REPORT TO THE CONGRESS

Increasing World Food Supplies--Crisis And Challenge B-159652

Department of State and other agencies

BY THE COMPTROLLER GENERAL OF THE UNITED STATES

SEPT. 6, 1974

COMPTROLLER GENERAL OF THE UNITED STATES
WASHINGTON, D.C. 20548

B-159652

Speaker of the House of Representatives and the
President pro tempore of the Senate

In the next 25 years the world will experience a growth in its population to more than 7 billion people--double today's. This means challenges to improve production and distribution of food for all mankind.

To help the Congress prepare to meet these challenges, we are undertaking a series of reports on food. This is the first. It summarizes attempts by the United States and international agencies to deal with current problems. Subsequent reports will discuss, more specifically, the adequacy of long- and short-range programs.

We made our review pursuant to the Budget and Accounting Act, 1921 (31 U.S.C. 53), and the Accounting and Auditing Act of 1950 (31 U.S.C. 67).

We are sending copies of this report to the Director, Office of Management and Budget, and to the heads of interested agencies.

Elmer B. Staats

Comptroller General
of the United States

Contents

ABBREVIATIONS

AID	Agency for International Development
ARS	Agricultural Research Service
DAC	Development Assistance Committee
ERS	Economic Research Service
FAO	Food and Agriculture Organization
FAS	Foreign Agricultural Service
ODA	Official development assistance
OECD	Organization for Economic Cooperation and Development
TVA	Tennessee Valley Authority
UNDP	United Nations Development Program
USDA	United States Department of Agriculture

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D I G E S T

WHY THE REVIEW WAS MADE

Experts in many parts of the world believe that increased demand for food soon will exceed available supply.

A World Food Conference will convene in Rome in November because of this prospect.

It will examine ways to maintain food production and supplies and to seek means by which all nations can better combat the threat of hunger and malnutrition.

This report is the first of several planned GAO reports that will be dealing with this subject.

The Congress and international organizations need accurate, concise, and timely information and analyses to assess world food problems and actions needed to counter them. GAO is in a position to provide this information from national and international sources, public and private. GAO believes it can further participate in the worldwide effort to alleviate food problems by identifying ways to improve program performance and to increase management efficiency and effectiveness.

This report is a summary of current efforts of the United States and international agencies. It was drawn from published documents of U.S. agencies and international organizations, from discussions with U.S. officials, and from statements by various authorities.

FINDINGS AND OBSERVATIONS

The Problem--Crisis and Challenge

Will there be mass undernourishment and starvation, or will mankind find the way to feed itself? This is one of the world's greatest challenges.

The world's population of about 3.6 billion is projected to double by about the year 2000 to more than 7 billion people. (See p. 21.)

The rapid population increase--about 75 million people each year--requires an equivalent increase of about 24 million tons in grain production just to keep pace. There is much concern about whether a continuous rapid rate of population increase can be matched by a corresponding rate of increase in food production. (See p. 2.)

These concerns were recently dramatized by the 1972 food production decline--the first in more than 20 years--which resulted in dramatic price increases, depleted food reserves, and decreased food aid programs. (See ch. 1.)

The challenges are to mobilize the resources of the earth, to provide the food available to those in need, and to help those in need attain

the capability either to produce or buy the food they need.

The crucial issue of controlling population growth is an inherent part of this challenge. (See ch. 5)

United States and Multilateral Programs

Substantial resources are being applied by the United States and by international agencies to improve agricultural development.

In 1973 the United States, through bilateral assistance programs, provided $196 million for agricultural development and $863 million in agricultural commodities as concessional sales and grants. Through its Peace Corps volunteers it also participated in agricultural and rural development programs in 54 countries. Also the Department of Agriculture aided by performing research activities and by providing needed information on the world agricultural situation. (See ch. 3.)

International agencies also committed or expended substantial resources. For example, the World Bank Group, the Asian Development Bank, and the Inter-American Development Bank loaned about $1.2 billion for agriculture purposes in their respective 1973 fiscal years. The U.N. World Food Program provided an estimated $340 million for 1973 and 1974 for development and relief projects. (See ch. 4.)

Observations

Several major issues face the United States, international organizations, and the world community concerning these matters. GAO's observations follow.

--World food supplies are unequally distributed, and many developing countries can neither grow enough food for their people nor pay for needed food imports. (See p. 64.)

--Programs to curtail population increases have not yet been able to control rapid population growth in the developing countries. (See p. 65.)

--Some multilateral assistance programs may not be placing appropriate emphasis on agriculture and population control programs. (See p. 65.)

--The world food problem is an international responsibility and thus the problems of increasing food production in the developing countries and curtailing population growth should be attacked on an international basis. (See p. 66.)

--The United States now faces the challenges of generating international cooperation to meet immediate food needs and expand agricultural production and of motivating developing countries to improve their capability for providing food adequate for their population growth. (See p. 66.)

AGENCY ACTIONS

Officials of the Departments of Agriculture, State, and Treasury and the Agency for International Development and the Peace Corps reviewed GAO's report and agreed in general to its content. Their informal comments have been considered in the text.

MATTERS FOR CONSIDERATION BY THE CONGRESS

Food issues have been raised and discussed repeatedly at the present session of this Congress, and the United States is now preparing to participate in the U.N.-sponsored World Food Conference. Issues raised in this report should be useful to the Congress, as well as to individual members serving on the U.S. delegation to the Conference.


U. S. NEWS & WORLD REPORT, Jan. 28, 1974
FORMULA FOR WORLD FAMINE?
Energy Gap + Population Explosion + Droughts
THE JOURNAL OF COMMERCE Wednesday, November 14, 1973
By US Agriculture Secretary
Improved World Food Situation Seen
THE NEW YORK TIMES, FRIDAY, MARCH 15, 1974
WORLD SEEN NEAR A FOOD DISASTER
THE NEWS AMERICAN Wed., Dec. 12, 1973
Expert Sees Food As Next Crisis
Chicago Sun-Times
THE JOURNAL OF COMMERCE, Monday, Oct. 15, 1973
Indian Food Outlook Good
THE NATIONAL OBSERVER Week Ending December 15, 1973
World's Food Situation Is No Cause for Despair
H16 Sunday, Jan. 13, 1974 THE WASHINGTON
Food Pressures Remain Seve
A 14 Sunday, March 17, 1974 THE WASHINGTON POST
Poor Nations Said To Face Food Crisis
Supplies for 80 Million Needy Overseas Have to Be Cut Back or Abandoned
THE JOURNAL OF COMMERCE Tuesday, March 5, 1974
Estimate Revised
Indian Wheat Crop Outlook Deteriorates
ST. LOUIS POST-DISPATCH Sun., Oct. 7, 1973
Food Source In Sea Grass
U.S. Shortages Peril World Food Aid Plan
THE NEW YORK TIMES, FRIDAY, FEBRUARY 15, 1974
Ethiopian Famine Hits Millions
THE CHRISTIAN SCIENCE MONITOR Friday, September 28, 1973
The lowly soybean—key to fee[d] a hungry world
Chelan Valley h Chelan, Wash. (Co. W. 2,017) JAN 2- 1974
Sorghum found to be an important sourc
YOUR MONEY'S WORTH
Food Price Outlook For World Is Blea
By Sylvia Porter
Special to The New Yorker
THE JOURNAL OF CO Tuesday, March 12, 1
According to FAO
World Grain Stocks at Low Ebb
THE NEW YORK TIMES, SATURDAY, SEPTEMBER 29, 1973
Research Finds Rich Sorghums To Bolster Diet of World's Poor
Scientists Discover Protein In Sorgh
Monday, November 19, 1973
THE WASHINGTON POST Saturday, Dec. 22, 1973
19 Per Cent Wheat Crop Growth Seen
Alfalfa leav
THE WALL STREET JOURNAL
The Growing Threat of World Famine
Wednesday, Nov. 14, 1973
THE JOURNAL OF C
FAO Wor
Chicago Tribune, Monday, December 17, 1973
as India protein aid
Food shortages, high prices plague nation
Boston Sunday Globe March 10, 1974
Housewives go on rampage in India
Saturday, Sept. 22, 1973 THE WASHINGTON POST
6.1% Increase in Food Prices Pushes Living Costs Up 1.9%
THE NEW YORK TIMES, TUESDAY, MARCH 5, 1974
100,000 Deaths in Africa Linked to Drought Neglect
THE WASHINGTON POST
India Envoy Moynihan Sees '75 Famine There

CHAPTER 1

WORLD FOOD SITUATION

The world food situation has been in the limelight since 1972 because of the results of the first overall decline in food production in recent years. This decline was caused primarily by adverse weather--drought, floods, and typhoons. Because of the high demand for exports since 1972, world grain stocks have been reduced to the lowest level since 1952, export restraints to protect domestic supplies have been imposed, and food and grain prices have skyrocketed.

As shown by the headlines, much publicity has been given to the food situation and the controversy over its real significance. Because of the concern over the current and future outlook, a World Food Conference under the auspices of the United Nations has been scheduled for November 1974. The principal task of the Conference is to develop ways and means by which the international community could resolve the world food problem within the broader context of development and international economic cooperation.

Shortfalls of grain production were widespread in 1972. The United States Department of Agriculture (USDA) reported that a winter kill and then a dry summer cut the U.S.S.R. grain crop; drought reduced the Argentine and Australian grain production; a below-normal monsoon cut India's grain crop; drought and typhoons damaged the Philippine rice and corn crops; and the African Sahelian countries of Mauritania, Mali, Chad, Senegal, Upper Volta, and Niger had their 5th consecutive year of severe drought.

Even though production declined in 1972, the USDA food production indexes on the following page show that the 1972 production was still the second highest on record--only slightly less than in 1971. The index of total production (based on the 1961-65 period) dropped from 126 to 124, or about 1.6 percent, but USDA reported that production of grains (a major food source) declined about 3 percent.

The larger decrease in grain production compared with overall production is significant because of the important role of grains in feeding the world's population. Grains consumed directly are the source for more than half of the world population's supply of calories. In addition, about half of the world's grain is used as feed for live-stock and

animal products provide about 28 percent of the world's supply of protein and 13 percent of the calories consumed.

Coupled with the production decline was an estimated 75 million increase in population. According to the Director of the International Center for Maize and Wheat Improvement, production of cereals must increase 24 million metric tons a year just to keep pace with the rapidly increasing population while maintaining the same per capita grain consumption. Therefore the 1972 production decline combined with the population increase reduced per capita production. As shown by the indexes, developing countries with per capita production at the pre-1967 level were more severely affected than were the developed countries.

Indexes of World Population and Food Production (note a)

Calendar year	World			Developed countries			Less developed countries		
	Population	Food production		Population	Food production		Population	Food production	
		Total	Per capita		Total	Per capita		Total	Per capita
	(1961-65=100)								
1954	84.2	77	91	89.1	77	86	80.6	77	96
1955	85.7	80	93	90.3	81	90	82.5	78	95
1956	87.3	84	96	91.5	85	93	84.4	82	97
1957	89.0	85	96	92.7	86	93	86.3	83	96
1958	90.7	90	99	93.9	91	97	88.4	87	98
1959	92.4	91	98	95.1	92	97	90.5	89	98
1960	94.2	94	100	96.3	96	100	92.8	92	99
1961	96.1	95	99	97.5	95	97	95.1	94	99
1962	98.0	98	100	98.9	98	99	97.5	97	100
1963	100.0	100	100	100.1	99	99	99.9	100	100
1964	101.9	103	101	101.2	103	102	102.4	104	102
1965	103.9	104	100	102.3	104	102	105.0	104	99
1966	105.9	109	103	103.4	111	107	107.7	106	98
1967	107.9	114	106	104.3	115	110	110.4	111	101
1968	109.9	118	107	105.3	119	113	113.2	115	102
1969	112.0	118	105	106.3	117	110	116.1	121	104
1970	114.2	121	106	107.3	119	111	119.0	126	106
1971	116.4	126	108	108.3	125	115	122.1	128	105
1972	118.7	124	104	109.3	124	113	125.3	124	99
1973	120.9	131	108	110.2	131	119	128.5	132	103

[a] World excluding communist Asia.

