(~uet ing their business operations.

Information is a precious commodity. To be useful, it must be objective, timely, and reliable. Such information will not automatically ensure better decisions, but it will expose those decisionmakers who fail to use these resources.

[The following material was referred to on p. I]

FOOD, AGRICULTURE, AND NUTR.ITIO~ INFORMATION Systems: ASSESSMENT AND REMMMENDATIONS

(Report of the Food Advisory Committee, Congress of the United - States, Office of Technokqgg Assessment)

Food Aiihhory Committee

Dr. Clifton R. Wharton, Jr., president of Michigan State University is the committee chairman.

Dr. .Mm-tin 11. Abel, University of Minnesota.

Dr. W. D. Buddemeier, director of international agriculture pro-~l~::i~and associate dean, College of Agriculture, University of

Dr. "David 4X1, director of cooperative extension, Cornell Univemity.

Dr. D. @le Johnson, vice president and dean of faculties, University of Chicago.

Arnold Mayer, legislative representative., Amalgamated Meat Cutters & Butober Workmen of North America.

Dr. Chester O. McOorkle, executive vice president, University of California (committee member through May 19'75).

Dr. Max IMilner, Department of Nutrition and Food Science, Massachuetks 1n~itute of Technology.

Dr. Robert Nesheim, vice president, research and devdopment, @~aker Oats co.

Esther Peterson, president, Nyational Consumer League, and consumer advisor to the resident, Giant Food, Inc.

Prof. Roger Reve lle, director, Center for Population Studies, Harvard University.

Leon Schachtir, international vice president, Amalgamated Meat ~ Cut'tmw & Butcher Workmen of North America (commitie member through May 1975).

Txumen Seth, editor of the editorial page, Des Moines Register and Tribune.

Dr. E. T. York, Jr., provost of the University of Florida.

Preface

The growin~ world interdependency has highlighted the information systems describing that interdependency, Nowhere is this need clearer than in the mwas of food, Wriculture, and nutrition.

The U.S. Congress recognized the centrality of this problem for some ~ime. But @he events of reeent years led them to make this area the fiti ptiority for the attention of the newly organized Food Advisory ("ommittee of the Office of Technology Assessment.

As work in this area began, the committee realized that information systems, even when limited to food, agriculture, land nutrition, is a broad topic. The current information system was never designed as a total system but represents an historical accretion based upon multiple uses and purposes---often conflicting. While the committee recognized the ideal would be to address the needed improvements in the total system, we realistically concluded that an adequate assessment of the total information systems would have retumed greater resources and more time than was available. The committee therefore chase to concentrate its attention *on* a limited set of recommendations. Two criteria were employed: Those areas which are most amenable to congressionnl action and those which in the committee's judgement most urgently require attention.

Our focus was also limited to the information systems rather than the analysis of the information gencrated by the systems, even though past problems often have been more clue to poor analysis than deficient information.

Tho twelve major recommendations are devoted to the need for: greater analytical capability, correction in data obsolescence, improved timeliness and reliability, better fertilizer information, strengthening the economic Research service. Statistical Reporting service and the I'orei$_{an}$ Agriculture Service, utilization of new information gathering technolo~~', improvement in nutrition information systems, and improvements in the international food and agriculture information systems.

The work of the Food Advisory Committee was considerably *aided by* the detailecl studies of three contractors: Michigan State University: Sidney M. Cantor Associates, Inc.; and The Futures Group, Inc.

While these reports were not a formal part of the committee% report, the person seeking greater depth and breadth of coverage will find them highly rewarding.

Various members of the OTA staff were most helpful to the committa in preparing base documents, summary statements and preliminary drafts. In this process we would especially single out Mr. ,T. ~. Cordaro and Dr. Walter Wilcox. Responsibility for the final document is,"of course, the committee's alone.

We sincerdy hope that our recommendations will prove valuable to the Congress and worthy of serious consideration.

Crmrro~ R. WIIAR~N, Jr.,
Chairman, Food Advisory Committee

JUNE 19'75.

Introduction and Sumnwy of Reco9n7nendation9

Within 2 months in mid-1972 the world food situation changed suddenly. This was due chiefly to poor crop conditions over much of ~~sia and large purchases of U.S. wheat by the Union of Soviet ScP cialist Republics. The phenomenal and unexpected increases in prices of wheat, feedgrains, and soybeans after October 1972 disrupted the U.S. livestock economy and within a few months retail food prices were rising rapidly. These developments tuok place in con-junction with a less visible, longer run reduction in stock due to the rapid

growth in per capita income in a large number of developing and developed countries.

As world grain production dropped sharplyin 1972-73 and world demand surged upward, world food stocks were reduced to historically low levels In some of the developing countries, there was less bread and rice for poor people. In some developed countries, there was less grain and protein feed for livestock, and consumers experienced smaller supplies of meat and sharply higher retail food prices. The increases in retail prices of U.S. farm products and food from October 1972 to August 1973, were by far the largest experienced since 1945-48.

The magnitude of the increase in farm product and food prices in the United States was not publicly predicted by authoritative sources inside or outside government. Members of Congress were concerned about the sharp increases in the cost of food and farm inputs and by shortages of production supplies, especially fuel, protein meals, and fertilizers. Why had the U.S. food and agriculture information systems failed to warn them of the impendmg shortages?

Underlying the dramatic events of the 1972–73 period have been recent fundamental changes in the world food situation. These include continued rapid increase in world population, the rise in consumer consumption expectations including increased demands for livestock products, sharply increased international trade in food, an increased dependence of the U.S.S.R. and the People's Republic of China on world grain markets, wide shifts in monetary exchange relationships, widespread inflation> and now widespread economic recession.

In view of these developments, are current food and agriculture information systems adequate ?

Do the food and naviculture information systems, with their emphasis on food production and disappearance, which yield only fragrnentary information on nutritional status of specific groups, prmude adequate information about the nutritional status and food habits of all consumers ?

How well do these current information systems meet today's needs?

This report is an assessment of the food, agriculture, and nutrition information systems which now serve Congress, executive departments and agencies, State and local governments, researchers, and private citizens. It focuses primarily on 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 a~ibusiness.

The existing agricultural information system, for the most part, measures output and its various ramifications. It is basically an impersonal, production oriented system. What happens to food after it leaves the final point of sale is not included in this system. A food and nutrition information system should also be a consumer oriented system that builds upon the nutritional needs of the consumer. It should relate food to the nutritional needs of the individual.

International and national nutrition information systems are considered primarily from the viewpoint of their adequacy for providing policy guidance to Congress in the areas of food and nutrition. There 1s no attempt to assess the many subsectors of the food, agriculture and nutrition information systems, each of which may be important to other clientele.

Summary Recommendations

MORE ANALYTICAL CAPABILITY NEEDED

More complete and more reliable information is needed on world agriculture; the recognized need for an effective food and nutrition surveillance system has not been met. Con gress greatest need, however, is for more analytical services and capability for dealing with the burgeoning information flow on the rapidly changing food, agricultural and nutrition situation.

1. *We recommend that the Congress increase the analytical capability of the staffs of its agricndtural committee.~, and of the agricultural specialists in the Congressional Research Service A group of several compertent analysts of making its studies should be available to Congress.*

Congressional committees and subcommittees now call on the USD.4 Economic Research Service and land grant universities for analytical reports on issues of concern to them. A part of the increased analytical ca]x~bilities needed by ~longrcss could be provided by a closer worl~-ing relationship with executive agencies and other institutions, inc~nding in some cases, additional financing for specific studies.

Z ?~re *aho recommend that the Congress develop clo8er i&~i80n with the exeeut?'ve agencie8 and the ~and grant wniver8u%e8 requesting thcm to devote more of tllez'r analytical capabiWe8 to the analy8i8 of $;)f ommztion f or Congress.*

Obsolescensce in data correciton

WC find serious obsolescence in many food and fiber data series. In addition, many new dccisionmnking demands arc being imposed on data systems which were not designed for such purposes. Although a distin~lishecl committee of the American Agricultural Economics .~~s$_{ocln}$ti$_{on}$ urged action i$_{n}$~i$_{ea}$ling with these issues as long ago as I!)7z., efforts on the part of responsible administrators lool<in~ toward the Improvement of these data series has been frustrated by laclc of public concern and support.

,3. *We recommend that eifher the Joint I?CONQrn$_{r}$iC Committee? or one or both of the Agrz"cwltwe Committees, rejnwt the Secretary of Agrimdtwe to establish cm. ogricwdturul statistical review com?m'ttce charged with responsibility of making recommendatibna to the Con~rem and appropriate executive agencies for zwodernizin~, coord~~af - kng and ~tandardizi~ the food and fiber data aert"ea. Thi8 agricuh.wa~ 8tati.~ti$a.l rem%w committee 8hcwld include member8 from the van"ou8 discipline~ and groups who utilize food and agricultural data.*

IMPROVEMEN"'I' 1>-TIMELIN"ESS .4ND RELIABILITY OF DATA NEEDED

llfost national food and agricultural data series arc released promptly. There was, however, an excessive time lapse before the last agricultural census data were available.

The timely collection and release of reliable agricultural data by the Census Bureau has encountered serious problems in recent years. In order to reduce costs, the Census Bureau is conducting the agricultural census in 19T5 with primary reliance on the return of mailed quest ionnaires.

A private consultant group, American Agribusiness Associates, found that more accurate benchmark data could be provided by the USDA. Statistical Reporting Service at the same or lower cost than by the continuation of the 5-year agricultural censuses conducted by the Census Bureau. Other users of agricultural census data believe that both the reliability and timeliness of such data could be improved if the responsibility for providing such data were transferred to the Statistical Reporting Service.

