

INTRODUCTION

BACKGROUND

Congress is dependent essentially upon noncongressional resources for food, agriculture, and nutrition information. Prior to 1972, Congress appeared to be well served by these information sources. In mid-1972, however, the world food situation changed within a 2-month period as world food production declined for the first time in many years at a time of rapidly expanding demand. World food reserve stocks were reduced to a historically low level of less than a 30-day supply. (See figure 1.)

The events responsible for these cataclysmic changes have been well chronicled. They include:

- Large purchases of wheat by the Union of Soviet Socialist Republics under conditions of semisecrecy.
- Increased foreign demand for U.S. soybeans because of the failure of the Peruvian anchovy catch.
- Increased U.S. food exports to all parts of the world, due in part to widespread inflation, U.S. dollar devaluation, and wide shifts in monetary exchange relationships.

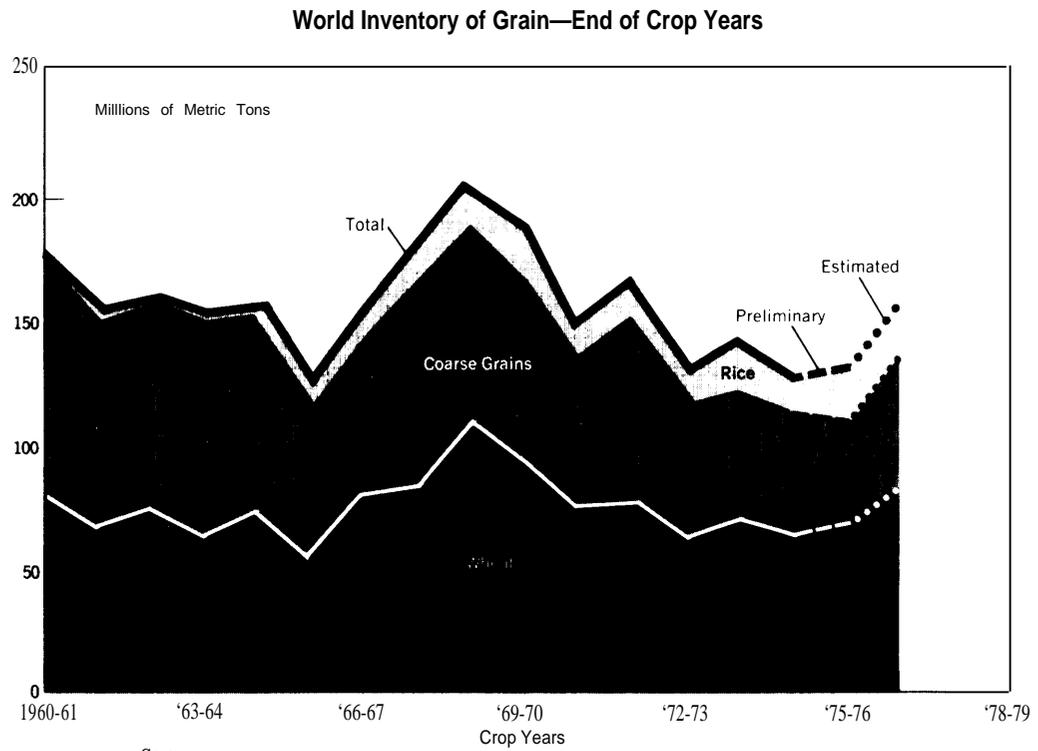
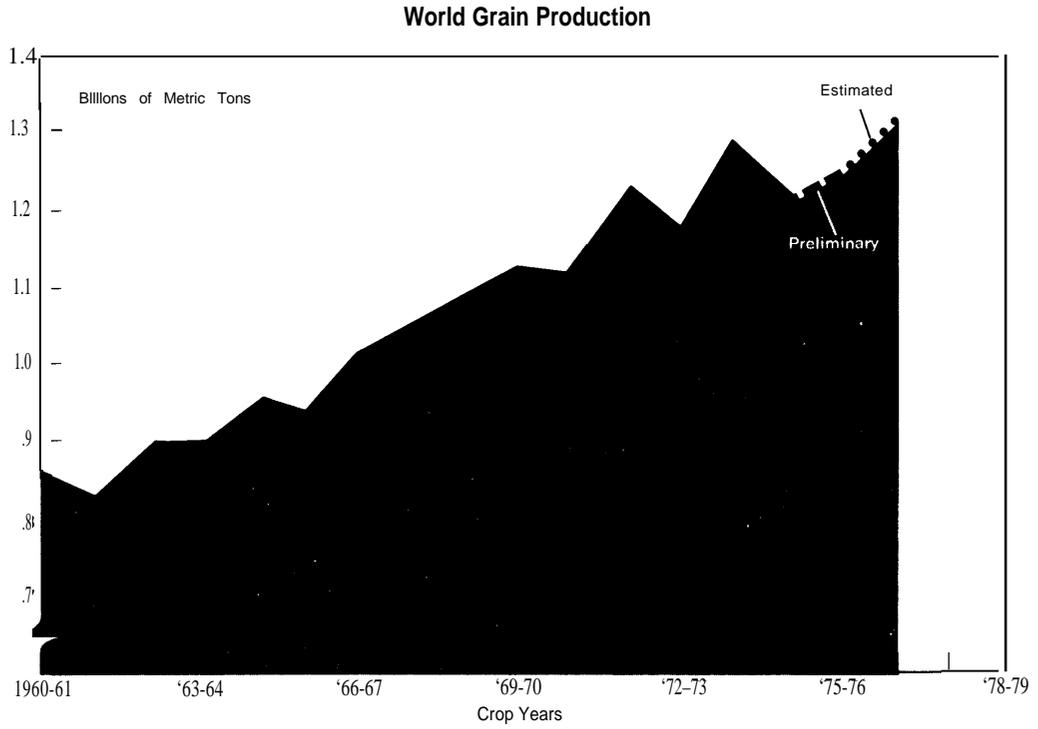
The phenomenal increases in prices of grains and soybeans in the 1972-73 crop year were not predicted by analysts in the Department of Agriculture or in land-grant universities. (See figure 2.) Members of Congress had no independent means for dealing with the food policy issues which arose at that time. It was this apparent breakdown in the information systems on which Congress had traditionally depended which led to a request that the Office of Technology Assessment (OTA) analyze the adequacy of these resources.