Source: USDA, December 1973.

As with all statistics, caution is necessary when considering world food statistics. Food production indexes are generally recognized as providing good insight into production trends, but they have limited value in showing nutrition levels. A USDA official pointed out that indexes cannot show whether the products were consumed in the producing country, exported, fed to livestock, or eaten by rodents. Also for such reasons as poverty, inadequate distribution, persistence of traditional habits, tastes, and taboos, food indexes do not show the number of hungry people.

Another factor requiring a degree of caution are the terms of reference which may be used loosely and interchangeably or in a definitive sense. For example, food production may include agricultural items and nonagricultural items, such as fish products; and agricultrual production may include food and nonfood items, such as cotton or tobacco; but not include nonagricultural items, such as fish products.

GRAIN STOCKS DEPLETED

The Food and Agriculture Organization (FAO) of the United Nations reported[1] that total carryover wheat stocks in the main exporting countries were expected to fall from about 47 million metric tons in the 1971-72 season to less than 30 million metric tons at the end of the 1972-73 season, the lowest level since 1952. Because stocks of other grains, including rice, had also been depleted, world grain supplies in the 1973-74 season would be almost entirely dependent on the 1973 harvest. In FAO's opinion, the level of grain stocks in importing and exporting countries gave little assurance of adequate supplies to meet the world demand in the event of large-scale crop failure in one or two major producing areas.

USDA reported in December 1973 that, even though world grain prospects for 1973-74 pointed to record crops, supplies were likely to remain relatively tight through 1973-74 and well into 1974-75. Increases in grain carryover stock of the major exporting countries may not occur before the end of the 1974-75 season.

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[1]The State of Food and Agriculture 1973 (based on statistical information available to Oct. 1973).

It may take even longer to build up stocks. The U.S. Representative to the United Nations stated on November 13, 1973:

> "World food reserves have declined so precipitously in recent years that even with bumper crops they may not be built up again in this decade. Without these reserves, we are all dangerously dependent on current production and thus that most undependable phenomenon: the weather."

The crop shortfalls in various countries, coupled with currency devaluations which made U.S. goods more price competitive and expanded trade with major economic powers, increased the demand for agricultural products and created about a one-fifth increase in world grain exports in fiscal year 1973. U.S. exports increased more than the worldwide increase; that is, the United States covered not only the total jump in exports but also the large shortfalls experienced by other exporting nations. As a result, the United States ended the fiscal year with the lowest stocks of wheat since 1952.

A major shift in U.S.S.R. import policy created a demand for agricultural imports. In previous years of grain shortages, the U.S.S.R.'s policy was to tighten its belt and slaughter some livestock rather than make up the shortages with imports. However, when hit by production shortfalls in 1972, the U.S.S.R. started importing grains. The U.S.S.R. reportedly bought about 28 million tons of grain, including 18 million from the United States. Sales to the U.S.S.R. accounted for about 16 percent of the $4.8 billion increase in value of U.S. agricultural exports in fiscal year 1973. According to FAO, U.S.S.R. imports were mainly responsible for the severe reduction in world grain stocks.

In the past, there have been adequate, and sometimes burdensome, grain reserves in the United States to meet almost any demand. Grain stocks were accumulated as a result of farm programs designed to raise farm incomes. However, along with the depletion of stocks in the United States, there has been a change in domestic farm legislation to orient supply-to-market conditions. A decision has not been made on what policy the Government will pursue regarding grain stockpiles, according to the Economic Report

of the President in February 1974, but the U.S. role as the world's residual supplier of agricultural commodities may change.

The International Economic Report of the President, also issued in February 1974, stated:

> "* * * We are seeking ways to share the hardships of production shortfalls as well as the responsibility of maintaining stocks in plentiful years to meet the needs of the lean years. * * * This policy implies that the United States will not again become the only major holder of food and feedgrain stocks for the world * * *."

USDA reported in December 1973 that countries which were commercial importers of U.S. agricultural commodities were being alerted that they may have to bear more of the burden of stockholding to meet their own needs.

World food security proposal

FAO feels that the current lack of contingency grain reserves points out the need for international action to insure the existence of an adequate food supply. The Director-General presented before the Seventeenth Session of the FAO Conference in November 1973 a proposal calling for a minimum level of world food security that could be met largely through coordinating national stock policies. These food reserves would reduce the probability of acute food shortages and would moderate price instability by insuring the availability at all times of adequate cereal supplies in the world. The proposal's main elements follow.

1. Governments' recognizing a common responsibility for maintaining adequate grain supplies.

2. Holding regular intergovernmental consultations for reviewing the world's food position and to advise governments on action if needed.

3. Developing voluntary guidelines for national food stock policies as a framework within which each country would develop its own policies according to its circumstances.

4. Having an information system where all member nations regularly furnish accurate and current information on cereal grains for factual appraisals of the world grain situation and outlook.

5. Having additional international assistance to help vulnerable, less developed countries to participate effectively in a world food security policy.

The Conference endorsed the principles and objectives of the proposal and requested that the Director-General convene a working party to review and revise the proposal. World food security is on the provisional agenda of the World Food Conference.

World food conference

In an address before the United Nations on September 24, 1973, the Secretary of State proposed that a world food conference be organized under U.N. auspices to discuss ways to maintain adequate food supplies and to harness the efforts of all nations to combat hunger and malnutrition resulting from natural disasters. This conference is to be held in Rome, Italy, in November 1974.

The draft provisional agenda, considered by the Preparatory Committee at its meetings in February and June 1974, called for the following items to be considered.

1. Assessing the present food situation.

2. Establishing measures for increasing food production and for improving patterns of consumption in developing countries.

3. Strengthening world food security through coordinated stockholding, emergency relief, and food aid.

4. International trade and international agricultural adjustment.

EXPORT RESTRICTIONS IMPOSED

Because of tight supplies some countries used embargoes, quotas, export taxes, and other means to restrict exports as

protection for domestic supplies. USDA reported in December 1973 that some of the countries where restrictions had been imposed were: (1) the United States and Brazil for soybeans, (2) Thailand, Burma, and the European Economic Community for rice, (3) Argentina and the European Economic Community for wheat, and (4) Brazil and Thailand for corn.

Thailand, the largest exporter of rice in 1972, used embargoes, licensing, and export taxes to control rice and other commodity exports.

The United States, which supplies about 80 to 90 percent of all soybeans and soybean products entering the world market, imposed export controls in July 1973 because contracted supplies of soybeans for export were thought to have exceeded the amount that would be available after domestic demands were met. These controls consisted of a temporary embargo and a later licensing of exports of soybeans and related products. In October 1973, after harvesting of the fall crops began, all export restrictions were removed from soybeans.

PRICES SPIRALED

Rising prices were experienced throughout the world in 1972 and 1973 in international markets and within countries. FAO reported that the U.N. index of export prices of agricultural commodities rose 12.5 percent in 1972--the highest yearly increase for a decade--compared with 5 percent in 1971. Food prices increased 12 percent, and nonfood agricultural commodity prices increased 14 percent. During 1973 prices continued to rise sharply for agricultural commodities in international trade, as illustrated by the following graphs for corn, wheat, and soybeans.

Within countries, price increases were not confined to food items, but food prices tended to increase more rapidly than nonfood prices. In the Organization for Economic Cooperation and Development (OECD) countries,[1] food prices increased in the 3 months ended in February 1973 at an average (annual) rate of 9.7 percent, compared with 4.4 percent for nonfood prices.

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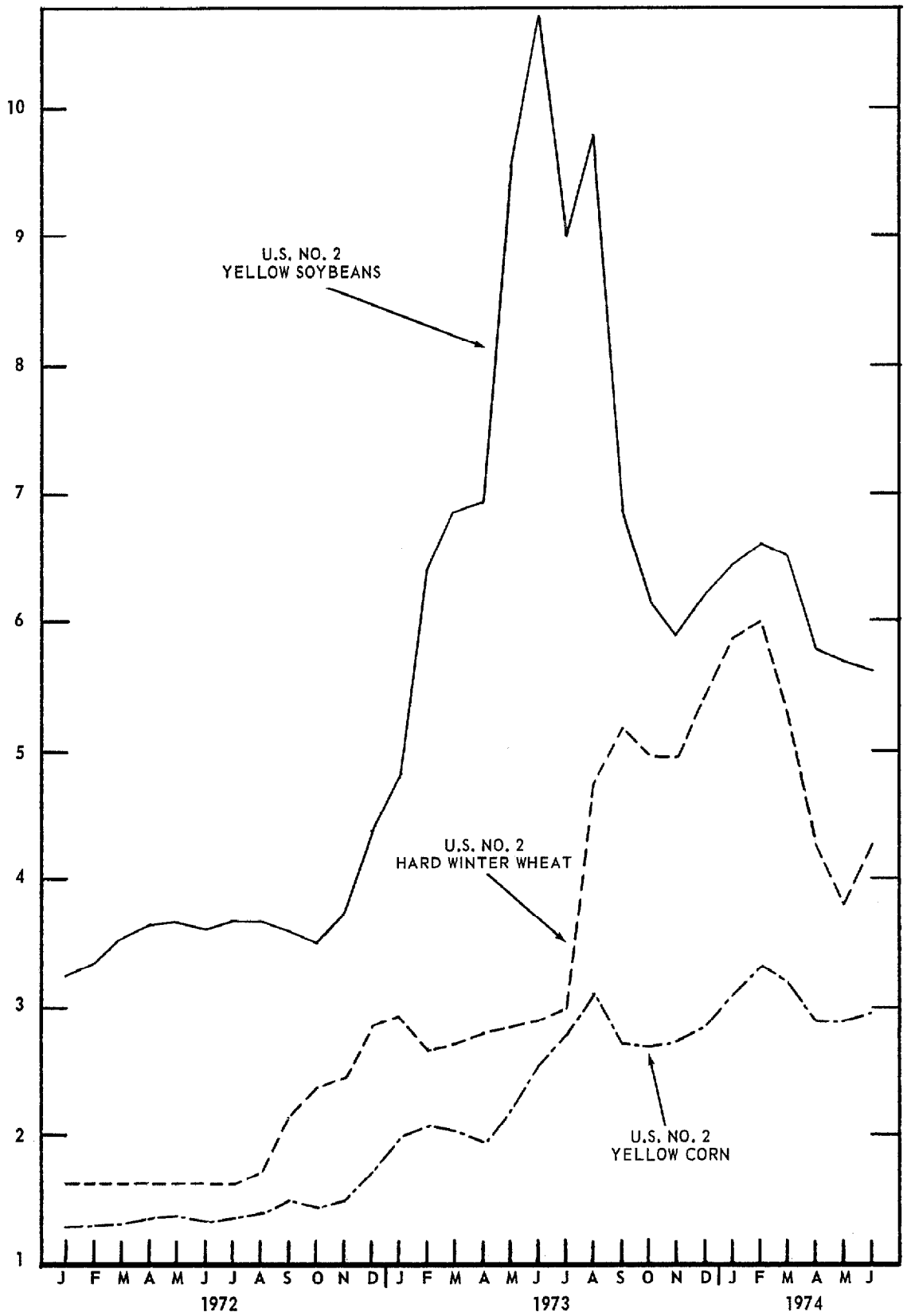
[1]Includes Australia, Austria, Belgium, Canada, Denmark, Finland, France, the Federal Republic of Germany, Greece, Iceland, Ireland, Italy, Japan, Luxembourg, the Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, the United Kingdom, and the United States.