4. *We recomnnend tltat the congremioruzl c0nwnittee8, which have juridictwn ovor the Depa.rtnumt of Agriculture and the %ureau of Lfen8u8 actiuitie8, study the de8irabiZity and feasibility o integrating " the 8tajl' and activitie8 of the Agricultural Uensm into tL ~tdi8tihd ~eporting Service. #uc?b a study, with hearin* **8** *if needed, 8hou2d be 8chcdu~ed w~thin the rwxt calendar year. If tL re8dt8 8U~#WTt 8uch a .trazwfer, a Propriatc @@$ation 8hould be t?nwtea? providing for ' tran8fer of tl e re8ponMdzty for agtiltura7 benchmark data to tb il!ltati~tical Reportinq Service when the procemhtg of the J9Y5 agricultural cen8us data ;s completed.*

IMPROVEMET' IN' FERTILIZER INFORMATION SYSTEM NEEDED

The collection of fertilizer information and its anal sis and dissemination are shared by ten governmental agencies an!' at least two industry-financed trade associations. There is substantial consensus among the users of this 'information that important improvements are possible, especially in terms of the timeliness of t e reports, increased reliabdity, and the publication of the scattered information in comprehensive monthly and annual reports.

,5. We *recommend that the 8everal congressional committee,~ having responsibility for the executive agencies which correct and public the various series of data dating to fertilizer conduct studies and hearings to determine ways, means, and costs of improving fertilizer information systems.*

STREXGTHENING OF TIIX? ECONOMIC RESEARCH AND FOREIGN AGRICULTURAL SERVICES NEEDED

In fiscal year 1972-73, when the failure in the international food information system occurred, the Government was spending $61 million annually on the four basic national agricultural information agencies: the Statistical Reporting Service, the Economic Research Service, the Market News Service, and the Foreign Agricultural Service.

Since early 1972, the Economic Research Service has been reorganized, and minor reorganizations occurred in the other agencies. Additional funds were requested by the agencies to permit them to collect additional data and to provide for more analyses.

In part, as a result of these actions, appropriated funds for these four agencies were increased to $73 million in 1974-75 and appropriations of $80 million are being requested for the 1975-'76 fiscal year. In terms of purchasing power, however, the $80 million requested is slightly less than them agencies received in 1972-73.

Important steps have been taken since 1972 to improve the quality and timeliness of the information available on world agriculture and

agricultural requisites. We believe, how-ever, that additional improvements are needed.

The Foreign Agriculture Service should improve its information collection capability by: Giving its attach& basic training in information gathering expanding its reporting capabilities in the critical developing countries; improving Its data transmission and the timeliness of its summaries; improving its reports for the major commodities, talking into account probable requirements of the importing countries; and improving its reports on world agricultural requisite supplies and requirements, especially fertilizer.

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; increasing its abilitv to analyze current world weather data and interpret its significance, in terms of probable crop production in the current season; and developing world models of production, utilization, trade, and prices for the more important agricultural commodities, especially grains, which would permit timely evaluation of new data on a monthly basis du ri ng the growing and early harvest season.

6'. *We recommend that the Aqriculture Committees of the Congress schedule hearings to detcmine what improvements in the Foreign, Ayriculturol Service and Economic Research Service have been made since 1972-73, and what further improvements are feasible.*

Such hearings should focus on: Additional data series to be collected by the Foreign Agricultural Service; steps to increase the timeliness of reports issued; steps to improve the quality of the data obtained from abroad; and appraisals by the administrators of these sin-ices concerning additional improvements that could be made in existing information systmxs, and the probable cost of achieving the improvements.

DEVELOI'MENT OF IMPROVEMENT TECHNOLOGY

We, note with approval that the Department of Agriculture has joined with the National Aeronautics and Space Administration and the National Oceanic and Atmospheric Administration to detemine whether data gathered by satellite and analyzed with the aid of computers can improve the timeliness and accuracy of major crop fore casts. We also note with approval that the National Oceanic and Atmospheric Administration is cooperating with the Statistical Reporting Service in the analysis of weather data as related to crop yields.

7. We believe ~t is *urgent that experimwtf9 mid analy8ef9 utilizing nwo tc~hnologi~s for obtaining and andy.zin,q data go forward o~I on e,rpm~dinq SWJC as preliminary rcswlt~~, inc7wling cost efectirtw~ss or)a7ytw.s7 justify.*

NCTRITION IXFOR3f.iTION SYSTEMS N? RIOUSI,Y DEFI('IEhT

~~e find that although the I?ederal Government appropriated $6.1 billion for food stamp and related food distribution pro~rams in tlm 1975 fiscal year, it has not conducted adequate, objective pro~~am

evaluation studies to determine the extent to which these programs are achieving the goals set for them by Congress.

8. *We recommend that Congress request the Food and Nutrition* Service which *administerd the food assistance programs to expand substantially its program evaluation studies. These studies should be integrated to maximize their cost effectiveness and ensure getting the quality and type of information necessary to make appropriate evaluations.*

Meaningful food and nutritional surveillance information is far more difficult and costly to obtain than comparable information on food production. This is because of the difficulty of measuring food consumption and nutritional deficiencies. In part the cost is related to survey methods which require clinical evaluations as a part of a comprehensive evaluation of an individual's nutritional status. Nutritional scientists also are not fully agreed on the significance and reliability of specific tests for nutritional deficiencies. Even though the White House Conference on Food, Nutrition and Health in December 1969, emphasized the need for a national nutritional status monitoring or surveillance program, little progress has been made in establishing such a program. The Senate Select Committee on Nutrition and Human Needs has held many hearings and issued many reports since that time but, thus fax, has made little progress in developing a national nutritional status surveillance program.

9. *We recommend,* as *a* first step *developing a* national nutritional *status monitoring ,and surveillance program, that the Select Committee hold hearings on the adequacy of design and integration of the onqoing nutrition suweys being conducted by Department of Health, Education, and Welfare, and the planned Household Food Consumption Survey to be conducted by the Department of AgriouZture.*

The Food Advisory. Committee plans to consult further with leading nutritional Scientists, and make recommendations for establishing a continuing nutritional status surveillance program.

IMPROVEMENTS INTERNATIONAL FOOD AND AGRICULTURE INFORMATION SYSTEMS MERIT SUPPORT

Resolution XVI of the *19~4* World Food Conference recommends a greatly expanded global lnformat:on and *early* warning system on food and agriculture..FAO is now m the process of improving and expanding its information collection and dissemination activities as directed by the resolution. It will be limited in its expansion plans both bv funds and by a shortage of technically competent staff.

10. We recommend *that the United States strengthen* its *own agricultural information agencies, but, in addition, the United States can and should provide increased financial and technical assistance for FAO information activities*

It could perhaps help guide development of FAO information activities by making financial grants and/or loaning the technically qualified staff to accomplish specific, agreed-upon tasks in the information field.

At present, the FAO staff, and the staffs of other international agencies which issue information on world food conditions, often are limited by the data supplied by member countries. Sometimes

other information indicates that the official reports are out of date or have been politically motivated. This is a serious handicap for international information agencies.

11. We recommend that Congress request the United States representatives with supervisory and liaison responsibilities for internationail information agencies to support the development of rules and regulations for the international professionul staffs which would authorize and direct these staffs to use the most reliable information available to them when compiling *their reports.*

FAO, in implementing World Food Conference Resolution XVI, concerning the improvement of basic data, reports that it plans to provide more technical assistance to individual countries for improvin$_g$ the methods of reporting on current harvests and crop conditions. This is an area where the United States has made important contributions in the past through technical assistance activities of the Agency for International Development. Congress in its authorization for AID has given a high priority to food and agriculture.

12. 'We recommend that Congress direct AID to increase its technical assistance for the improvement of agricultural infmvnatiun systems, including the introduction of advanced information technology, in the developing cowntries most deficient in their agricultural statistical institutions.

ADDITIONAL NUTRITION STUDIES PLANNED

The implementation of these 12 recommendations would result in eliminating the major existing gaps in the world food and agricultural data series and make substantial improvements in the national series.

If implemented, these recommendations also would greatly increase the range of analyses of current information available to Members of Congress. The need for an improved food, agricultural and nutritional information system growing out of the growing world interdependency would be substantially met. The danger of some future failure of the system similar to the 1972–73 occurrence would be lessened.

The assessment of the nutritional information system indicates that little if any progress has been made toward establishing a national nutritional status surveillance program. The need for such an informational program was outlined by the 1969 White House Conference on Food, Nutrition and Health. The need for such a program was reemphasized in hearings held by the Senate Select Committee on Nutrition and Human Needs in June 1974 and detailed in their May, 1975 report entitled "Towards A National Nutrition Policy."

Many complex issues are involved in established a cost-effective surveillance program. The Food Advisory Committee plans to continue its assessment in this area, consulting further with leading nutritional scientists and make specific recommendations in the near future. A subcommittee has been appointed for this purpose.

Food, Agricultural, and Nutritional Informtion Needs of Congress

This section explores the food, agricultural, and nutritional information needs of Members of Congress as a prelude to assessing the deficiencies and suggesting changes.

CONGRESSIONAL WORKLOAD

The Senate Committee on Agriculture and Forestry in the 93d Congress had 177 bills and resolutions dealing with food, agriculture, and nutrition referred to it for consideration and possible legislative action. The Committee on Agriculture of the House of Representatives in the same period received 565 similar bills and resolutions. Another 1,089 bills and resolutions dealing with food agriculture, or nutrition were introduced by Members of the 93d Congress and referred to other committees having jurisdiction over the particular issues addressed in the bills.