The current information flow to the Congress was never designed to operate as a total system but rather represents a historical accretion of segments based on multiple uses and purposes which are often-conflicting.

PURPOSE

The events of 1972 and 1973 led to sharp increases in the cost of food and farm inputs, resulted in shortages of such production supplies as fuel, protein meals, and fertilizers, and raised a number of questions such as:

Figure 1.—World production and stocks of major grains 1960-76



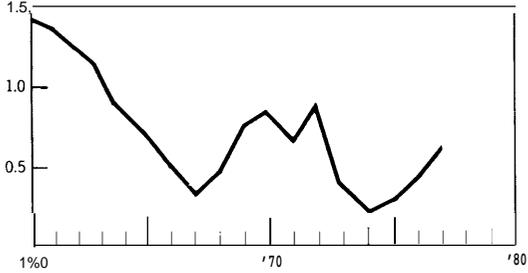
SOURCE: United States Department of Agriculture

Figure 2.—Carryover of major U.S. grains and soybeans, 1960-75 crop years, with year-end price averages, 1970-74

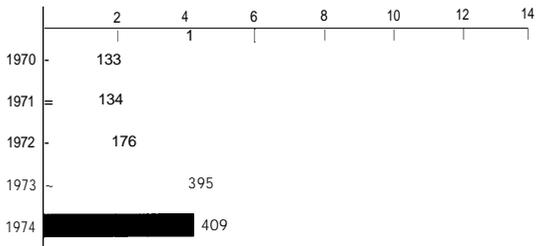
WHEAT

Carryover

Billions of Bushels



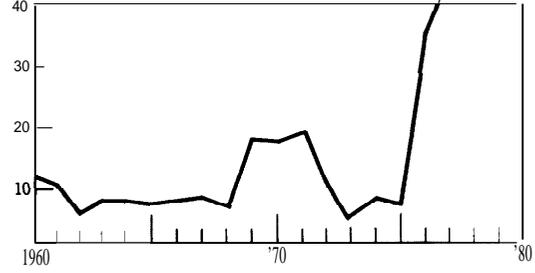
Prices-Dollars per Bushel



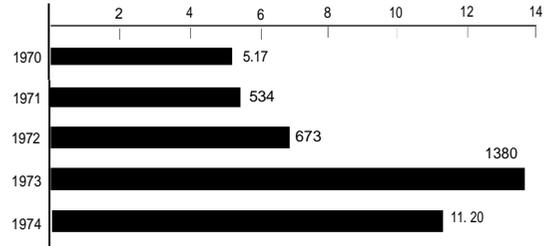
RICE

Carryover

Mill tons of CWT



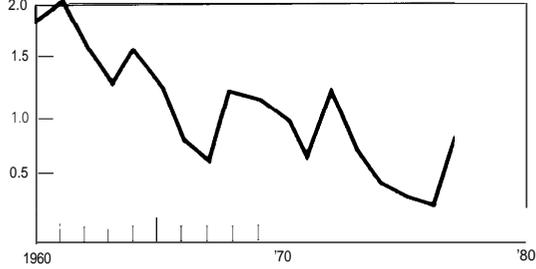
Prices-Dollars per Hundredweight



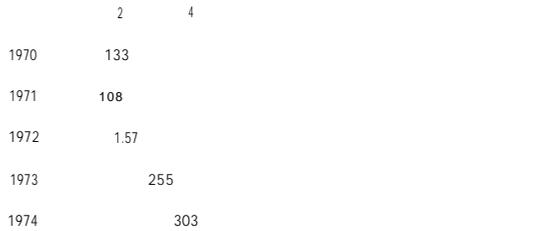
CORN

Carryover

Billions of Bushels



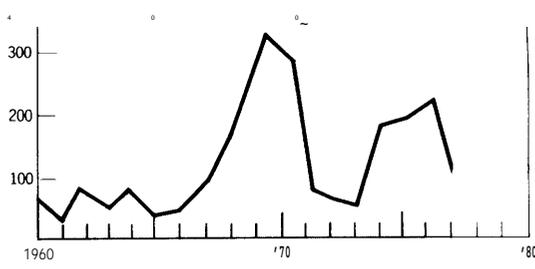
Prices-Dollars per Bushel



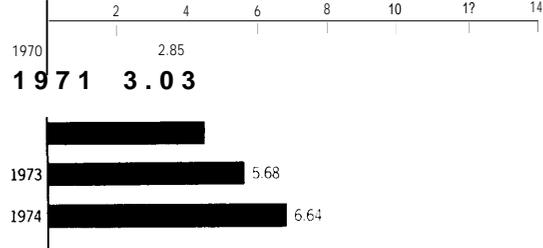
SOYBEANS

Carryover

Millions of Bushels



Prices-Dollars per Bushel



SOURCE United States Department of Agriculture

- **Why had the U.S. food and agriculture information systems failed to give warning of the impending shortages?**
- **Are existing food and agriculture information systems adequate? Do they meet today's needs?**
- **Have appropriate steps been taken to correct the deficiencies that existed in 1972-73?**

OTA's analysis, guided by its Food Advisory Committee, addressed these questions.

Dr. Clifton R. Wharton, Jr., chairman of OTA's Food Advisory Committee (FAC), noted the limitations of the study in his preface to the committee's report:

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 required greater resources and more time than was available. The committee, therefore, chose to concentrate its attention on a limited set of recommendations. Two criteria were employed: Those areas which are most amenable to congressional action and those which in the committee's judgment most urgently require attention.

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

SCOPE

An identification, examination, and evaluation of the key food information systems was made in order to determine:

- **The significant food information systems**

This involved identifying key systems and determining how well they serve decisionmakers. These systems were probed in terms of the information they provided—for example: type and nature of the information, processes and procedures used to obtain information (including frequency, timeliness, quality, format, and availability), and use and dissemination practices.

IHearings, p. 5.

• **Deficiencies in existing information systems**

This task focused on the gaps, deficiencies, redundancies, and bottlenecks that might impede decisionmaking. Identification of defects led to consideration of options for improvements.

• **Options**

This task identified and analyzed options that could improve existing information systems, taking into account the numerous recommendations made to OTA.

METHODOLOGY