AVERAGE MONTHLY U.S. EXPORT PRICES

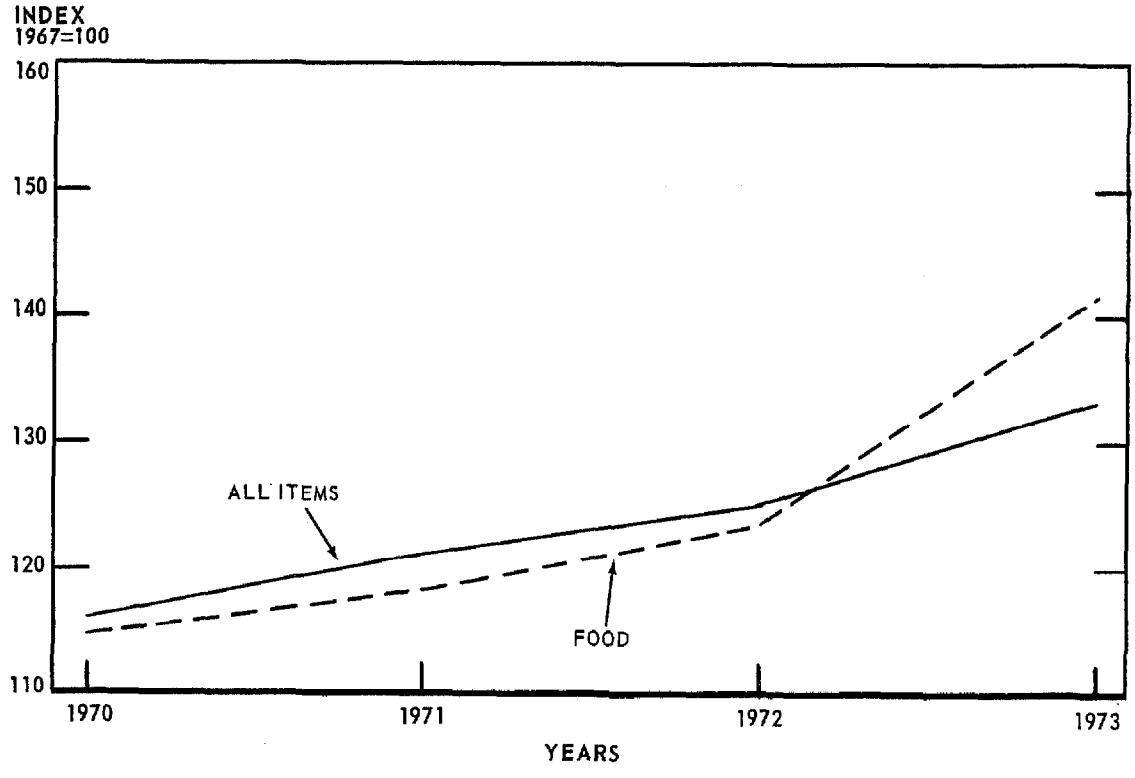
DOLLARS PER BUSHEL,
F.O.B. VESSEL, GULF PORTS



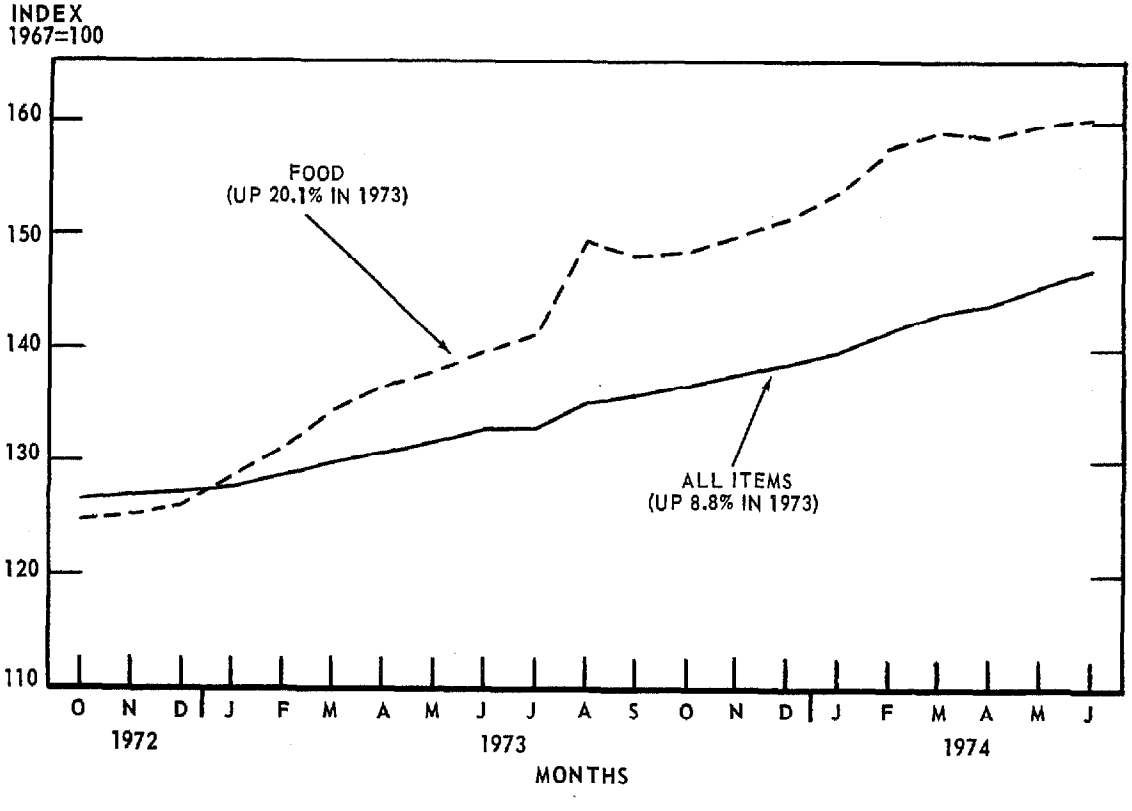
Many countries in the developing regions experienced even greater food price increases in 1972, with some countries reporting prices over 20 percent higher than a year earlier.

As shown by the following charts of the U.S. Consumer Price Index, the rapid food price increases did not occur until 1973 in the United States which then experienced a 20-percent increase.

CONSUMER PRICE INDEX



CONSUMER PRICE INDEX



DEVELOPING COUNTRIES HARDEST HIT

Most countries suffered from tight supplies and from increasing prices, but developing countries suffered from both their more severe per capita production decline and their limited ability to buy on the world market. These countries also received reduced amounts of external food assistance because of the high prices and tight supplies.

The United States had a 60-percent increase in the value of agricultural exports in fiscal year 1973, but developing countries did not share equally with other areas in this increase. USDA reported that most of the gains in U.S. agricultural exports were accounted for by Japan (22 percent of the total gain), Western Europe (30 percent), U.S.S.R. (16 percent), and the People's Republic of China (4 percent).

In most developing nations from 70 to 80 percent of the family earnings goes for food. In comparison, the portion of take-home earnings spent on food has been between 16 and 18 percent for Americans and between 20 and 40 percent for Europeans. When prices of such basic commodities as wheat and rice double, families that are already spending 70 percent of their income on food will be severly affected.

Production declines in the developing countries were compounded by declines in external food assistance. The United States, which provides about 75 percent of world food aid, decreased its agricultural commodities from more than $1.1 billion in calendar year 1972 to $863 million in 1973. In April 1974 a USDA official said that commodities provided in fiscal year 1973 were 20 percent less than in 1972 and that commodities to be provided in fiscal year 1974 were estimated to be 50 percent less than in 1973. (Food commodities comprised all of the decrease from 1972 to 1973.) The low-income nations are therefore faced with the dilemma of competing for available supplies either at the prevailing prices or as food aid which may be reduced in times of tight supplies.

Multiple price increases in other essential and related commodities, such as fertilizers and petroleum products, make the problem more severe. The president of the Overseas

Development Council[1] estimates that food, fertilizer, and petroleum products will cost developing countries $15 billion more in 1974 than in 1972. The increased cost of wheat alone was estimated at $3 billion and fertilizer another $0.5 billion.

SIGNIFICANCE OF 1972 FOOD SHORTAGE

Opinion varies as to the significance of the 1972 production decline, the high demand for exports, and the resulting food shortages, as shown by the following statements.

> "In January, I stated my conviction that we must counter the new and growing belief that a fundamental deterioration in world food situation has occurred. This belief, while probably a natural outgrowth of rising agricultural prices and distorted trade patterns that developed last year, is not based on substantial evidence. In my view, the disappointing crops that created the headlines which have fed this belief were the result of unusually poor weather. * * * Nothing that has happened since January has altered my opinion that these developments do not indicate changes in long-term trends." (Don Paarlberg, Director of Agricultural Economics, USDA, May 29, 1973.)

> "The world food situation has been dramatized this year by some unusual factors--including the poor rice harvest in Asia, the shortfall in the Soviet wheat crop, and the disappearance of the anchoveta off the coast of Peru. But today's shortages and sharp price increases are not merely temporary phenomena. They reflect certain long-term trends and augur a global shift from an era of commercial surpluses to one of frequently tight global supplies of essential foodstuffs. Rising affluence has now joined population growth as a major factor behind the burgeoning global demand for food." (Lester R. Brown, Overseas Development Council Communique No. 21, Aug. 1973.)

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[1] "Energy Shock and the Development Prospect," The U.S. and the Developing World: Agenda for Action 1974. Published for the Overseas Development Council by Praeger Publishers.

"It would be all too easy to write off this year's shortages and price increases to the droughts and bad weather over the past 2 or 3 years. Some people are trying to do just that, and saying that it will most likely never happen again, but it would be fool-hardy and irresponsible to do so. A study of the world food situation clearly reveals that there are deeply rooted causes of the current world food crisis. Rising affluence and unchecked population growth are beginning to strain the productive capacities of world agriculture." (Senator Hubert H. Humphrey, Chairman, Subcommittee on Foreign Agricultural Policy, Senate Committee on Agriculture and Forestry, Oct. 1973.)

"* * * Actually the accelerated foreign purchases since mid-1972 caused agricultural exports to reach $12.9 billion in fiscal 1973 and $17.5 billion in calendar 1973. About 60 percent of the increase in fiscal 1973 was caused by increased volume; the remainder came from higher prices.

"* * * An important question is whether the increased demand for exports is traceable to abnormally poor weather conditions in other countries or a longer-term rise in world demand. Both of these have contributed to export demand in the 1972-73 period. Poor crop harvests during 1972 in many countries were certainly a major factor: * * *"

* * * * *

"However, there are * * * reasons to believe that U.S. exports have moved to a higher plateau." (Economic Report of the President, Feb. 1974.)

"It will be somewhat simplistic to suggest that the world food situation suddenly took a wrong turn under the impact of bad weather. An analysis of production trends during the past two decades indicates that more deep-seated problems were also accumulating, with the industrialized countries producing more food than they could consume or export and the developing countries facing food

import bills growing larger every year. The developed countries could not sell all the food they were producing; the developing countries could not produce fast enough." (Preliminary Assessment of the World Food Situation Present and Future, Apr. 1974, prepared for the Second Session of the Preparatory Committee of the World Food Conference.)

CURRENT OUTLOOK

Not all major producing countries were maximizing production in 1972. For example, the United States had production restrictions. Payments to U.S. farmers for setting land aside from producing feed grain, cotton, and wheat during the 1972 crop year amounted to $3.5 billion. Payments for the 1973 crop year were estimated to be $2.3 billion. Payments for set-aside of crop land were terminated for 1974.

USDA's December 1973 estimates showed that, as a result of actions by various countries to increase production and generally more favorable weather, world food production in 1973 increased 6 percent to a new peak. Notable production increases were made in the United States, Canada, the U.S.S.R., India, Latin America, and Oceania. However, even with the overall 6-percent increase, many countries still experienced severe problems--production in Africa was down about 3 percent and in the Middle East about 5 percent. For some countries the decline was more severe; for example, South Africa's total production dropped about 20 percent from 1972 and Turkey's wheat production dropped 15 percent.

USDA forecasts record grain crops again in 1974, but, even with such crops, supplies are likely to remain relatively tight into 1975 and increases in grain carryover stocks of the major exporting countries may not occur before the end of the 1974-75 season. Thus world grain supplies will be especially dependent on current and upcoming harvests, which could present a precarious situation if a few key countries have crop failures.

The International Wheat Council reported in May 1974 regarding the wheat situation:

"On the basis of information available at the present time, the indications are that the supply/demand position might improve to the extent of permitting a rebuilding of stocks in the coming crop year, the greater part of which would take place in the United States. But factors such as weather, shortages and high prices of fuel oil, pesticides and fertilizers, incidence of plant pests and diseases, continued monetary instability or unforeseen developments could all alter the picture between now and the forthcoming harvests."