The number of bills and resolutions dealing with food, agriculture, and nutrition introduced in the 93d Congress, and referred to each of 13 committees in the Senate and each of 19 committees in the House of Representatives is shown in the accompanying table.

TABLE *I.-Bills and resolutions dealing with food, agriculture, and nutrition introduced in the 2d session of the 93d* Congress[1]

Referred to Senate Committee on:	*Number of Wlu and re601uti6na*
Aeronautical and Space Sciences	
Agriculture and Forestry	177:
Banking, Housing and Urban Affairs	17
Commerce Committee	16
District of Columbia	1
Foreign Relations	
Finance	2:
interior and insular Affairs	5
Judiciary	
Labor and Public Welfare	55
Post Office and Civil Service	4
Public Works	1
Rules Committee	8
Total Senate	330
Referred to **House Committee on:**	
Administration	
Agriculture	**565**
Appropriations	7
Armed Services	1
Banking and Currency	**116**
District of Columbia	**1**
Education and Public Welfare	**133**
Foreign Affairs	**25**
Government Operations	**1**
Interior and Insular Affairs	**9**
Interstate and Foreign Commerce	**373**
Judiciary	**23**
Merchant Marine and Fisheries	**12**
Post Office and Civil Senile	**10**
Public Works	**1**
Rules	**20**
Sciences and Astronautics	**1**
Veterans	**6**
Ways and Means	**192**
Total House	**1,501**

[1] From the House Bill Status Office.

Each year Congress also must approve appropriation bills authorizing Federal Government expenditures of billions of dollarsfor Federal food assistance, farm income support, research, education, and

regulation in fields of food, agriculture, and nutrition. The more important food, agriculture, and nutrition issues in 'the 93d Congress, other than the level of funding of the already authorized Federal programs in these fields, dealt with the desirability and feasibility of:

Additional export restrictions to reserve adequate domestic food supplies for domestic consumers;

Modifying energy price control and allocation regulations to assure adequate energy supplies for the production of fertilizer, crop drying, and related agricultural activities;

Making additional quantities of limited supplies of our food available, through the Food for Peace Public Law 480 program, to developing countries that are unable to purchase their food requiremenents in the commercial markets;

s Increased regulation of trading in commodity futures markets to safeguard the rights of the traders and to improve the efficiency of the markets;

Providing emergency credit for livestock producers who are suffering from the squeeze of sharply increased feed costs while livestock and livestock product prices failed to increase or declined;

Modifying the peanut, rice, and tobacco price support and supply adjustment programs, to reduce governmental program costs, and increase their market orientation.;

Amending legislation regulatmg the use of agricultural chemicals and feed additives 'by reducing the scope of specific regulations which sharply increase production costs yet provide only limited benefits to society;

Amending the Agricultural Act of 1973 to give farmers increased economic protection, in view of the sharp increases in production costs and to provide adequate incentives for increased food production;

Explorinnumerous rural development issues through '(oversight" hearings held by both the House and Senate subcommittees on rural development in the 93rd Congress.

In addition to these major food, agricultural, and nutritional issues which were debated in the 93d Congress, there were hundreds of constituent requests for congressional assistance which required Members of Congress and their staffs to acquire up-to-date in 7nformation in order to be able to respond to them.

SOURCES OF INFORMATION"

Although a Member of Congress, or his staff, seldom has as much information as he would like to 'have on a particular issue, Congress does not suffer from a dearth of information. Rather, the Members' offices are almost overwhelmed by the volume of reports, letters, news items, and telephone calls coming into their ofice each day.

They depend heavily on the statistical and related reports of the cxecutive department agencies, the news media, constituent mail and reports, lobbyists, and the Congressional Research Service.

The screening of this massive flow of information is an enormous job. The pressures for immediate action within Congress me severe and little time is available for analysis and synthesis of the information streams. This is especially *true for analysis* and planning with

respect to the longer term problems in the food, agricultural, and nutritional areas. Ideally congressional policy should be backstopped with informational systems which have three equally important components: [1] "Statistical measures which provide an "early alert' system of problem identification; measures to provide adequate description of the problem and allow the formulation of policy options; and reformulation of technical statistics into measures that can be communicated in a form to allow ready interpretation and understanding by busy members of Congress who are not fully familiar with many food, agricultural, and nutritional issues.

CONGRESSIONAL RESEARCH SERVICE

The Congressional Research Service with its automatic data processing facilities and other research resources is the only agency which has " m its primary goal the organization of information specifically to meet the day-to-day requests of Members of Congress. It maintanns a corps of analysts in most subject matter fields, and news clipping services ready to respond to requests by Members of Congress for information on speoific issues.

In recent years, increasin amounts of information most commonly requested by the Congress have been accumulated in computer data banks available on a moment's notice. Automatic data processing of information for congressional use is in its infancy. Some of the greatest progress in the next few years will be made in this field.

MORE ANALYTICAL CAPABILITY NEEDED

We conclude from this assessment that more reliable information is needed on world agriculture and the nutritional status of the people. Congress greatest need, how~ver, is for more anal tical ca ability for deahngwlththe burgeonm~ ?nform:atlon flow on tl e rapid f changing food, agricultural, and nutritional wtuation.

We reconwnend that the Congres8 increaxe the analytical capai%lity of the 8ta#8 of it8 Agm"cultural Conwnittee8, and o the agricwttural 8pem"ali8t8 in the Congre88iuna~ Re8earch ~ervhe. 1 group of 8everaZ competent analy8t8 capabk of making it8 own 8tua?ie8 8how?u? be available to Congre88.

Congressional committees and subcommittees now call on the USD.~ Economic Research Service and land grant universities for analytical reports on issues of concern to them. Fart of the increased analytical capability needed by Congress could be provided by developing a closer working relationship with executive agencies and other institutions, including, in some cases, additional financing for specific studies.

We &o recommend that the Congre88 develop do8er Uai80n with the executive agen.&e8 and the land gramt univer8itie8 requesting thenb to devote more of t?wir andyttiaZ capabWtie8 to the anaZy8h ***of infor-?n&on for*** *congre88.*

[1] Mayer, Leo V., and Alvin L. Dawson, "Public Policy Demands and Statistical Measures of Agriculture," *American Journal of Agricultural Economics, vol. 66, No. 5,* December 1974, pp. 984–988.

National and International Food and Agricultural Information Systems

Each year, the U.S. Department of Agriculture publishes a volume entitled "Agricultural Statistics" containing over 800 statistical tables including new data for the previous year. The introduction to one of these recent volumes states:

"Agricultural Statistics" is published each year to meet the diverse needs for a reliable reference book on agricultural production, supplies, consumption, facilities, costs, and returns. * * * Most of the data were prepared or compiled in the U.S. Department of Agriculture. * * * Its tables of annual data cover a wide variety *in* forms suited to most common use.

STATISTICAL REPORTING SERVICE

In addition to this annual publication, the Statistical Reporting Service of the Department of Agriculture-with a budget of $27 million in 1975—publishes a series of monthly and quarterly reports on crop and livestock production, supplies, and prices. It publishes other reports at specific times once or twice during the year, such as farmers' crop planting intentions published in March.

It is probably best known for its monthly forecasts of crop production as the growing season progresses. These reports are based primarily on careful counts and measurement, at the beginning of each month, of the plants growing in specific sample plots in all parts of the United States, selected on the basis of probability sampling. Each month estimates are made of the probabye crop outturn, taking into account the condition of the crop at that time, and assuming normal weather will prevail for the balance of the crop growing season.

Fifty years ago, estimates of acreages planted of the various crops crop production, and livestock numbers of farms were based on voluntary reports sent in by cooperating farmers, and observations of State and Federal employees who drove through key farming communities. Today they are based primarily on enumerative probability samples from both area and list frames; basically area samples for crops and multiframe sampling procedures for livestock. Precise acreage measurements and livestock counts are taken for the sample areas. In addition to its estimates of crop acreage and production and livestock numbers on farms, the Statistical Reporting Service issues reports on stocks of grains and oilseeds on farms and in warehouses, cold storage stocks of selected products, cattle on feed in fattening lots, broder chicks hatched, milk production, prices received and rices paid by farmers, and other similar reports. For each report, t e Service has developed a system for information, which is as accurate and reliable information as possible for a reasonable expenditure of funds. Resulting national estimates for major crop acreages and livestock inventories have sampling errors of 2 percent or less.

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All periodic and annual estimates are subject to revision over a period of approximately 5 years as data from marketing, processing plants, and other sources become available.

ECONOMIC RESEARCH SERVICE

The Economic Research Service of the Department of Agriculture, with a budget of $22 million in 1975, analyzes the data reported by the Statistical Reporting Service, by the Agricultural Census, the Agricultural Marketing Service, the Foreign Agricultural Service, and by other agencies of the Department of Agriculture as well as data from financial institutions and agribusiness. It is best known for its situation, and outlook reports for specific farm commodities such as wheat, feedgrains, livestock, and dairy products, which are issued several times during the year.

In addition to publishing the national situation and outlook reports issued at regular intervals, ERS participates in regional outlook conferences, and the various 'branches of the Service issue a wide range of analytical reports. Among these are found economic development activities in rural areas, analyses of employment of migratory and other hired farm labor, economic developmental activities in forei=-countries, and summaries of the financial assets of farmers. It has developed a national agricultural production model, which is used in the evaluation of alternative farm program proposals and for a large number of similar analyses.