The focal point of this study was OTA's Food Advisory Committee, working with OTA staff and consultants. In addition, contractor reports were utilized. Each of the contractors made a contribution toward OTA's preparation of a preliminary definition of the study:

Michigan State University provided an overview of the total system and examined analytical techniques.

The Futures Group pinpointed some of the key issues for which Congress evidenced information needs,

Cantor Associates explored information needed to assist the Congress in developing an improved nutrition information system.

OPTIONS

During the course of this study, recommendations for correcting the deficiencies in the existing food information systems were made to OTA. These recommendations helped to develop three options for congressional consideration:

1. Reliance on existing agencies to initiate improvements;
2. Development of a single integrated world food information system;
and
3. Perfecting changes in existing systems.

Option 1: Reliance on Existing Agencies To Initiate Improvements

This option would imply that the events which occurred in 1972-73 were unique and that countries and organizations were rapidly making the

needed changes and adjustments. However, events exacerbating the world food situation have continued to occur. The margin of error in the world's food supply is now less than 5 percent, reserve stocks have been reduced to less than a 30-day supply, and the number of Most Seriously Affected (MSA) countries has increased from 33 to 44. Likewise, although improvements are being made to the existing system, the OTA study participants felt additional steps to correct deficiencies were needed.

Option z: Development of a Single Integrated World Food Information System

This option would require the development of a worldwide system within which: 1) a congressional unit, 2) linked to a quasi-independent unit within USDA, would serve as the point of contact for the United States, 3) with both tied to a world food information system.

The advantage of this approach is that "a system" would be idealized. However, this option has several disadvantages: the impracticality of its implementation in the near future; the political sensitivities to be encountered in getting such major participants as the Union of Soviet Socialist Republics and the People's Republic of China into the system; as well as the expected enormous cost of correcting existing deficiencies in order to make the system effective and efficient.

Option 3: Perfecting Changes in Existing Systems

Due to the fragmented nature of the system, it seems more, practical to make perfecting changes in the key existing systems than to try to create a new system. Likewise, suggested improvements to subordinate systems will, in the long run, improve the world food information flow.

Synthesizing the principal findings, conclusions, and recommendations, OTA found that there were five major areas where specific opportunities for improvements might be considered. Within each of these, several specific opportunities exist for action. Some of these improvements require legislation; others do not. These five areas are:

1. Improving the accuracy and timeliness of U.S. food and agriculture information systems.
2. Strengthening the U.S. role in a world food information system.
3. Increasing congressional staff analytical capabilities.
4. Increasing the integration of nutrition information.
5. Accelerating the use of advanced technologies.