FUTURE OUTLOOK

FAO and USDA's Economic Research Service (ERS) have made projections of the food and agricultural situation to the 1980s. The projections generally agree that the developed countries will produce more grain than they need and that less developed countries, despite advances in production techniques, will need more grain than they can produce. Based on this situation, a key problem is the developing of a method for transferring grain from those that have to those that do not have.

To 1980--FAO

The FAO projections for the 1970-80 period, published in 1971, concluded that conditions in world agriculture should generally improve a little over the decade but that improvements would be limited for the developing countries. Even though the average shortage of food should be somewhat less than now, the absolute number of people short of food may be much the same as today.

Because demand projections are not based on actual need but on slight increases in historical per capita consumption, in 1980, the average calorie intake in 42 developing countries with a total population of 1.4 billion would be below nutritional requirements even if the projected demand for food were fully met. The Asian centrally planned countries, for which projection data is less firmly based, would add another 1 billion people. To compound the problem, uneven distribution of income and thus of food within a country leaves many persons diets below the minimum calorie requirements even though the projected national average requirements may have been satisfied or exceeded. The number of

people in the last category is unknown; therefore, the total number of persons with inadequate diets cannot be estimated.

By 1980 the projected food demand in developing countries will increase by 42 percent, but for the world it will increase only 27 percent. In high-income countries, the increase in demand comes primarily from the income effect (demand for more diversified and more expensive food rather than for a larger volume of food), whereas, in the developing countries, about 70 percent of the increase in demand will be brought about by population increases.

The projections were based on production increases in the developing countries of 3.3 percent a year even though from 1959 to 1969 the average increase was 2.9 percent a year, from 1970 to 1971 the increase was 1 percent, and in 1972 there was no increase in production. Therefore, by 1980 the food situation in the developing countries could be even more critical than the projections indicated.

FAO said that in 1970 the excess of effective demand for food which could not be met from domestic production or imports in developing countries was estimated at $1 billion and, according to the projections, is expected to increase to between $2.2 billion and $2.7 billion in 1980. The excess of unsatisfied needs is much greater because many people in the developing countries need more food than they can pay for, i.e., their effective demand. At today's prices, the unsatisfied needs would be still greater because the higher prices reduce the quantity of food that can be purchased.

In April 1974 the Preparatory Committee of the World Food Conference published a preliminary assessment of world food supply and demand for the period up to 1985 based primarily on material prepared by FAO.

Although the details of the preliminary assessment differ somewhat from FAO's earlier projections, projected demand in the developing countries will be greater than their projected production and the resulting food deficits will far exceed their capacity to import on commercial terms. The Committee concluded that increasing food imports aggravated by the rise in world food prices would likely cause a critical payments problem long before 1985.

To 1985--ERS

The ERS projections of demand, production, and trade of food grains and coarse grains, published in December 1973 for the period up to 1985, indicated the same general outlook as the FAO projections; that is, a capacity for excess production in the developed countries and an unsatisfied need in the developing countries. Thus the projections show a capacity to meet effective demand--to supply those with the ability to buy--but very little overall nutritional improvement in the developing countries.

A USDA official summarized the projections as follows.

> "These projections suggest that under normal weather conditions, that the world's capacity for production of the grains, cereals, will increase faster than consumption. And there will likely be a rebuilding of grain stocks, or maybe a downward push on some prices or programs to restrict production in certain of the major exporting countries or some combination of these. But we see over this period, until 1985, still a greater capacity than what there is ability to buy, not necessarily that there is not the need there, but for the ability of these countries to buy."

Projected production and trade of the less developed countries should permit their per capita consumption of grains to increase slightly over the base period. But, because of foreign exchange requirements, any major increase will more likely have to come from greater domestic production rather than from larger imports.

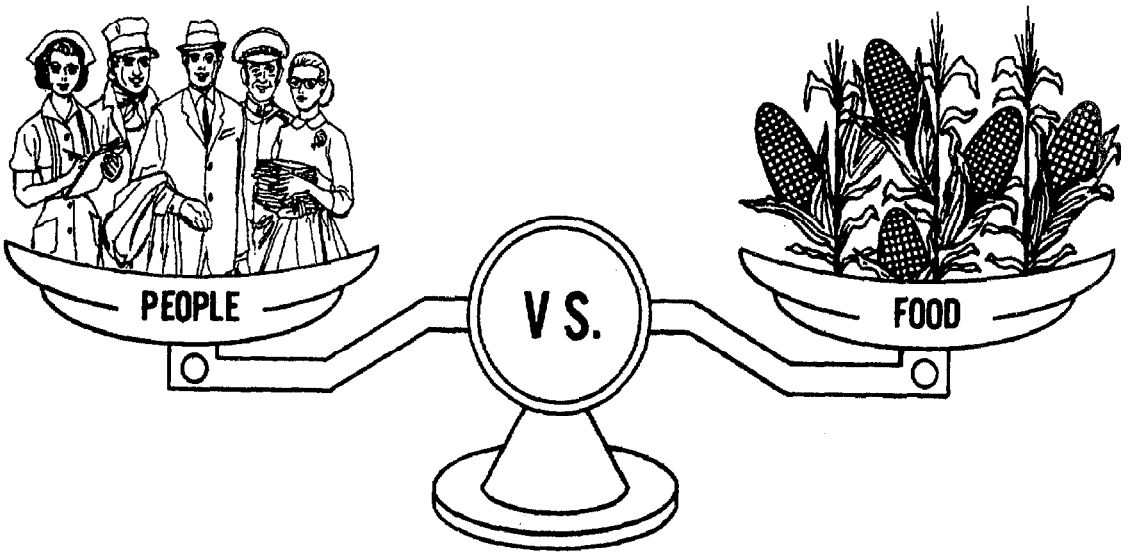
Perspective--Agency for International Development

In congressional hearings on April 5, 1973, the Agency for International Development (AID) summarized its interpretation of the FAO and the ERS projections then available as they related to the developing countries. The projected grain consumption (based on expansion of population and a modest improvement in diet) will continue to exceed the projected production. Imports represented 5.3 percent of developing countries' grain consumption during 1964-66 and 5.2 percent during 1969-71. If imports fill the projected

gap in the 1980s, they will amount to at least 8 percent of consumption in 1980 and 8.4 percent in 1985.

In quantity terms, grain import needs are expected to double by 1980 and to increase about 2.5 times by 1985. Imports, as a proportion of total consumption in the 1980s, will be particularly important for wheat. They are projected to represent over 24 percent of consumption in developing nations in 1980 and 25 percent in 1985. The proportions for coarse grains and rice will be much less.

AID believed that the developing countries would not be able to finance imports on the commercial market to meet the projected demand and thus concessional food aid would be needed.



CHAPTER 2

INCREASING FOOD DEMAND--CAN IT BE MET?

Although most authorities agree that agricultrual production can be increased to higher levels, they are convinced that it cannot be increased indefinitely. The ultimate solution to the food problem can be achieved only by limiting the increase in food demand.

The changes in technology needed to increase production can be illustrated by the Green Revolution--the term used to describe the introduction of high-yield wheat and rice varieties in the 1960's which, when used under ideal conditions (i.e., when all necessary inputs such as fertilizer, irrigation, pesticides and machinery are available), vastly increase production. These new grain varieties, however, were not designed for dry land agriculture and require an optimum mix of inputs without which their potential for increased production will not be realized. Research such as that leading to the Green Revolution is continuing in several areas.

The short-term outlook for increased agricultural production is restricted by the current fertilizer shortage. The success of high-yielding grain varieties is particularly dependent on fertilizer.

The long-term outlook for agricultural production depends mostly on what technology can achieve. To a considerable extent production was increased in the past by expanding the amount of land under cultivation. The United States this year removed the last of its acreage restrictions, which permitted set-aside land to be returned to production.

According to USDA officials, there is a lack of reliable statistics on new land that could be readily developed.

Fertile land that is available cannot be readily developed because of a lack of water for irrigation. The problem is compounded by the loss of agricultural land to erosion or conversion to other uses, such as industrial development, recreation, transportation, and residential development.

Further research is being conducted for ways to increase yields of crops, such as sorghum, millet, and legumes which are grown in semiarid areas of the world. Other research is being done to increase the nutritional qualities of such items as corn, sorghum, wheat, barley, and manioc (a root crop, often called cassava or other names) which are staples in the diets of many of the people of the less developed countries.

The main causes of the rising demand for food are population growth and increased affluence of the world's people. Population growth creates a demand for a larger volume of food, and rising affluence, in addition to its effect on volume demand, creates a demand for higher quality foods, which are usually more expensive to produce.

Population growth at the present time is concentrated in the less developed countries. In the developed countries, where population is increasing but at a steadily declining rate, increased affluence is the primary cause of the rising demand for food--food that requires more inputs to produce.

Many organizations of various countries have been working to curb population growth, but the success achieved thus far has not been adequate; much more needs to be done.

WORLD POPULATION GROWTH --DOMINANT CAUSE OF INCREASING DEMAND

Authorities agree that there can be no longrun solution to the food crisis without slowing down population growth. Notable gains have been made in food production in developing countries, but such gains have barely kept pace with the rapidly increasing population. For example, food production in developing countries increased during the past 20 years, on the average, about 2.8 percent annually, or a total increase of about 54 percent, but per capita gains were about one-half of 1 percent annually.

According to the World Bank, it took more than 1,800 years for the world's population to increase from 210 million to 1 billion. The second billion required about 125 years, and the third only 30 years. Presently, only 15 years is needed to add the fourth billion. If present growth rates continue, the current population of more than 3.6 billion could double in 35 years, and, by the end of this century, it would be increasing at the rate of a billion about every 8 years.

Projections of the world's population vary, but all projected totals will place increasing pressure on the world's food production capacity. The Department of State projects the world's population at 7.5 billion by the year 2000 if the present rate of growth continues. The U.N. medium variant population projections, prepared in 1968, are for a world population of 6.5 billion in the year 2000 (1.5 billion in the developed regions and 5 billion in the less developed regions). An extension of the medium variant in a February 1974 U.N. report shows population reaching 12.1 billion in the year 2075 and stabilizing at about 12.3 billion.

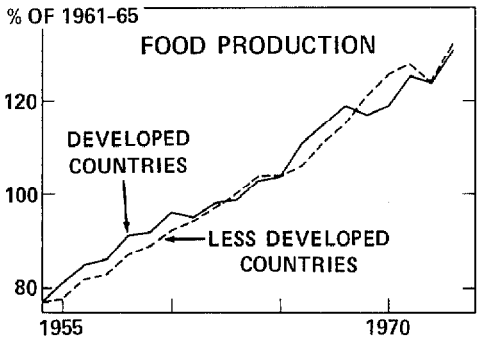
Population has grown more rapidly in the less developed countries than in developed countries over the last two decades. Although population continues to grow in developed countries, both the rate of increase and the annual increment in numbers are low and steadily declining. In the less developed countries, however, the rate of population increase and the annual increment are high.

The less developed countries now account for 83 percent of the world's population increase, compared to 68 percent only 20 years ago. A further problem is that an average of more than 40 percent of the population of the less developed countries have not yet reached their reproductive years.

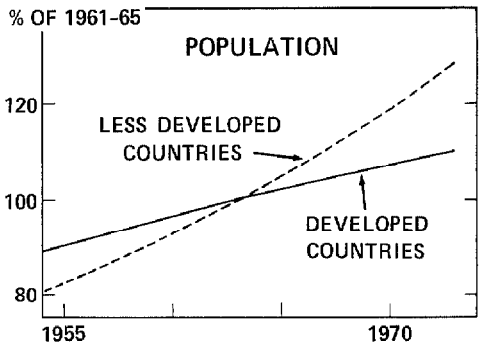
As a result of the different rates of population increase, the peoples of developed and less developed countries have not fared equally well from the roughly equal growth in food production. In less developed countries; population gains absorbed nearly all of the production increase, production per capita has improved only slightly. Figure A compares the food production and population growth in developed and less developed countries and the effect of the greater population growth in less developed countries. Figure B shows the food production per capita in regions of developed and less developed areas of the world.