The agriculture committees and subcommittees of the House and Senate occasionally request the Economic Research Service to prepare special analytical reports, such as the report, "The U.S. Food and Fiber Sector: Energy Use and Outlook," a Ill-page report prepared for the Subcommittee on Agricultural Credit and Rural Electrification of the Senate Committee on Agriculture and Forestry in September 1974.

AGRICULTURAL MARKETING SERVICE

The Agricultural Marketing Service of the Department of Agriculture is charged with the responsibility of administering a large number of inspection, grading, and other marketing regulations. It is a major source of information on products processed and marketed. Its Market News Service (with a budget of $11 million in 1975) provides daily, monthly, and annual information on market supplies and prices in the principal markets of the United States.

FOREIGN AGRICULTURAL SERVICE

The Foreign Agricultural Service (with a budget of $13 million in 1975 for its information services) collects and disseminates information on world agriculture. In 1974, it had attach& stationed in 63 foreign countries spending approximately 40 percent of their time reporting agricultural information from more than 100 countries. In 1973, these attach& sent in 3,091 reports. The Foreign Agricultural Service also receives over 2,500 foreign agricultural publications annually. Frequent highlight reports covering agriculture generally are received from attaches stationed in the 27 more important developed and developing countries.[2]

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[2] Foreign Agricultural Service, in interview with Walter W. Wilcox, October 1974.

CENSUS BUREAU

Since 1840, the Census Bureau, now located in the Department of Commerce, has taken an agricultural census at least every 10 years and, since 1930, the agricultural census has been taken eve 5 years. At one time, local census takers were employed and trained by the Federal officials and directed to visit all farmers in their districts and obtain accurate reports on the acreage farmed, the acreage owned and rented, and the production of crops and livestock products in the previous year.

However, the 1969 and 19'74 agricultural censuses, which were taken in the early months of 1970 and 1975, were done by means of mailed questionaires sent to lists of farmers and farming corporations obtained from the Internal Revenue Service and other sources.

Three different questionnaires were used: A short one for small and part-time farmers, a more detailed set of questions for medium-sized and larger farmers and an even more extensive questionnaire for farming corporations. For the large farms, followup telephone calls were made if the completed questionnaires were not returned as requested.

In the past, the agricultural census reports have been taken as reliable benchmarks and all annual estimates of crop acreages and livestock numbers have been revised as necessary to conform to them. In recent years, however, incompleteness in coverage by the agricultural census and technological advances by the Statistical Reporting Service have resulted in the SRS providing the more dependable national estimates.

Informtion on materials used in agricultural production is supplied for the most part by the biennial census of manufacturers and by other periodic reports compiled and issued by the Census Bureau. In the case of fertilizer production, utilization, and prices, however, several different agencies participate in supplying the information. The Census Bureau issues monthly reports *on* the production of inorganic fertilizer materials, the Bureau of Mines issues reports on potash, phosphate rock and sulfur production, and the U.S. Tariff Commission issues reports on production of organic fertilizer materials, especially urea. The Statistical Reporting Service collects fertilizer utilization information from State fertilizer regulatory agencies and publishes monthly fertilizer utilization reports. Twice a year, it also collects and publishes 'information on prices paid by farmers for the various fertilizers. Finally, the Bureau of Labor Statistics collects and publishes monthly data on prices paid for fertilizer at wholesales The adverse effect of this fragmentation will be discussed later.

OTHER SOURCES (DOMESTIC)

A continuing flow of *research* information also is provided by the Agricultural Research Service, the land grant universities, and the State agricultural experiment stations. Most of the reports issued by

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a Wilcox, Walter w., 'assessment of National and International Fertilizer Information Systems," Assessment of Food, Agriculture and Nutrition Information Systems—working papers from Michigan State University, June 1975.

these research bodies are primarily of interest to other researchers or to a limited number of producers who are concerned with the problem researched. They are indexed by the Department of A "culture in a computerized information retrieval s tem called CR S. A Member of Congress ma use this service andquickly learn whether or not there are resea.rt reports on a problem of interest to him.

FOOD AND AGRICULTURAL ORGANIZATION (FAO)

The international food and a agriculture information available to Members of Congress and othe readers in the United States is supplied primarily by the U.S. Foreign Agriculture Service described earlier, by the Food and Agriculture Organization of the United Nations, and by the news media

One hundred and thirty-one countries are members of the Food and Agricultural Organiztiion. Each member of FAO is obligated to forward to the FAO statistical staff all national data on food and fiber production, utilization, and related information as soon as it is published. The member countries have agreed also to forward to FAO headquarters in Rome other periodic information on food, agriculture, and nutrition. On the basis of these country reports, the FAO publishes an annual World Agricultural Production Yearbook, a Trade Yearbook, The State of Food and Agriculture an Annual Fertilizer Review and a Monthly Bulletin of Econonucs and statistics. Some 15 commodity subgroups also prepare regular and special reports on commodity problems.

FA0 data are less accurate than desired in many cases since the official statistics of many nations lack an objective basis and are f requentl y influenced by political considerations.

In 1968, the FAO also began the development of an early warning system. Under this system, monthly reports on food, crop Conditions, and the food situation are collected by FAO and the world food program field staff for over 70 developing countries. This early warning program is aimed at obtaining advance indications of possible emergency food and food aid needs. It is in addition to the estimates of current and prospective crops collected regularly as a part of FAO commodity market intelligence service which has been functioning for many years. Elsewhere in this report, recommendations for expanding this service, which were made by the 1974 World Food Conference, are discussed.

INTERNATIONAL WHEAT COUNCIL

Another international agency which compiles and publishes world wheat reduction and trade information is the International Wheat Councilr , located in London, with a membership made up of 10 exporting countries and 42 importing countries. In April, 1972, it began issuing monthly world market reports on wheat, which were authorized and reviewed by its advisory subcommittee on market conditions. In 1973, it issued its first annual forecast of the world wheat, supply and demand situation for the ensuing marketing year, 1973–74.

INTERNATIONAL COTTON ADV1SORY COMMITTEE

Since 1939 the major cotton producing and consuming countries have supported an International Cotton Advisory Committee, which,

with a limited staff, compiles world information on cotton production, trade, stocks, and prices. This International Cotton Committee located in Washington, D. C., has 46 member countries. It issues a monthly review of the world cotton situation and quarterly bulletins containing world information on cotton production, imports, exports, prices, and stocks.

OTHER SOURCES (INTERNATIONAL)

In addition to these three international agencies, world information on sugar production supplies, and prices is compiled and published by the Licht Corp. in Germany. World information on oilseed production, supplies, and processing is compiled and published in "Oil World," by ISTA Mielke & Co., Hamburg, Germany. World information on grains is published by the Commonwealth Secretariate, London. World Information on fertilizer production capacity is compiled and published by the British Sulfur Corp. of London. Several other private institutions supply information on specific aspects of the world food industry.

Technical and Institutional Obsolescence of National Food and Agriculture Information System

OBSOLESCENCE

Many of the data series now being maintained by the Statistical Reporting Service and the Economic Research Service were designed 40 or 50 years ago. They were designed to provide information about food and agriculture at that time. To the extent that the structure of our food and agriculture industry has changed since then, these older data series are based on obsolete concepts, definitions, and measurements.

The nature and extent of this problem are described in some detail in a report of an American Agricultural Economics Association Committee in 1972 entitled, "Our Obsolete Data Systems: New Directions and New Opportunities."[4]

Examples of this obsolescence are found in two of the older established series. '(Prices Received by Farmers and Cash Receipts From the Sale of Crops and Livestock." What was the average price received for broiler chickens last month? How much did broiler chicken sales contribute to farm income last month? Almost all broilers are raised under contract by local growers or are produced by integrated corporations engaged in all aspects of broiler production, from the production of the feeds used, to the marketing of the broilers. Under these conditions statisticians are forced to improvise.

The statisticians compute equivalent farm prices for broilers from prices reported for dressed broilers and from limited survey reports. These equivalent prices are applied to the weight of broilers slaughtered each month to obtain equivalent farm income from the sale of broilers.

This is only one example of the obsolescence in our older data series. The failure of administrative officials, charged with the collection and publication of these series to bring them up to date is closely related

[4] American Journal of Agricultural Economics, vol. 54, No. 5, 1972, pp. 867–S75.

to interests that data users have in the continuity of a data series. Any proposed change in the series is seen as an advantage by some users but as a disadvantage by others.

Professor Bonnen of Michigan State University, who has studied this problem for several years observes that "* * * the great improvements in statistical methodology and data processing techniques over the last generation cannot offset failures at the conceptual level, for no matter how well quantified one is still measuring the wrong thing. * * * Management ofda systems has grown far more sophisticated. But none of this is sufficient to offset the debilitating effect of being forced to measure something that in some major degree no longer exists.' [5]

We are concerned that, although a distinguished committee of the American Agricultural Economics Association urged action in dealing with these issues as long ago as 1972, efforts on the part of responsible administrators looking toward the improvement of these older data series have been frustrated by lack of public concern and support.

We recommend that either the Joint Economic Committee, or one or both of the Agriculture Committees, request the Secretary of Agriculture to establish an agricultural statistical review committee charged with the responsibility of making recommmdations to the Congress and appropriate executive agencies for modernizing, coordinating, and standardizing the older food and fiber data series. This agricultural 8tatistical review committee should? include members from the various disciplines and groups who utilize food and agricultural data.