FOOD PRODUCTION AND POPULATION
DEVELOPED AND LESS DEVELOPED COUNTRIES

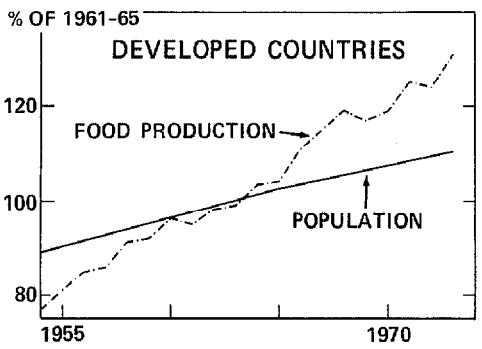
Food production has grown steadily over the past two decades. Growth in the developed countries has roughly paralleled that in the less developed countries.

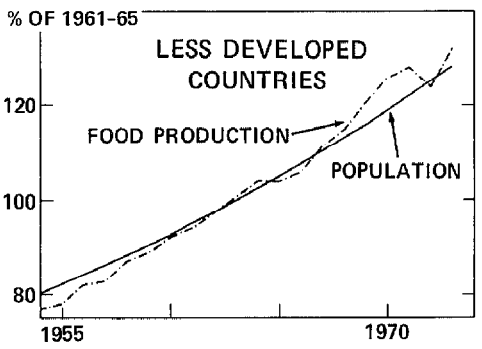


Population has grown faster in the less developed countries.



Peoples of the developed and less developed country groups have not fared equally from the roughly equal growth in food production. In the developed countries production has increased much faster than population, boosting production per capita. In the LDC's population gains have absorbed nearly all of the production increase; production per capita has improved only slightly.





POPULATION EXCLUDES COMMUNIST ASIA

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FIGURE A

GAO note: LCD's (less developed countries).

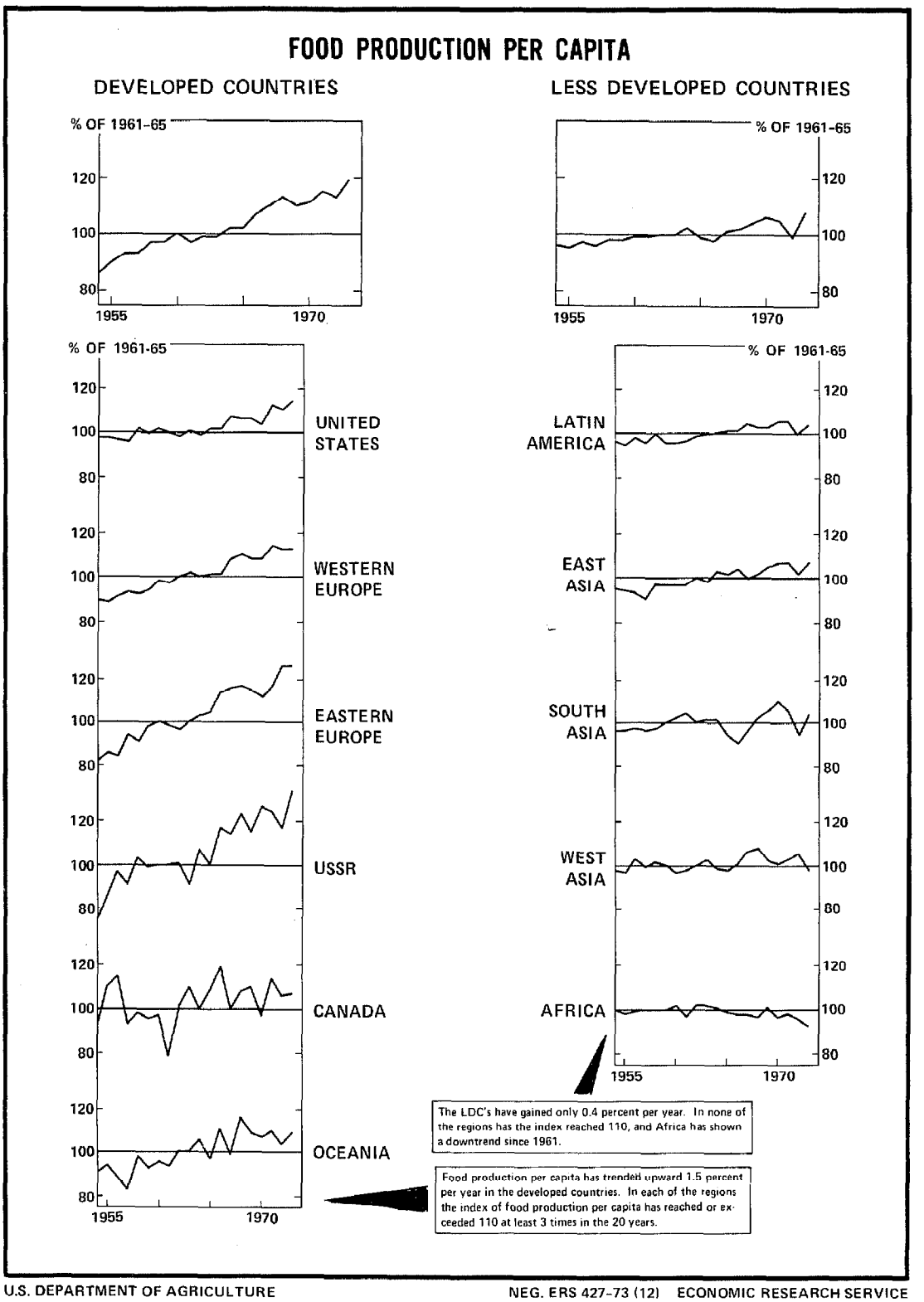

FOOD PRODUCTION PER CAPITA
DEVELOPED COUNTRIES
LESS DEVELOPED COUNTRIES
% OF 1961-65
120
100
80
1955
1970
UNITED STATES
WESTERN EUROPE
EASTERN EUROPE
USSR
CANADA
OCEANIA
LATIN AMERICA
EAST ASIA
SOUTH ASIA
WEST ASIA
AFRICA
The LDC's have gained only 0.4 percent per year. In none of the regions has the index reached 110, and Africa has shown a downtrend since 1961.
Food production per capita has trended upward 1.5 percent per year in the developed countries. In each of the regions the index of food production per capita has reached or exceeded 110 at least 3 times in the 20 years.
U.S. DEPARTMENT OF AGRICULTURE
NEG. ERS 427-73 (12) ECONOMIC RESEARCH SERVICE

FIGURE B

What is the relationship between these statistics on food production and the availability of adequate nutrition to the people of the world? In 1970 the U.N. Protein Advisory Group said that, if supplies were distributed equally, the total available calorie and protein supplies probably would be sufficient to satisfy the requirements of the entire population. Because of unequal distribution, however, an estimated 300 million to 500 million people in developing countries did not have enough food and as many as 1.5 billion did not have adequately balanced diets.

FAO's projections to 1980 noted that, although the average quantity of calories and proteins consumed in less developed countries would have increased by 5 percent, the number of people with calorie intakes below requirements might not have changed much from that in 1970.

Children especially are affected by inadequate nutrition since they need more and higher quality foods than adults. The Protein Advisory Group estimated in 1970 that over 300 million children would suffer grossly retarded physical growth and development because of dietary deficiencies and that many of these would also have impaired mental development.

Malnutrition affects these children throughout the rest of their lives. As many as two thirds of the children that survive are prevented from attaining their full potential because of the retarded physical and mental growth resulting from malnourishment.

In less developed countries, 30 percent of all children die before age 5. Although many of these deaths are attributed to such diseases as dysentery, measles, tuberculosis, or pneumonia, most of them are related to chronic malnutrition which makes an individual very susceptible to disease and reduces his ability to recover.

In countries where infant mortality was high and the aged depended on their children for security, a high birth rate was encouraged; only in recent years have some governments of developing countries realized that the living standards of their people do not improve because economic development is sacrificed to population growth. In 1960 only three countries had official policies designed to slow the population growth; by 1971, the governments of 26 developing countries had adopted

official policies and 24 others supported private family-planning programs without announcing official policies.

In most cases, however, programs for carrying out these policies effectively are still inadequate. The OECD Development Center estimated in 1970 that 2.3 million births had been averted in 1968 by family planning programs; however, if the population growth rate is to be lowered to acceptable levels within a reasonable period, this is far from adequate.

Many organizations are working to curb world population growth. The World Bank reported in March 1972 that 12 years earlier bilateral, multilateral, and private organizations had committed about $2.8 million for family-planning programs but that in 1971 the amount was about $225 million, Participants included the governments of Canada, Denmark, the Federal Republic of Germany, Japan, the Netherlands, Norway, Sweden, the United Kingdom, and the United States; various agencies of the United Nations; and private agencies, such as the Ford Foundation, the Rockefeller Foundation, the International Planned Parenthood Federation, and the Population Council.

The United Nations has designated 1974 as World Population Year and has convened a World Population Conference held in Bucharest, Romania, in August 1974. The Conference is to consider the effects of world population growth and to establish a plan to bring population growth under control.

AFFLUENCE--ANOTHER DEMAND FACTOR

Although population growth is the dominant cause of increasing demand for food, rising affluence is emerging as a major new claimant on world food resources. With rising incomes, people consume a larger variety of foods and substitute higher quality foods which require greater agricultural resources for their production.

In less developed countries, such as those of Asia, where per capita income is extremely low, most grain is consumed directly as human food at about 400 pounds a person a year. A meat diet, such as Americans enjoy, requires annual per capita usage of about 1,800 pounds of grain. The FAO-UN North American Representative said in a statement on March 6, 1974, that current world grain production would feed 5 billion

people on the Asian diet but less than 1-1/2 billion on the American diet.

Because of the direct consumption of grain in the developing countries to meet minimum energy needs, little is available for conversion into animal products (meat, milk, eggs). In less developed countries direct consumption of grain provides 62 percent of the calories and animal products provide only 7 percent, whereas, in developed countries, direct consumption of grain provides 37 percent of the calories and animal products provide 23 percent.

The Overseas Development Council reported that, in the northern tier of industrial countries, stretching from Western Europe through the U.S.S.R. to Japan, dietary habits now approximate those of the United States in 1940. As incomes continue to rise in this group of countries (which total some two-thirds of a billion people), a sizable share of the additional income is being converted into demand for livestock products, particularly beef.

THE GREEN REVOLUTION--IS IT THE ANSWER?

In its early phases, the Green Revolution was hailed by some as the answer to feeding the world's increasing population. Although the Green Revolution may have been instrumental in increasing agricultural production, the last few years have shown that it has limitations. The Green Revolution is not the ultimate solution to the world food problem; it has however, provided additional time for slowing down population growth.

The development of high-yielding dwarf wheat in Mexico initially financed by the Rockefeller Foundation was the first breakthrough for the Green Revolution. This wheat was unique in that it was responsive to fertilizer which permitted vastly increased yields; it was not sensitive to length of daylight hours and therefore could be used around the world over a variety of latitudes; and it had an early maturity, which opened the possibility for multiple cropping.

Although this was a tremendous technical advance, one of the staple foods of the poor countries is rice. Therefore, the International Rice Research Institute was established and initially financed by the Rockefeller and Ford Foundations. Using the experience gained in the wheat grains, the

Institute, within a few years, succeeded in breeding a counterpart of the high-yielding wheats--a fertilizer-responsive, early maturing rice capable of wide adaptation.

When these new high-yielding wheat and rice varieties were combined with the necessary inputs of insecticides, fertilizer, water, credit, and machinery (along with changes in government agricultural policies and training of personnel), their production was dramatically increased.

The following table shows the production in Turkey, Mexico, India, Pakistan, and the Philippines from 1969 to 1973.

Wheat and Rice Production

Country	Crop	1961-65 average	1969	1970	1971	1972	1973 (estimate)
		(thousands metric tons)					
Turkey	Wheat	7,050	8,300	8,000	10,700	9,500	8,000
	Rice	160	200	246	262	173	240
Mexico	Wheat	1,719	2,200	1,950	1,900	1,800	1,900
	Rice	306	361	399	438	420	433
India	Wheat	11,192	18,651	20,093	23,832	26,477	25,500
	Rice	52,864	60,706	63,401	64,166	55,556	65,000
Pakistan	Wheat	4,153	6,618	7,294	6,476	6,867	7,515
	Rice	1,825	3,601	3,303	3,309	3,432	2,900
Philippines	Wheat	-	-	-	-	-	-
	Rice	3,957	5,233	5,343	5,100	4,620	5,444

Sources: USDA indexes of agricultural production and USDA officials.

The Acting Administrator, AID, made the following statement on October 5, 1973, regarding the increases resulting from the Green Revolution.

> "* * * But if we look at the record we see that of the 12 less developed Asian countries for which we have comparable data, the 6 that led the way in the green revolution increased their production almost 40 percent in rice in the last

6 years. The six which made the least such changes increased their production only 11 percent. In other words, new practices and development techniques give you a four to one difference in the return.

"Now, for wheat it is even greater. The countries that applied the techniques of the green revolution in wheat doubled their production, whereas those that didn't apply these techniques increased wheat production only 12 percent."

The Green Revolution's role in increasing food production has been widely publicized. However, shortfalls in production over much of the world in 1972 showed that the Green Revolution has not solved the world's food problem.

The Green Revolution was not designed for dry land agriculture; it will be successful only when there is adequate rainfall or appropriate irrigation and when combined with the use of fertilizer, pesticides, and mechanization. Because of the interdependence of these inputs, if any one of them should be in short supply, output is seriously threatened.

Experts working closely with the Green Revolution have stressed that it does not represent the solution to the world food problem but that it is a means of buying time during which population growth can be slowed down.

Research is now beginning to develop technologies and strategies for introducing or expanding crops suited to dry land. The International Crops Research Institute for the Semi-Arid Tropics, for example, was started in 1973, with partial funding from AID, to work on sorghum, millet, legumes, and other upland crops for subsistence farmers not yet reached by the Green Revolution.

Efforts are also being made to increase the nutritional value of some of the foods that provide a major part of the diets of many people in less developed countries. Purdue University recently announced a breakthrough in plant breeding increasing the nutritional value of sorghum. Similar work is being done on wheat by the University of Nebraska in collaboration with USDA and the International Research Center in Mexico. Canada is doing research in improving the

nutritional value of the root crop, manioc; and work has been done or is underway to increase the nutritional value of corn and rice.

FERTILIZER SHORTAGES AFFECTING PRODUCTION

Fertilizer is a key to high agricultural yields. For example, the president of the Fertilizer Institute has stated that fertilizer accounts for 30 percent of the U.S. agricultural production. Thus the current fertilizer situation of short supplies and spiraling prices may adversely affect world food production.

In the 1960s, a high demand for fertilizer was interpreted as a continuing trend by the fertilizer industry and many production units were built. This overexpansion caused an oversupply of fertilizer, which depressed prices and resulted in a lack of new investment and in closing old, inefficient plants. When demand for fertilizers increased sharply in 1972 and 1973, additional capacity was not available to supply the market.

An AID-initiated study of the fertilizer situation completed by the Tennessee Valley Authority (TVA) in early 1974 attributed the current shortages of nitrogen and phosphate fertilizers in international trade and in domestic supply in many countries to the following factors.

1. Increased indigenous demand for nitrogen and phosphate fertilizers, combined with a failure to add to production capacity within recent years, has left the primary sources of world trade--North America, Western Europe, and Japan--with less fertilizer available for export.

2. Increased use of nitrogen compounds for animal feed supplements has decreased the nitrogen fertilizer supply, especially in North America.

3. Planned expansion in developing countries is behind schedule and some plants operate at a low rate because of tight pollution standards, raw material shortages, power outages, lack of preventive maintenance, shortages of spare parts, and lack of trained manpower.

The tightness in fertilizer supplies has caused most nitrogen and phosphate product prices to reach all-time highs on the international market. For example, AID-financed purchases of urea fertilizer (46 percent nitrogen), which ranged from $63 to $97 a metric ton in 1972, cost $199 on November 30, 1973, and only limited amounts could be obtained.

Because domestic fertilizer prices at the producer level were first frozen on August 15, 1971, when prices were at a very low level, a wide gap developed between domestic and world prices. Since they could get much higher prices for their product on the international market, fertilizer companies exported their products rather than sell them domestically at the controlled price level. On October 25, 1973, the Cost of Living Council removed price controls on fertilizer. USDA reported that, in concert with that action, nearly 40 fertilizer manufacturers agreed to make an additional 1.5 million tons of fertilizer available to U.S. farmers before June 30, 1974. Domestic prices then increased 45 to 65 percent from the producer's level to the levels of international prices. Because of rising prices, in January 1974 the Cost of Living Council requested producers to observe voluntary restraints on further price increases until the end of June. Once again a wide spread developed between domestic and export prices.

The tight supply and high price of fertilizer on the world market are particularly difficult on developing countries that must depend on imports for much of their supply. In 1971 and 1972 these countries imported over half their fertilizer supplies, despite increased domestic production in the last decade.

Countries that use AID funds to buy fertilizer have been unsuccessful in obtaining their basic fertilizer requirements for 1974. AID financed fertilizer purchases of 1,113,113 metric tons in calendar year 1973, but its rough projection for calendar year 1974 is 500,000 tons.

AID had difficulty in obtaining fertilizer after October 25, 1973, when price controls were removed, because the U.S. fertilizer industry promised to maximize domestic availability.

From October 25, 1973, to February 14, 1974, AID requested bids for 456,000 metric tons of fertilizer for shipment to

Pakistan, Vietnam, and Bangladesh. It received bids on 67,000 metric tons but was able to award contracts for only 31,000 metric tons. For two requests in November 1973 and January 1974, AID did not receive any bids.

AID said that in South Vietnam rice production would decline by 4 tons for every 1-ton shortfall in fertilizer used. Replacing the rice which would thus not be produced with imports will be far more costly than supplying the fertilizer.

Agricultural production in developed countries may also be affected by reduced fertilizer usage because of tight supplies and high prices. USDA reported that, because of tight supplies and unfavorable weather conditions, U.S. farmers in 1973 used 6 percent less of some fertilizers an acre than in 1972. In its recent report, TVA concluded that fertilizer suppliers would again be in tight supply during 1974.

ASSISTANCE TO DEVELOPING COUNTRIES

Some authorities believe that the current food problem is one of distribution as well as of production. Less developed countries, with their large populations and high population increase rates, have neither the capacity nor the capability to readily produce enough food for their people, and at the same time they have only limited amounts of foreign exchange with which to purchase from those areas with excess production capability.

To aid these developing countries in meeting their food needs, many public and private organizations have provided (1) direct food aid, and (2) economic assistance in its various forms. Direct food assistance provides immediate relief but it does not provide any long-term solution to the problems faced by these countries. The economic assistance helps these countries improve nutrition, expand agricultural production, and build their foreign exchange reserves through exports so that they can purchase the food that they cannot produce.

In November 1973 the Development Assistance Committee (DAC) of OECD reported that the total official and net private flow of assistance from its donor countries to less developed countries in 1972 amounted to $19.6 billion. Official development assistance (ODA) was $8.6 billion ($3.3 billion from the United States), including bilateral assistance of $6.7 billion ($2.7 billion from the United States).

The portion of such assistance, from either public or private sources, that went to the food and agriculture sector or to population control is not readily determinable. OECD stated:

> "The nature of the statistical data makes it difficult to quantify the changes in emphasis that have taken place in the sectoral distribution of DAC countries' ODA over the years 1967-72. There has been a growing awareness among all donors of the need to assist agriculture, and more recently of the necessity to alleviate the effects of unemployment, but this has not been reflected in the statistics. On the other hand, available data illustrate the rapid growth of population programmes during the period under review. In 1967, only two countries, Sweden and the United States, extended this type of assistance and their bilateral ODA disbursements totalled approximately $7 million. By 1972, more than half the DAC countries assisted population programmes through a variety of channels (bilateral, multilateral and through subsidies given to private organisations) and ODA disbursements were in the vicinity of $160 million. Although Sweden and in particular the United States--whose programmes increased ten-fold over the period to $125 million--continue to dominate this area, the resources devoted by the other DAC donors in 1972 exceed by far the combined efforts of 1967."

In the past, most countries have offered their assistance primarily on a bilateral basis. Some experts indicate, however, that a coordinated multilateral approach is required to solve the food problem of developing countries.

The following sections of the report identify the major U.S. bilateral assistance programs and major multilateral assistance programs that aid the developing countries in alleviating their food problems.

The United States is contributing a considerable amount of resources to help developing countries in food and agriculture. However, the U.S. resources are being applied by several organizations, and it is difficult to identify all

the organizations and even more difficult to identify the resources being applied by these organizations to food and to agriculture. A similar situation exists with the multilateral organizations.

MATERNAL/CHILD FEEDING PROGRAM TUNJA, COLOMBIA SPONSORED BY FOOD FOR PEACE.

Source: Agency for International Development.

CHAPTER 3

U.S. BILATERAL ASSISTANCE TO FOOD AND AGRICULTURE

The major direct aid to developing countries in meeting their food needs has been development assistance (loans and grants) for expanding agricultural production and food assistance (concessional sales or donations of U.S. agricultural commodities). Other U.S. programs that contribute either directly or indirectly to developing countries' efforts to meet their food needs include the Peace Corps which works with individual countries; research and other activities of USDA; and activities of U.S. Government corporations, such as the Export-Import Bank, the Overseas Private Investment Corporation, and the Inter-American Foundation.

DEVELOPMENT ASSISTANCE

For many years the United States has provided assistance to developing countries for expanding agricultural production as part of the economic assistance program administered by AID. Estimates included in AID's annual appropriation requests show a rising trend in its food and nutrition program. As shown by the following table, AID is proposing $675 million for food and nutrition in 1975, compared with $192 million in 1972.

AID Programs by Functional Categories

	Fiscal year			
	1972	1973 (note a)	1974	1975
	(000,000 omitted)			
Functional development assistance:				
Food and nutrition	$ 192	$ 196	$ 285	$ 675
Population planning and health	137	168	186	226
Education and human resources development	100	84	106	109
Selected development problems	274	232	143	63
Selected countries and organizations	200	205	169	57
Total	903	885	889	1,130
International organizations and programs	153	137	146	179
Other programs and support costs (note b)	418	313	261	192
Security supporting assistance	593	628	138	398
Indochina postwar reconstruction	-	-	452	943
Total AID	$2,067	$1,963	$1,886	$2,842
Food and nutrition as a percent of functional development assistance	21	22	32	60
Food and nutrition as a percent of total AID	9	10	15	24

[a] 1974 congressional presentation estimate. 1975 congressional presentation shows 1973 actual of $1,937,000, but a functional breakdown was not given.

[b] Includes American schools and hospitals abroad, narcotics control, contingency fund, refugee relief and rehabilitation assistance (Bangladesh), and administrative expenses.

Source: AID's annual submissions to the Congress.

During fiscal year 1973 AID disbursed about $348 million of nonconvertible foreign currencies generated primarily from concessional sales of agricultural commodities under Public Law 480, and at June 30, 1973, was accountable for an unexpended balance of $142 million. These currencies can be used for various purposes and are not solely for agricultural projects. The amounts of such currencies becoming available in the future will decrease because agricultural commodity sales for foreign currencies were phased out in 1971.

Helping developing countries meet their food needs is one of the purposes of development assistance stated in foreign assistance legislation. Section 207(b) of the Foreign Assistance Act of 1961, as amended, states that, in furnishing development assistance, the President shall place appropriate emphasis on

> "* * * programs directed at enabling a country to meet the food needs of its people from its own resources, including the furnishing of technical knowledge and of resources necessary to increase agricultural productivity; assistance for improved storage, transportation, marketing, and credit facilities (including provision for foreign currency loans to small farmers), cooperatives, water conservation programs, and adaptive research programs; and technological advice * * *."