TIMELINESS

Most national food and agricultural data series are released promptly. This has not been true, however, in recent years for the **agricultural census.** The first reports from the agricultural census of 1969 were not available for more than 2 years after the data were collected; the final reports were not issued until more than 4 years after the data were collected.

Fertilizer production data series also suffer from a lack of timeliness. The timeliness of other data series also could be improved. Usually when a data series is developed by an agency, which has little interest in, or need for, the data in its program operation:, the tabulation and release of the data are relegated to a second or thmd order of priority ' in its work schedule. For example, the administrator in charge of one of the fertilizer data series indicated his willingness to arrange for earlier scheduling of the tabulation and release of the data if the appropriate congressional committee chairman made such a. request.[8]

The collection of fertilizer information and its analysis and dissemination are shared by 10 governmental agencies and at least 2 industry-financed trade associations. There is substantial consensus among the users of this information that important improvements are possible, especially in terms of timeliness of the reports, increased reliability, and the publication of the scattered information in comprehensive monthly and annual reports.

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[5] Bonnen, James T., "Problems of the Agricultural Information Systems of the United States." Assessment of Food, Agriculture, and Nutrition Information Systems—working papers from Michigan State University, June 1975, pp. 7 and 15.

[8] Wilcox, Walter W., personal communication, December 1974.

We recommend that the several congressional committees having responsibility for the executive agencies which collect and publish the various series of data relating to fertilizer conduct studies and hearings to detemine ways, means, and cost of improving fertilizer infomation systems

AGRICULTURAL CENSUS

The timely collection and release of reliable benchmark data such as the 5-year agricultural census provided in the 1930s, 1940's, and 1950s has become a serious problem in the 1970s. In part, this is because of the changing structure and increased specialization in agriculture. Also, the labor costs involved in recruiting and training a field force sufficient to interview all farm families in the United States, as was done earlier, are almost prohibitive today.

As mentioned previously, the 1969 and 1974 censuses of agriculture were taken by use of mailed questionnaires with a heavy dependence on telephone calls to assure an acceptable response. This method was chosen primarily to reduce costs after preliminary tests indicated that such a method would give reasonably satisfactory results

In view of the shift to large probability samples by the Statistical Reporting Service, and the shift by the census Bureau from a complete enumerative agricultural census to a mailed questionnaire survey, the desirability of adding the census function for detailed and county - level data to tKe responsibilities of the Statistical Reporting Service. should be reviewed y Congress. An analysis of the feasibility and probable cost of making such a change, by a private consultant group, indicates the probability of obtaining more accurate benchmark data at no higher cost if the responsibility for collecting benchmark agricultural data were assigned to the Statistical Reporting Service.[7]

We recommend that the *congregressional committees, which have* jurisdiction over the Department of Agriculture and the Bureau of Census activities study the desirability and feasibility of integrating the staff and activities of the Agricultural Census into the Statistical Reporting Service. Such a study, with hearings if needed, should be scheduled within the next calendar year. If the results support such a transfer appropriate legislatiion should be enacted providing for transfer of the responsibility for agricultural benchmark data to the Statistical Reporting Service when the processing of the 1976 agricultural census data is completed.

FORECASTING DEFICIENCIES

The phenomenal increases in prices of grains and soybeans in the 1972-73 crop year were not predicted by analysts in the Economic Research Service or at the land grant universities. It appeared that the food supply and price forecasting system had failed to provide reliable information for planning and decisionmaking. what were the causes of this failure? What can and should be done to avoid the danger of another similar failure in the future?

Lack of information regarding stocks and the size of the 1972 world grain crop ***was*** a factor. Unexpectedly large Soviet purchases in world

[7] American Agribusiness Associates, "New Agricultural Data System Needed," duplicated. 1973, 15 pp.

grain markets sharply reduced market supplies. Domestic price controls influenced beef cattle marketing and the complex of oil seed products in ways that were not fully anticipated. There insubstantial agreement however, that the primary failure was analytical. The economic models and supply-demand-price equations> which had performed satisfactorily in the 1950's and 1960's, had little value when applied to the more dramatic changes that occurred in the domestic and world markets in the 1970's, such as the size of the 1972 world grain crops

The *lesson of the failure of the food and agriculture information system in 1972-73 is that we must have more information on food production and market demand in other parts of the world and our analytical capabilities must be increased.*

STRENGTHENING OF THE ECONOMIC RESEARCH AND FOREIGN AGRICULTURAL SERVICES ~NEEDED

In fiscal year 1972–73, when the failure in the international food information system occurred, Government was spending $61 million annually on the four basic national agricultural information agencies; the Statistical Reporting Service, the Economic Research Service, the Market News Service, and the Foreign Agricultural Service. Since early 1972, the Economic Research Service has been reorganized and minor reorganizations occurred in the other agencies. Additional funds were requested by the agencies to permit them to collect additional data and to provide for more analyses.

In part, as a result of these actions, appropriated funds for these four agencies were increased to $73 million in 1974-75, and appropriations of $80 million are being requested for the 1975-76 fiscal year. In terms of purchasing power, however, the $80 million requested is slightly less than these agencies received in 1972-73.

The General Accounting Office recently studied USDA's plan for an automatic data processing system and equipment to be acquired. It concluded USDA had not made needed cost-benefit analyses and should complete studies of data processing and communication requirements" %before investing in additional computers. USDA also was criticized for inadequate consideration of security to protect personal or other sensitive information.

USDA might better use additional funds for improving agricultural data and its analysis before investing in additional processing equipment.[8]

Important step s have been taken since 1972 to im rove the quality and timeliness o the information available on world agriculture an$ agricultural requisites, We believe, however, that additional improvements are needed.

The Foreign Agriculture Service should improve its information collection capabili~y by: Giving its attach4s basic training in data collection; expanding its reporting capabilities in the critical developing countries; improving its data transmission and the timeliness of

[5] Fox, Karl, "An Appraisal of Deficiencies in Food Price Forecasting for 1973, and Recommendations for Improvement," prepared at the request of Gary Seevers, member of the Council of Economic Advisers, 26

[8] **Comptroller General of the Wr~~$"\;~::$' :~~!:~g?anning-A Must Before a** Departmentwide Automation Data Processing System Is Acquired for the Department of .N@?ulture," LCD 75-108, June 3, 1975.

its summaries; improving its reports for the major commodities on probable import requirements of the importing countries; and improving its reports on world agricultural requisite supplies and requirements, especially fertilizer.

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 seasons; increasing its ability to 'analyze current world weather data and interpret its significance in terms of probable crop production in the current season; and developing world models of production, utilization, trade and prices for the more important agricultural commodities, especially grains, which permit timely evaluation of new data on a monthly basis during the growing and early harvest season.

We *recommend that the Agriculture Committess of the Congress schedule hearings to determine what improvements in the Foreign Agriculture Service and the Economic Research Service have been made since 1972–73, and what further improvements* are ***feasible.***

Such hearings should focus on: Additional data series to be collected by the Foreign Agriculture Service; steps to increase the timeliness of reports issued; steps to improve the quality of the data obtained from abroad; and appraisals by the administrators of these services concerning additional improvements that could be made in existing information systems and the probable cost of achieving the improvements.

INFORMATION METHODOLOGY

Automatic data processing has contributed grcatly to both the timeliness of most statistical series and to the analytical capabilities of those engaged in the analysis of information relating to food and agriculture. The Economic Research Service maintains a national agricultural model which it uses to analyze alternative national agricultural program proposals. This model is also utilized to provide estimates relative to regional adjustments and to provide estimates for groups of commodities. It also maintains less comprehensive models for analytical purposes in preparing its periodic situation and outlook reports for the various commodities.

Members of the agricultural economics staffs at several State agricultural experiment stations, utilizing automatic data precessing, have developed models for one or more of the more important agricultural products in their States, none of which have been very useful thus far.

The University of California, Case-Western Reserve University, Iowa, State University, and Michigan State University, have developed models, in some, cases, for the United States, in some cases for the entire world, and in other cases for specific foreign countries.

The 1972 failure of the agricultural information system indicates the need and desirability of building and maintaining international modcls on a selective basis dealing with the problems of relevance to the Congress.[10] International market forces of demand and supply are continually changing due to changes in population, income distribution, weather, governmental policies, and other factors. These market

[10] **Johnson, Glenn, "Technology of Information Systems," Assessment of Food, Agriculture, and Nutrition Systems—working papers from Michigan State University, June 1975.**

forces need to be modeled for individual countries so that both the executive agencies and the relevant committees of Congress can formulate appropriate policies. The need for building international models has increased as world trade in food has increased in recent years. The need will increase even more in the years ahead.

The Department of Agriculture has joined with the National Aeronautics and Space Administration and the National Oceanic and Atmospheric Administration to test whether the use of data gathered by the second Earth Resources Satellite (ERTS-B)[11] launched in January 1975, and analyzed with the aid of computers, can improve the timeliness and accuracy of major crop forecasts. This project, large area crop inventory experiment (LACIE), at the outset will concentrate on wheat grown in North America.[12] It will combine crop acreage measurements from ERTS-B data and meteorological information from NOAA satellites and from ground stations. It is designed to relate weather conditions to yield assessment and ultimately to production forecasts.

The National Oceanic and Atmospheric Administration is also cooperating with the Statistical Reporting Service in the analysis of weather data as related to crop yields in the major agricultural areas of the United States. One of the objectives of such analyses is to discover weather-yield relationships which can be applied in those parts of the world where reliable information from other sources is not available.