In authorizing economic assistance funds for fiscal year 1974, the Congress specified that bilateral assistance should be devoted to solving specific problems that directly aided the mass of the world's poor rather than large-scale capital projects and general-purpose resource transfers. Development assistance funds, which historically had been authorized for such categories as development loans, technical cooperation and development grants, and the Alliance for Progress, were authorized for fiscal year 1974 in functional categories reflecting the most common and pervasive development problems.

--Food and nutrition.

--Population planning and health.

--Education and human resources development.

--Selected development programs.

--Selected countries and organizations.

AID believes that, for many developing countries, development is synonymous with agriculture. About two-thirds of the labor force in these countries are dependent on the agricultural sector, and higher income, better employment opportunity, and a more nutritious diet can be realized only if food production is increased.

AID's stated goal in the agricultural sector is to increase the productive capabilities of the developing countries, particularly those having chronic food shortages. AID identified the following needs of, and constraints to, food production in the developing countries.

--Developing technologies, including equipment and crop protections.

--Adjusting agricultural systems to achieve better results in terms of employment, income distribution, balance of payments, and nutrition.

--Better use of soil and water.

--Providing major inputs to farmers, including technology, seed, fertilizers, farm chemicals, water, credit, and transportation.

--Organizing and managing agribusiness systems to provide farmers with required inputs and outputs.

--Limited availability of sufficiently trained personnel.

--Policies and bureaucracy which prohibit proper use of resources.

--Limited planning and management capacity.

--Crop spoilage and losses.

--Tribal customs, religious taboos, and lack of incentives.

The appropriation request for 1975 states that the purposes of AID's program are to help resolve the world food problem by increasing output per acre, especially on small farms in developing countries, through labor-intensive agriculture. This program supports six broad purposes of development:

--Strengthening local institutions to involve the poorest majority in development.

--Increasing and diversifying agricultural production.

--Integrating agricultural, industrial, and commercial development so that advancement in one will spur the others.

--Improving nutrition.

--Localizing infrastructure so that the poorest majority have access to roads, better land, electricity, water, and other utilities.

--Increasing employment and improving income distribution.

FOOD AID

In addition to providing economic assistance, the United States has, since 1954, provided other countries with food and nonfood agricultural commodities totaling about $25 billion. (About 10 to 15 percent have been nonfood commodities, such as fibers and tobacco.) These commodities were provided as concessional sales or as grants and averaged about $1 billion annually, ranging from a high of $1.7 billion in 1956 to $860 million in calendar year 1973.

U.S. agricultural commodities provided as concessional sales represented 41 percent of total agricultural exports in 1956 but declined steadily to 12 percent in 1972 and dropped sharply to 5 percent in 1973.

FAO reported that food aid represented 15 percent of official development assistance. Among the donor countries, the United States provides 75 percent of total food aid, followed by Canada which accounts for another 15 percent.

For both countries, food aid represents more than one-fourth of official development assistance.

U.S. agricultural commodities have been provided to other countries primarily under the Agricultural Trade Development and Assistance Act of 1954, as amended, which is commonly known as Public Law 480 and as Food for Peace. Commodities provided under Public Law 480, other Government programs, and commercial sales follow.

Export Market Value of U.S. Farm Products Shipped Under Public Law 480, Compared with Total Exports of U.S. Farm Products from July 1, 1954, through December 31, 1973

Calendar year	Public Law 480				Mutual security (AID) (note b)	Total Government programs	Commercial sales	Total agriculture exports
	Title I (sales)	Title II (donations)	Title III (barter) (note a)	Total				
	(000,000 omitted)							
1954[c]	$ -	$ 48	$ 22	$ 70	$ 211	$ 281	$ 1,304	$ 1,585
1955	263	242	262	767	351	1,118	2,081	3,199
1956	638	252	372	1,262	449	1,711	2,459	4,170
1957	760	214	244	1,218	318	1,536	2,970	4,506
1958	752	202	65	1,019	214	1,233	2,622	3,855
1959	732	143	175	1,050	158	1,208	2,747	3,955
1960	1,014	173	117	1,304	157	1,461	3,371	4,832
1961	879	244	181	1,304	179	1,483	3,541	5,024
1962	1,048	259	137	1,444	35	1,479	3,555	5,034
1963	1,213	259	37	1,509	11	1,520	4,064	5,584
1964	1,330	248	43	1,621	23	1,644	4,704	6,348
1965	1,051	253	19	1,323	26	1,349	4,880	6,229
1966	1,054	211	41	1,306	47	1,353	5,528	6,881
1967	930	287	13	1,230	33	1,263	5,117	6,380
1968	924	251	3	1,178	11	1,189	5,039	6,228
1969	765	256	-	1,021	(d)	1,021	4,915	5,936
1970	766	255	-	1,021	12	1,033	6,226	7,259
1971	692	291	-	983	86	1,069	6,629	7,698
1972	730	377	-	1,107	45	1,152	8,249	9,401
1973[e]	541	209	-	750	113	863	16,814	17,677
Total	$16,082	$4,674	$1,731	$22,487	$2,479	$24,966	$96,815	$121,781

[a] Beginning with 1963, title III has been adjusted by deducting exports under barter contracts which improve the balance of payments and by including them with commercial sales.

[b] Sales for foreign currency, economic aid, and expenditures under development loans.

[c] For only half a year, from July 1 through December 31.

[d] Amounts not available.

[e] Preliminary figures.

April 1974 estimates of Public Law 480 activities for fiscal year 1974 indicate that program costs may approach levels of the past few years, but, because of price increases, the quantity of commodities shipped will be down about 50 percent from fiscal year 1973 shipments.

Public Law 480 activities are funded from Commodity Credit Corporation appropriations and borrowing authority. The program is limited by the authorizing legislation to $1.9 billion annually for concessional sales and $600 million annually for grants, plus carryovers from previous years, but the amounts provided have never reached these annual limits. In recent years the controlling factor on program amounts has been a budget ceiling set by the Office of Management and Budget. During fiscal year 1974 and part of 1973, the primary controlling factor has been limited commodity availability.

Public Law 480 has played a major role in both the U.S. domestic farm program and the foreign assistance program. As stated in section 2 of the act, its purpose is:

> "* * * to develop and expand export markets for United States agricultural commodities; to use the abundant agricultural productivity of the United States to combat hunger and malnutrition and to encourage economic development in the developing countries, with particular emphasis on assistance to those countries that are determined to improve their own agricultural production; and to improve in other ways the foreign policy of the United States."

Public Law 480 commodities are to be used to assist friendly countries that are determined to help themselves toward a greater degree of self-reliance in providing food for their people and in resolving their population growth problems. Although some Public Law 480 objectives have changed, certain goals--such as encouraging economic development, promoting foreign policy, and feeding the hungry--have been present throughout.

Since the initial program emphasis was on disposing of excess U.S. agricultural commodities, the legislation originally included a requirement that the commodities be surplus before they were eligible for sale or donation. By 1966, however, agricultural surpluses had diminished to less than 1 year's supply. At the same time, crop failures and rapid population increases in the world had created a situation whereby the United States felt obligated to continue food aid. In 1966 legislation removed the requirement that commodities be surplus and substituted the requirement that no

commodity be made available for Public Law 480 use if the disposition would reduce the domestic supply below the level needed to meet domestic requirements, adequate carryover, and anticipated commercial exports.

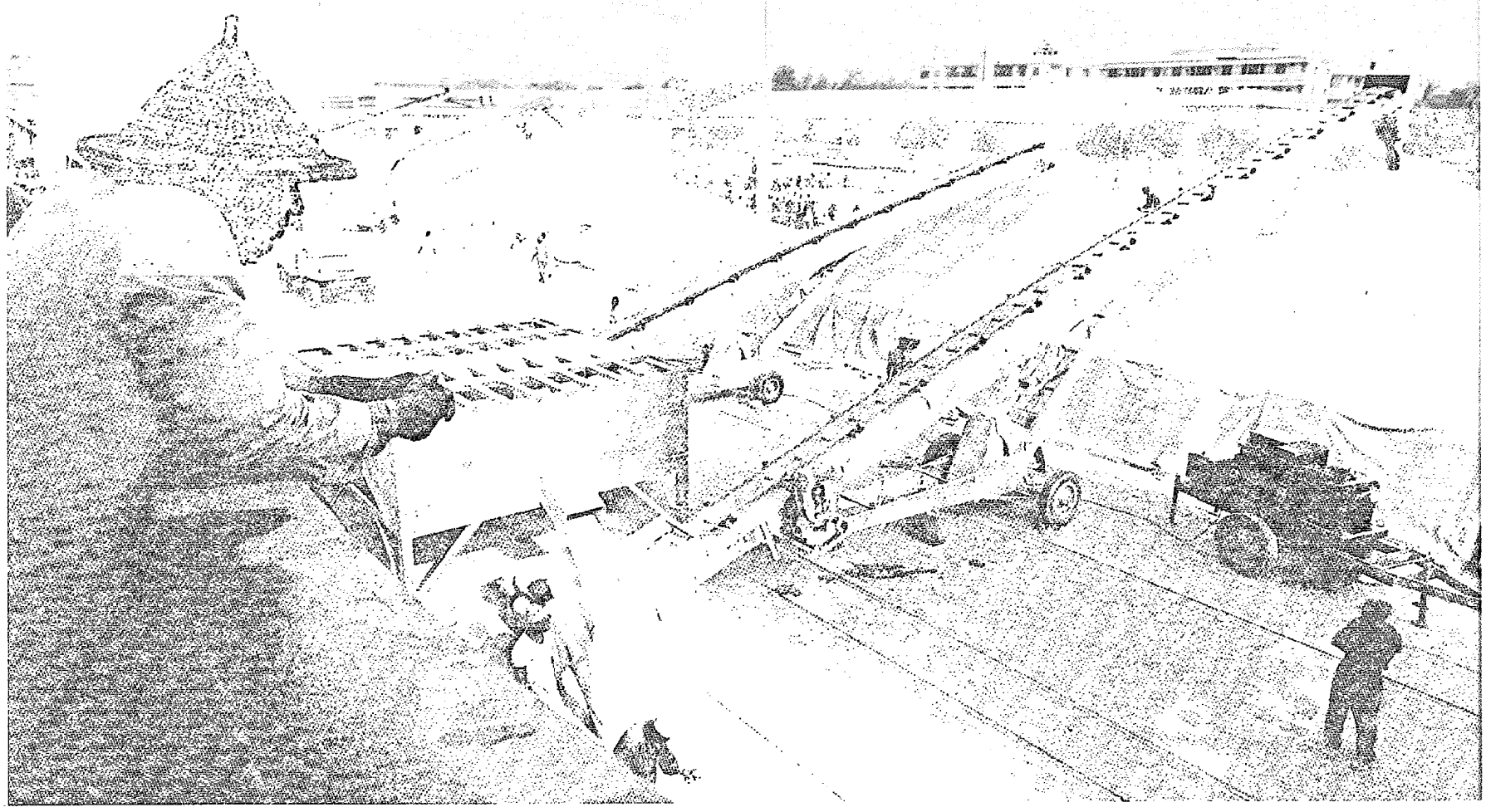
The recent food shortages and drawdowns of U.S. stocks drew attention to this requirement and its effect on Public Law 480 exports. The Foreign Assistance Act of 1973, approved December 17, 1973, expressed the sense of the Congress that legislation providing increased flexibility for responding to emergency and humanitarian requirements for assistance should be considered. This legislation would permit the Secretary of Agriculture to determine what part of the exportable supply should be used to carry out Public Law 480 objectives. A bill was introduced in the Congress in December 1973 containing such a provision.

Concessional sales

Agricultural commodity sales under title I--local currency sales, dollar credit sales, and convertible local currency credit sales--have amounted to $16 billion, or 72 percent of the total commodities provided under Public Law 480.

Since December 1971, local currency sales, under which the United States received payment in the currency of the importing country, have not been permissible under Public Law 480 legislation. The present legislation permits title I sales only on a dollar credit basis or a convertible local currency basis. Since a convertible local currency sale provides for repayment in dollars or convertible currency, such agreements are, in effect, dollar repayable agreements. The only difference in the two types of sales agreements lies in the terms of repayment. Sales specified "dollar credit" require repayment in not more than 20 years, whereas convertible local currency sales may provide for repayment on maximum concessional terms of up to 40 years, including a 10-year grace period.