We note with approval the plans for expanding weather-crop yield research. We believe it is urgent thut the experiments and analyses utiliizing new technologies for obtaining and analyzing data go ***forward on an*** *expanding scale as preliminary results, including cost effectiveness analysis justify. These newer technologies offer great promise for the years ahead.*

Reliabnility and Timeliness deficiencies of International Food and Agriculture Information Systems

THE 1972–73 INFORMATION SYSTEM FAILURE

The failure in the world food information system in 1972-73 was caused partly by gaps in the information on world grain production and trade and partly by a failure to analyze adequately the information which was avalable. In a report prepared for the Ford Foundation, by the former deputy director general of FAO, several gaps in world food information systems, as they existed in mid-1972, were identified:

1. The **U.S. had no current reporting system on sale of grain for export.**
2. **The absence of current estimates of probable grain production as well as stocks for the U.S.S.R. and the People's Republic of China.**
3. **The need for better estimates, or at least qualitative evaluations of current crop conditions or prospects in most of the developing countries.**
4. **The need for better stock statistics in most commercial importing countries, including U.S. S.R. and the People's Republic of China,**
5. **The need for more current and better information on the availability of production requisites for the developing countries, especially fertilizer.**

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11 Since renamed Landsat.
12 National Aeronautics and Space Administration, press release, 74–294, November 6, 1974.

6. The need for more reliable indications as to the probable flexibility of production in some of the main producing countries, especially for the United States, India, Brazil and the U. S. S. R.~

This report also states that:

*** * * most of the failure to forecast or understand the** seriousness of the world food situation in the summer of 1972 and again in the summer of 1973 was more a matter of analysis and political desire than of statistical intelligence.[17]

These findings were preliminary to the major conclusion of the report:

The consultant recommends that the foundations and related institutions interested in the world food situation should give serious consideration to the establishment of an autonomous International Food Policy Institute * * * which would give attention to the development and dissemination of food policy and food situation analyses with especial reference to the immediate operating needs of the underdeveloped world.[18]

It was proposed that such an institute should prepare a series of reports, seminars, and conferences on the food problems of the less developed countries.

The World Bank, FAO, and other international agricultural agencies have pledged their cooperation and have endorsed the establishment of such an institute. Plans for an institute, financed by a consortium of private foundations in the United States, Canada, and other countries, have progressed to the point that an acting director has been appointed and organization activities are underway.

When this new autonomous International Food Policy Institute begins to function it should eliminate a current weakness of the other international agricultural agencies: their inability to publish information and analyses, other than those approved by member governments.

FAO TIMELINESS PROBLEMS

The Food and Agriculture Organization of the United Nations is recognized as the major source of information on world agriculture. Expectations for improving the world's information system must be based upon an assessment of international capability. There are several generally recognized deficiencies in the information collected and published the FAO.

The time apses between the collection of data in the various countries and their availability in the FAO publications is so peat that most series are only of value for historical research. The Information reported in the monthly bulletins of Economics and Statistics are more timely than those published in the annual yearbooks, yet even in these publications there is usually *a* lag of 6 months or more between the collection of the country data and the availability of the regional and world summaries in the monthly bulletins.

CENTRALLY PL.4NNED COUNTRY DATA GAP

Another deficiency is the gap in world food and agriculture information created by the failure of U.S.S.R. and other centrally planned countries to supply accurate national data to FAO on a timely basis.

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[17] Wells, O. V., "Improving World Food Situation Outlook Information and Analysis," phase II report. Ford Foundation, April 1974 (duplicated), pp. 4 and 5.
[18] Ibid., p. 6.
[19] Ibid., p. 7.

Acreage data are released on a timely basis by the U. S.S.R., but thus far little information on either acreage or production is made available from the People's Republic of China.

DEVELOPING COUNTRIES' PROBLEMS

In perhaps 100 or more of the developing countries, the national information systems are so poorly staffed that the data supplied by FAO is lacking in reliability." There is great variation in the agricultural information systems found in these less developed countries. Many countries lack even a recent census of agriculture. Others have agricultural census data collected at regular intervals supplemented by sample surveys and by reports of knowledgeable people at regular periods throughout the year.

Each year or the past 10 years or more the FAO has stationed 25 to 40 technically trained experts in underdeveloped countries for the purpose of helping the national governments improve their statistical services. The technically trained FAO staff member is usually stationed in a country for a full year or more to enable him to train local personnel in the collection and dissemination of agricultural information."

Even though this program has been in operation for a number of years, and the United States through its AID financing has provided training for personnel from many underdeveloped countries, agricultural information systems in many of these countries continue to be inadequately staffed and poorly financed.

The inadequacies of the food and agricultural information systems in the developing countries create serious problems for international agencies, which attempt to assemble world food and agricultural statistics. This is an area where the United States has made important contributions in the past through AID-financed technical assistance activities. Congress has given a high priority to food and agriculture in legislative authorizations for AID.

We recommend that Congress direct AID to increase its technical assistance for improvement of agricultural information systems, including the introduction of advanced information. technology, in developing countries now most deficient in their agrcultural statistical institutions

FAO and other international agencies also encounter the problem of national governments which are sometimes unwilling to release unbiased data because of the fear of encountering problems with an important segment of their citizens. Situations have occurred where the national government believed it to be to its advantage for example, not to release its best estimate of national crop production in a drought -year. Rather, the government released estimates which were believ eto best suit its political purposes. FAO and other international agencies including the USDA, usually must accept the data supplied by the national governments. This is a potential weakness in all data gathered and released by international organizations and a serious handicap to all who use the data.

We *recommend that* Congress *request the U.S. representatives with supervisory responsibilities for international information agencies to*

[16] Ibid., p. 10.
[1] Ibid., p. 21.

support the development of rules and regulations for the international professional *8taff which would* authorize *and* direct *these Staffs to use tbe most reliable information available to them wlien compiling their reports.*

FAO : EARLY WARNING SYSTEM

In 1968, recognizing the lack of timeliness in most of its data series, FAO began the development of an early warning system. Under this system, monthly reports on food crop conditions and the food situation are collected by FAO and the world food program staff for over 70 developing countries. This early warning program is aimed at obtaining advance indications of possible emergency food aid needs. These early warning reports are in addition to estimates of current and prospective crops collected regularly as a part of an FAO market intelligence service, which has been functionmg for many years

The 1973 FAO conference authorized funds for an expansion of the early warning system.[18] An expanded program was established in March 1974, but even the new program failed to meet the needs in this area and, as will be reported more fully later, the World Food Conference in November 1974, adopted resolutions calling for its further improvement.

Although the early warning reports of FAO have been helpful in providing information at an ear y date on food crop conditions in countries in danger of requiring emergency food aid, the reports have been in qualitative terms. They seldom have contained quantitative estimates and seldom have been sufficiently documented to provide a basis for estimating the food import requirements of the countries.

This early warning food information system, stalled by the FAO and the world food prqgram, provides the most timely information available during the crop growing season for some 7O developing countries. The FAO commodity intelligence service collects similar crop progress information m the developed countries, and as a follow-up to the 1974 World Food Conference, is developing timely information during the growing and early harvest season for all countries on a regional and world basis.

INTERNATIONAL WHEAT COUNCIL

The International Wheat Council, located in London, with 10 exporting members and 42 importing members, began issuing monthly and annual reports on the world wheat supply and demand situation in 1972. These reports are issued on a time y basis and appear to be comprehensive. The Soviet Union, although not a member of the FAO, is a cooperating member of the International Wheat Council.

The monthly and annual reports, including forecasts for the marketing year ahead. are prepared by the Council's advisory committee or a subcommittee on market conditions under the guidance of the executive committee of the council. Before a final report is released, each country represented on the executive committee has an opportunity to review it. Thus far the Council has not adopted procedures to guard against possible exercise of undue influence on the content of a report by some member of the executive committee.

[18] **Ibid., p. 5.**

WORLD WEATHER DATA

At the present time, the field staff of the FAO and the world food program prepare qualitative re ports on the weather as it has affected crop production in the country or which they are making early warning reports. The U.S Foreign Agricultural Service also receives and assesses weather data for impotant agricultural areas of the world in developing its current estimates of world production of the major foodstuffs.

A current major problem encountered in the use of weather data is that the global telecommunications systems was designed primarily to service aviation. Data important for a "cultural assessments particularly precipitation, are not required to e transmitted regularly and on a timely basis. There is also a lack of uniformity in codes and frequency of sending precipitation data between various regions.[18]

FAO, in its proposals for national and international action at the November 1974, World Food Conference proposed requestin the World Meteorological System to provide regular assessments of current and recent weather data assembled by the World Weather Watch to identify agriculturally significant changes in weather patterns and related information. These assessments by the World Meteorological System, when they are undertaken, should improve our information on the progress of crops m those sections of the world where gaps now exist.

AERIAL PHOTO/REMOTE SENSING~~

FAO is now cooperating with national governments in the experimental use of aerial photography to collect more accurate and timely informatl~n on crops and livstock numbers. Its staff is also studying the feasibility of remote sensing as *a* means of obtaining agricultural data in countries where gaps now exist. Serious political problems in the collection and release of remote sensing data, as well as t e high cost of processing them, make it unlikely that remote sensing will close existing information gaps in the near future.

IMPROVEMENTS NEEDED

More comprehensive, more accurate, and more timely information on world food and agriculture is needed now and will continue to be needed in the years ahead. In a later section the resolutions relating to these issues, which were adopted by the 1974 world conference, will be discussed. Because of the sensitive political considerations of its membership, however, FAO may be unable in the near future to achieve its goals in the improvement of the world food and agricultural reformation system.[20]

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[19] Wilcox, Walter W., "Technical Assessment of International Food and Agriculture Information Systems," Assessment of Food Agriculture, and Nutrition Information Systems—working papers from Michigan State University, June 1975.

[20] Sorensen, Vernon L., and Ferris, John, "Impact of International Food Production and Trade on U.S. Agriculture System and Needs for Development of the Relevant Information System," Assessment of Food, Agriculture, and Nutrition on Information Systems-working papers from Michigan State University, June 1975.

International and National Nutrition Information Systems

FOOD DISAPPEARANCE DATA

Throughout the world food disappearance data are utilized as an indirect measure of the nutritional adequacy of food consumption. Most developed **countries have reliable information** on food disappearance and also have substantial information on the nutritional status of their citizens. In the developing countries, however, credible food and agriculture data often are lacking. Nevertheless, these questionable food data are relied on as almost the only indication available of the nutritional status and the extent of undernutrition in these countries.

limited numbers of nutrition surveys have been conducted by United Nations and U.S. AID agencies such as the National Food and Nutrition Survey" of Barbados [21] and '(The Tamil Nadu Nutrition Study" in India.[22] For the most part, however, nutritional status information is inferred from food availability and disappearance data. Largely from such data the FAO Preliminary Assessment of the World Food Situation for the 1974 World Food Conference concludes, that at least 400 million people in 1970 were suffering from malnutrition.[23]

In the United States there is a plethora of information relative to food availability and disappearance. The Department of Agriculture each year publishes in Agricultural Statistics" information on (1) quantities of 12 food nutrients available for consumption per capita, per day, (2) percentage of total nutrients contributed by major food **groups, (3) index** of per capita food consumption major food groups, and (4) per capita consumption in retail weigh t equivalent, by major food groups. It also publishes a 25- to 30-page National Food Situation four times a year. This publication contains information on food prices, current trends in food spending and income, per capita food consumption (disappearance) by 3-month periods, and aggregate food supply and utilization information. There also is much research information available relative to the nutritive content of specific foods and diets.

FOOD AND NUTRITION BOARD

One of the first national nutritional status studies was that of the pnational Nutrition Conference for Defense convened in 1941 by the Food and Nutrition Board of the Nationa] Research Council and several governmental agencies. It reported findings of poor diets and nutritional deficiencies at all socioeconomic levels the lower the levels of income and education, the more frequent and the more serious the problem. The groups noted to be especially vulnerable at that time were preschool children, pregnant women, nursing mothers, and adolescent girls. This 1941 conference report was based on dietary and clinical

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21 Scientific Publication No. 237. Pan American Health Organization. 1972.

22 Report t. U.S. AID on Contract No. AID/nesa–399 by Sidney M. Cantor Associates, Inc., July 6.1973.

23 Prof. Thomas T. Poleman. discusses the inadequacy of Information On food consumption in the less developed countries, in "World Food: A Perspective," Science, May 1975. pp. 510–518.

nutrition studies during the Great Depression of the 1930's and examinations of men called up for military service.

Following the 1941 National Nutrition Conference, the Food and Nutrition Board made studies and issued reports on nutrient requirement, food composition, enrichment of grain products industrial feeding , nutritional survey techniques an their value, composition of milk, heat injury to protein, maternal and child nutrition, and other matters of health importance related to food and nutrition. It is perhaps best known for its "(Recommended Dietary Allowances" (RDA) first issued in 1941 and continuously revised as more evidence becomes available on the nutrient requirements of man. The eighth - edition of the allowances was published in 1974.[2]*

HUNGER AND NUTRITIONAL DEFICIENCIES IN THE 1960'S

Food consumption studies conducted by the Department of Agriculture in 1945 anf 1955 indicated that diets had improved substantially. The 1965 surveys however, indicated that the nutritional status of important population groups had deteriorated. This survey was followed in 1967 with several reports of large pockets of hunger and nutritional deficiencies among the poor in America.

A Senate Subcommittee on Manpower, Employment and Poverty held hearings in Jackson, Miss., and visited the home of poverty stricken rural families in the summer of 1967. The evidence of hunger and nutritional deficiencies observed by the Senators led the Field Foundation to take the leadership in creating a "National Council on Hunger and Malnutrition in the United States." The activities of this National Council led to a public airing of the hunger problem by the news media. It also led to the creation in the Senate of a Select Committee on Nutrition and Human Needs.

As a result of this new concern, Congress, in December 1967, authorized the Public Health Service to conduct a survey of the nutritional status of Americans living in low-income areas. This survey was conducted in select low-income sections of 10 States and New York City . Information from this survey and from other related activities, including the hearings of the Select Senate Committee on Nutrition and Human Needs, was used to support the expansion of governmental food assistance and nutritional education programs. The widespread . interest created in these problems led to the convening of a White House Conference on Food, Nutrition and Health in December 1969. This conference made numerous recommendations for improving the government food assistance programs and for the expansion o nu- -- trition research and educational activities. It also recommended that the commercial food industry improve the nutritional content of processed foods.

FEDERAL FOOD ASSISTANCE PROGRAMS

Since Congress each year must provide the funds for the food assistance program for special groups, and for nutrition research and education programs, its first interest is in information for the evaluation of the effectiveness of these programs.

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[2] Food and Nutrition Board, National Academy of Sciences, pamphlet, March 1975, 25 pp.

Congress has authorized a substantial number of food assistance programs: Food stamps: commodity donations for needy families, for institution?, and for feedng programs for the elderly; other supplemental feeding programs including a program for pregnant women and infant children; special school milk program; school lunch and school breakfast programs; and day care and Head Start feeding programs.

The appropriations for these programs, including the Federal Government's share of administrative expenses in fiscal year 19'75, were $6.1 billion. Appropriations for nutrition research and educational activities of the Federal Government also exceed $50 million annually.

The Food Advisory Committee found that to date only limited and fragmentary program evaluation studies have been made by the administering agencies. It noted that the U.S. Court of Appeals in June 1975, ruled that the Department of Agriculture is not complying with the legal requirements of the 1971 amendments to the Food Stamp Act which in effect, directs the USDA to provide food stamp allotments which will assure low-income households the opportunity for an adequate diet.[25] Additional program evaluation studies are urgently needed to improve the administration of Food Stamp and related food assistance programs.

We recommend that the Congress direct the Food and Nutrition Service which administers the food assitance program to expand its program evaluation studies. These studies should be integrated to maximize their cost effectivenes and ensure getting the quality and type of information necessary to make appropriate evaluation8.

NUTRITIONAL STATUS MONITORING PROGRAM NEEDED

As part of a national food and nutrition policy, a national nutritional status monitoring and surveillance program is needed. A total of 906 bills dealing with food and nutrition were introduced into the 93d Congress. The principal nutrition issues appear to be: Poverty as the principal correlate of hunger and nutritional deficiencies; the extent of nutritional deficiencies associated with distorted food behavior, including overconsumption, found at all social and economic levels in the United States; food and nutritional needs of special groups, such as pregnant women, preschool children, ethnic minorities, and the aged; the effects of a major transfer of food preparation and service responsibilities to the commercial sector; and the quality and safety of the food supply.[26]

A panel of the 1969 White House Conference considered the need for a continuing monitoring system of dietary and nutritional evaluation. It reported:

All members of the Panel agreed there are two basic objectives for which we should strive:

1. Monitor: Evaluate and re-evaluate nutritional status of samples of Americans to measure effectiveness of programs being applied to improve nutritional status.

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[25] *Rodway* v. *U.S. Department of Agriculture,* D.C. Circuit, docket No. 74–1303, decided June 12, 1975.

[26] Sidney M. Cantor Associates, Inc., Preliminary Technology Assessment of U.S. Food, Nutrition, and Agricultural Information Systems—Food Consumption and Nutrition Status Contract Report OTA–C–7, November 1974.

2. Surveillance: Comprehensively evaluate the population at large to identify potential problems before many people are affected and to provide a continuing reference base * * *

The role of nutritional surveillance and monitoring systems must be to gather data that will serve as the basis of applied nutrition programs aimed at the improvement of the nutritional status of the American population with emphasis on the poor. * * *

To date little followup action has been taken on these White House Conference recommendations. The Nutrition and Special Groups Panel of the June 1974, National Nutrition Policy Study was concerned by the failure to make progress in this area. They reported, . '(Since World War II there have been hundreds of studies done of the nutritional status of Americans. These included dietary, biochemical and clinical assessments * * *

What is of particular concern to us is that results of the most recent studies add little to our knowledge and completely ignore questions which we feel must be answered if the United States is to develop a sane and equitable nutrition policy.[28]

Meaningful food consumption and nutrition surveillance information is far more difficult and far more costly to obtain than comparable information on food production. This arises primarily because of the difficulty of measuring nutritional deficiencies and related food consumption. In part, the high cost is because existing technologies require clinical analysis as a, part of a comprehensive evaluation of an indivdnal's nutritional status.

Nutrition scientists also arc not fully agreed on the significance and rcliability of specific tests for nutritional deficiencies. Information on nutritional status also involves consideration of nutritional-related public health issues, where in many instances cause and effect relationships are not clearly established. It is because of these problems that little progress has been made in establishing a monitoring and surveillance program as recommended by the 1969 White House Conference.

INTEGRATION OF HEALTH AND NUTRITION- AND FOOD Comsummo~ SUR~'EI'S

The National Center for Health Statistics, HEW, is now carrying Out Health and Nutrition Examination Surveys to obtain data of . epidemiological quality for use in national health program planning. The small samples used in these surveys and the time elapsed between gathering the data and publishing the results limit their usefulness.

Plans also have been substantially completed by the Consumer and food Economics Institute of the Agricultural Research Service to conduct, a nationwide household food consumption survey in 1977. This survcy using improved design and methodologies would be a continuation of similar surveys started in 1935, the last one occurring in 1965 In previous household food consumption surveys, the design of the schedule has been so deficient that the nutrition data could not I)e related to important economic and social characteristics: these surveys lmte been limited in their usefulness, a deficiency which can be corrected in future surveys.

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27 **"White House Conference on Food, Nutrition, and Health, Final Report, 1969,"** pp. *24–25.*

28 **Hearings before the Senate Select Committee on Nutrition and Human Needs, pt. 3— Nutrition and Special Groups, June 19, 1974, p. S40.**

Statisticians and automatic data processing specialists are helping the consumer and food economics staff develop plans which will utilize the latest developments in sampling theory, automatic data processing and information transmission.

Current planning, which is being monitored by the Office of Management and Budget, revolves the active cooperation and participation on the part of the Food and Nutrition Service, the Economic Research Service, the Social Security Administration, the Food and Drug Administration, and the National Marine Fisheries Service. Food consumption data for the individual members of the household will be placed in data banks, where they will be available for research use at the land grant universities and elsewhere within a year after the data are collected.

This survey, if adequately planned and carried through, should provide the food consumption data base for a continuing nutritional status surveillance program. If the Health and Nutrition Surveys of HEW were expanded on a probability sample basis, and methods of handling the data improved, these data, combined with relevant food consumption information, could be organized and analyzed by a competent staff to serve as a minimum national nutrition surveillance system.

We recommend that, as a first step in developing a national nutritional monitoring and surveillance program the Senate Select Committee on Nutrition and Human Needs hold hearings on the adequacy of design and integration of the ongoing nutrition survey conducted by the Department of Health, Education, and Welfare and the planned household food consumption survey to be conducted by the Department of Agriculture.

The administrators responsible for these surveys should be asked to report on their current activities and plans for the next few years. They should be asked to report on how data from one survey supplements that obtained from the other, and how the information from both surveys taken together might 'be analyzed to determine more adequately the nutritional status of population groups. Questions also should be raised regarding plans for analyzing the data and relating them to the economic and social characteristics of the individuals in the households. Are research staffs in HEW, USDA, or the land grant universities making plans to analyze data from both surveys as they relate to each other?

The Food Advisory Committee plans to consult further with leading nutrition scientists and at a later date make recommendations for establishing a continuing nutritional status surveillance program.

World Food Conference Recommmuiatioms for Improving

SCOPE OF RESOLUTION

Resolution XVI of the 1974 World Food Conference is entitled "Global Information and Early-Warning System on Food and agriculture.>' Its first paragraph states that the capacity of governments to take prompt and appropriate measures to deal with food shortages would be enhanced if all countries could receive timely information concerning the current and prospective world crops and food situation.

It then stresses the urgent need for a global food information system which would provide early warning by (a) identifying countries and regions where acute food shortages and malnutrition problems are expected before another crop is harvested and (b) by monitoring world food supply-demand conditions. It emphasized the important role played by comprehensive and timely information relative to prospects for agricultural production, import requirements, export availabihties, livestock health, and inputs in meeting the requirements of world food security and market stability.[2]*

The opening paragraphs also recognize that the areas most severely affected by food shortages, and those where timely and adequate information is most needed, often do not possess the necessary resources and data collection institutions to provide the information needed.

The resolution then states that all major food producing and consuming countries have expressed their willingness in principle to participate in expanding the existing information arrangements into a more comprehensive and global system and Resolves that a global information and early warning system on food and agriculture should be established and agrees that FAO is the most appropriate organization to operate and supervise the system. * * * Requests FAO, in cooperation with other concerned international organizations, particularly the International Wheat Council, to formulated arrangements necessary for the establishment of the system, and to submit them for final approval by governments participating in the system." It requests that the information collected be fully analyzed and disseminated periodically **to** all participating governments for their exclusive use; it being understood that, where requested. certain information provided by governments would be disseminated only in aggregate form to avoid possible unfavorable market effects.

The final paragraphs of the resolution are devoted to requests for cooperation on the part of all participating governments and other international organizations. These requests cover three broad areas.

(1) Cooperation of all national governments in supplying on a voluntary and regular basis current information and forecasts **on the** basic food products in particular, and on all other relevant aspects of food and agriculture in their country.

(2) Cooperation on the part of FAO, the World Meteorological Organization, the World Health Organization, and other multilateral and bilateral sources to assist interested governments, both technically and financially, in strengthening their data collection and dissemination in the fields of food production, nutrition levels at various income levels, input supplies, meteorology, and crop/weather relationships.

(3) Cooperation on the part of the World Meteorological Organization and the FAO in expanding their regular assessments of current **and** recent weather data assembled through the World Weather Watch by: establishing joint research projects, particularly in the arid and semiarid areas; strengthening the global weather monitoring and data processing systems, making them more directly relevant to agricultural needs; and undertaking investigations of the probability of adverse weather occurring in various agricultural areas and obtaining a better understanding of the causes of climatic variations.

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* FAO Global Information and Early Warning System on Food and Agriculture-Proposed Working Arrangements, Annex 13, FAO (duplicated), March 1975.

POSTCONFERENCE ACTIONS

The FAO Council at its regular meeting in November 1974, a greed that the Global Information and Earl Warning System on F Agriculture as recommended by the orld Food Conference should be established in FAO and requested the Director General to set up the system as soon as possible.

A statement of proposed working arrangements was prepared by the staff for review and approval of the council at a special session in March 1975.[30] The proposed working arrangements were then transmitted to the FAO and U.N. member states with an invitation to each to participate in it. FAO proposes to put the new system in full operation by the end of June 1975. The expenses of putting the system into full operation are to be met in 1975–76 out of the regular budget.

Organization and scope of current plans

The senior officer in the Commodity and Trades Division of the Economic and Social Policy Department, FAO, will be responsible for the preparation of the reports issued and for relations with participating governments.

The new system will operate through an interdepartmental food outlook board. The food outlook board will preview the FAO outlook statements and periodically advise on the operation of the system with a view to improving its effectiveness. A number of divisional and regional offices will be involved in servicing the system, primarily b expanding their traditional activities. Information on fertilizers will come from estimates of the working party on fertilizer statistics and information supplied from other sources. Each participating government will be invited to appoint a liaison officer to facilitate t e transmission of national data to the FAO and to expedite distribution of the reports to the countries.

As currently proposed, the new system will produce four types of reports:

(1) Monthly food situation reports, a quarterly food outlook report, and s special reports on urgent food situations;

(2) Month y early warning reports containing the latest information on basic food crop conditions and food deficits or food availabilities in over 90 developing and developed countries;

(3) Quarterly food aid bulletin on bilateral and multilateral food aid and status and evaluation reports on world food stocks and storage capacity;

(4) Reports on fertilizer and pesticide supplies, deficits, prices, contracts and capacities which will be issue on a quarterly basis if feasible.

Long-term *improvement of basic data*

The plans for implementing the Global Information and Earl Warning System on Food an Agriculture, approved by the FAO Council in March 1975, included a section on improvement of basic data.[31]

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[30] Ibid., p. 1.
[31] Ibid., p. 3.
[32] Ibid., p. 6.

FAO proposes to provide more technical assistance to individual countries for improving methods of reporting on current harvests and crop conditions, utilizing funds made available by U.N. development programs and bilateral donors.

FAO and WHO staffs are currently considering ways of carrying out joint research projects to investigate weather-crop relationships.

FAO plans to extend its work in the field of remote sensing. It will explore the feasibility of organizing international cooperative action in this field with a pilot project on wheat.

FAO and WHO staffs, as requested by the World Food Conference, are currently working on the development of a global nutrition surveillance s tem. Possibilities will be explored of linking food information anJnutrition surveillance systems.

The FAO may not be able to achieve all the goals it has set for itself - in the next few years in its plans for implementing the World Food Conference resolution, If this roves to be true, the staff should be encouraged to consult with member governments and establish priorities among the goals and adjust its development plans in line with this appraisal.

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The USDA @aff together with other members of the American delegation to the 1974 World Food Conference prepared background documents that were of substantial value to the conference and FAO. The Secretary of Agriculture should continue to cooperate fully with FAO and assist it in solving technical problems encountered in implementing the World Food Conference resolution and provide increased financial assistance for this purpose. 7J.S. representatives stationed in foreign countries might well be given instructions to assist the F.40 liaison officers to the extent possible in supplying reliable information to F.40.

Chairman **HUMPHREY.** Mr. Bell, before you begin I would like to make a few points.

It seems to me that the one key issue with respect to Soviet purchases of U.S. agricultural commodities is their insistence on buying secretly and buying big. This causes disruptions in the market. It also in a very real rense, limits competition, as only a few firms can really sell in such big orders. And it means higher prices and a higher than normal degree of interest in the sales on the part of the public and the press.

In looking over some of the purchases last year, the Chinese actually bought more wheat and corn from the United States than the Russians. But the fact is that there is hardly any notice of this, except in some specialized agricultural publications. This is because the Chinese bought into our market in an orderly way, purchasing four, five, or six shiploads every week or two, rather than millions of tons at a time.

The Russians are the only importers who insist on these one-time high-volume purchases. If they were to buy in an orderly fashion like the Chinese, the Brazilians, and even the Indians-who last year were one of our biggest customers-there would be more competition among