Each sales agreement contains a self-help provision which describes the actions being undertaken by the recipient country to increase its agricultural production. The purpose of these self-help measures is to increase the food production and to improve the means for storing and distributing agricultural commodities.



U.S. SORGHUM FOR SAHELIAN DROUGHT VICTIMS BEING UNLOADED AT PORT OF DAKAR, SENEGAL

Source: Agency for International Development

Donations and disaster relief

Under title II, agricultural commodities may be donated to meet famine or other extraordinary relief requirements; to combat malnutrition, especially in children; to promote economic and community development in friendly developing areas; and for needy persons and nonprofit school lunch and preschool feeding programs outside the United States. The President's 1972 annual report on Public Law 480 activities stated that about 90 million people were recipients of U.S. assistance during fiscal year 1972.

These programs are carried out under a variety of arrangements, but each program must have a cooperating sponsor, such as friendly governments operating under bilateral agreements with the United States, voluntary agencies registered with the Advisory Committee on Voluntary Foreign Aid, or the multilateral U.N. World Food Program.

Recent guidelines issued on the title II program focus on improving nutrition and on overcoming malnutrition problems of vulnerable groups, with the maternal/child health program receiving the highest priority.

Barter

Barter program activities were shifted in 1963 from the use of agricultural commodities for procurement of strategic materials, as authorized in title III, to the use of such commodities for procurement of goods and services for U.S. Government agencies under the authority of the Commodity Credit Corporation Charter Act. USDA officials said that there was no activity under title III after 1969 and that, due to the agricultural commodity supply situation, the barter program was suspended at the end of fiscal year 1973.

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U.S. food assistance under Public Law 480 has been applied against the U.S. commitment to provide specified amounts of grain under the Food Aid Convention, 1971. The first Food Aid Convention, July 1, 1967, brought together, for 3 years, the United States and a number of other producing and importing developed nations in a multilateral food assistance effort to benefit the developing countries. The convention was

renewed in 1971 for 3 years. The agreement specifies that food aid may be provided through international organizations or bilaterally and may be donated or sold on a concessional credit or local currency basis. The United States was to contribute 1.89 million metric tons of grain annually, which represented 47.6 percent of the total contribution by all countries. U.S. food assistance under Public Law 480 has been more than the U.S. commitments under the convention.

PEACE CORPS VOLUNTEERS

The Peace Corps provides trained manpower to meet critical needs of developing countries and focuses its programs on training local people to meet vital basic manpower needs in education, agriculture, health, and public works. At June 30, 1973, it was participating in agricultural and rural development programs in 54 of the 58 countries in which it had programs.

Of the 7,354 Peace Corps trainees and volunteers at June 30, 1973 (compared with 6,894 at June 30, 1972), 12 percent had skill backgrounds in agriculture. One official said that the Peace Corps obtained up to 10 percent of the graduates from U.S. agricultural schools.

The following distribution of trainees and volunteers by program category shows that agriculture and rural development, with 22 percent at June 30, 1973, ranks second to education as areas of emphasis.

Program sector	June 30, 1972	June 30, 1973
Agricultural rural development	25%	22%
Business and public management	3	3
Education	50	48
Health	7	9
Urban development and public works	13	13
Other	2	5
	100	100

Since 1966 Peace Corps funding has ranged from a high of $114.1 million to a low of $72.5 million. A breakdown of these amounts by program category was not available.

The Peace Corps did a survey of what its volunteers had accomplished through their projects since inception of the Corps in 1961. The survey concentrated on the history of projects which were still current during the early part of fiscal year 1973 and which represented the collective achievements of 24,902 volunteers (about one-half of all volunteers) in 59 countries. According to this survey, 5,022 volunteers in the agriculture and rural development sector had aided, either directly or indirectly, over 2 million people by working in the following types of programs.

--Crop extension and production development.

--Animal extension and production development.

--Fisheries research and development.

--Agriculture cooperatives and other marketing development.

--Environment protection, conservation, and wildlife.

--Irrigation, water systems, and wells.

--Equipment maintenance, repair, and instruction.

--Agriculture planning and research.

--Rural community development and home economics extension.

--Forestry research and development.

--4-H youth and agriculture training development.

--Agriculture education.

--Geology, mining, and exploration development.

An official said that Peace Corps was reorganizing its priorities to emphasize agricultural and water resource programs. Although this must be done within the limits of the

PEACE CORPS VOLUNTEER DIRECTING DRY-LAND FARMING EXPERIMENT IN ETHIOPIA

Source: ACTION/Peace Corps

host country's desires, area directors have been advised to look for opportunities to initiate or increase these programs.

USDA AND FOREIGN AGRICULTURAL DEVELOPMENT

USDA's international activities have been devoted primarily to promoting sales of U.S. agricultural products through its Export Marketing Service and its Foreign Agricultural Service (FAS). USDA has conducted some agricultural research overseas through its Agricultural Research Service (ARS), however, and makes various studies of the world agricultural situation through its Economic Research Service (ERS). In addition, USDA coordinates U.S. participation in FAO.

FAS

In February 1974 the functions of FAS, the Export Marketing Service, and the International Organizational Staff were realined to form a new FAS. The realinement was intended to improve the effectiveness of its three primary international functions: (1) gather, analyze and disseminate information on world production and utilization of agricultural commodities, (2) develop export markets for U.S. agricultural commodities, and (3) represent USDA in international trade matters.

USDA officials said that the mission and principal functions remained the same under the realinement. The former Export Marketing Service had a budget of about $3.8 million for each of 1973 and 1974. Its major objective was to assist and promote the expansion of foreign agricultural markets through selected Government-assisted concessional and commercial sales of U.S. farm products. It performed this function by cooperating with other U.S. Government agencies, foreign governments, export trade firms, and ocean-chartering agencies in concessional commodity export sales under Public Law 480 and commercial credit and barter programs of the Commodity Credit Corporation.

Prior to the realinement of functions establishing the new FAS, the previous FAS had, between 1972 and 1974, an annual budget ranging from $29 million to $35 million plus $1 million in foreign currency expenditure authority. It performed three principal service functions: (1) it maintained a continuous program of analyzing and reporting on

worldwide supply and demand situations for agricultural commodities to assist the U.S. agricultural industry in its export operations, (2) it helped gain access to foreign markets for U.S. farm products through participation in bilateral and multilateral negotiations to reduce trade barriers, and (3) it helped develop foreign markets for U.S. farm products by participating with producer groups and trade associations in cooperative market development projects abroad.

The International Organizational Staff, which was administratively under FAS prior to the alinement, is responsible for coordinating activities involving international agricultural assistance agencies, for example, FAO.

ARS

ARS conducts basic, applied, and developmental agricultural research. ARS administers the USDA Special Foreign Currency Research Program and other international activities which are closely tied to the domestic research mission.

Through agreements with foreign research institutions and universities, ARS directs mutually beneficial research in plant science and entomology, livestock and veterinary sciences, soil and water conservation and agricultural engineering, marketing, forestry, agricultural economics, and nutrition.

Through June 30, 1973, about $92 million in foreign currencies generated from sales under Public Law 480 were obligated under the Special Foreign Currency Research Program for about 1,400 research agreements in 32 countries. The program estimate for fiscal year 1974 is the equivalent of $10.8 million in nine excess and five non-excess-currency countries.

Dollar costs associated with ARS international activities were $1.6 million in fiscal year 1973 and are estimated at $2.1 million for fiscal year 1974. Of these amounts, $459,000 in 1973 and $600,000 in 1974 are for ARS overseas agricultural laboratories.

ERS

ERS, with annual funding of $27 million to $31 million from 1972 to 1974, does research to provide economic

intelligence for USDA and other agencies, farmers and related industries, and the general public. Some activities relate to international aspects of food and agriculture, including (1) studies of supply and demand, trade in farm products in foreign countries, and their effect on prospects for U.S. exports and (2) analyses of farm export programs, progress in economic development and its relationship to sales of farm products, and international financial monetary programs and policies as they affect the competitive position of U.S. farm products.

ERS does economic research, such as special studies of agricultural economics of foreign countries, on a reimbursable or advance payment basis. From 1972 to 1974 this research, which is primarily for AID, ranged from 123 to 141 man-years at a cost of $7 million to $9 million.

ERS also coordinates the technical assistance and training that other USDA agencies provide to developing countries in planning agricultural development policy, in formulating technical assistance projects, and in evaluating U.S. agricultural assistance efforts overseas. Such USDA activities, including those of ERS, from 1972 to 1974, ranged from 253 to 335 man-years at a cost of $10 million to $13 million.

U.S. GOVERNMENT CORPORATIONS

Other U.S. Government activities directly or indirectly contributing to food and agricultural production are the Government corporations, such as the Export-Import Bank, the Overseas Private Investment Corporation, and the Inter-American Foundation.

The Export-Import Bank has several programs to facilitate exporting U.S. goods and services. Its annual report stated that, during fiscal year 1973, the Bank authorized credits, guarantees, and insurance policies in support of $922.1 million of agricultural product exports, including cotton, tobacco, grains, breeding stock, baby chicks, hides, tallow, and dried fruit.

The Overseas Private Investment Corporation provides incentive programs encouraging U.S. private investors to play a more constructive role in the economic and social progress of the developing countries. It insures and guarantees U.S. investors against potential risks of loss of

their overseas investments due to expropriation; inconvertibility of currency; and war, revolution, or insurrection. It also makes some direct loans and grants.

The Corporation's 1973 annual report stated that 78 new insurance contracts were issued representing $649 million in coverage for projects in 27 developing countries. Some of these projects related to food and agriculture, such as producing and marketing agricultural products and livestock in Iran, a cattle ranch in Kenya, expanding a food processing plant in the Philippines, and a flour mill in Liberia.

The Inter-American Foundation was created to help Latin American countries, and it makes small grants to local organizations for starting or operating social action projects. From inception to September 30, 1973, the Foundation made commitments for projects in 23 Latin American countries totaling $8.8 million, some of which were related to agriculture. The kinds of projects funded by these grants range from the one-time purchase of a truck to an ongoing project to fund 15 regional finance centers for rural farmers in Mexico.

CHAPTER 4

MULTILATERAL ASSISTANCE TO FOOD AND AGRICULTURE

Several multilateral organizations are conducting activities in the food and agriculture sector. These organizations may be roughly divided into two basic groups: (1) the international financial institutions, that is, the major development banks with international membership whose primary business is extending economic and social development loans to less developed countries and (2) the specialized agencies of the U.N. System[1] whose activities vary from providing a broad range of technical and capital assistance to using food commodities as wages for development purposes. This chapter briefly outlines the nature, purpose, and range of the more important activities in food and agriculture conducted by the major multilateral organizations. The United States is a major contributor to most of these multilateral organizations.

This chapter also highlights the work of the international research institutes which are instrumental in the Green Revolution.

WORLD BANK GROUP

The World Bank Group, consisting of three separate organizations, is the largest multilateral donor to world agriculture. Its two primary lending organizations, the World Bank itself and the International Development Association (hereinafter referred to collectively as the Bank), together loaned about $938 million, or 27.5 percent of their total lending, for agriculture in fiscal year 1973. The third organization, the International Finance Corporation, has also contributed to this sector, but its greater emphasis is more indirect, concentrating on such areas as fertilizer and food processing rather than on direct production of food corps or livestock.

The Bank made its first agricultural loan in 1948, but agriculture was not a high-interest area during its early years. In 1963 the Bank decided to expand operations in

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[1]The World Bank Group, although a part of the U.N. System, is considered, in this report, with the other development banks.

agriculture, and since then its lending in the agriculture sector has accelerated in dollar volume and as a percentage of total Bank operations.

Fiscal year	Total loans and credit	Agriculture	
		Total	Percent
	(000,000 omitted)		
1948-63	$ 7,439	$ 628	8
1964-68	5,496	600	11
1969-73	13,164	2,449	19
Total	$26,099	$3,677	

The countries of Asia, particularly India, have been the largest recipients (about 40 percent) of agriculture lending. In recent years the percentage of agriculture lending going to Africa has increased and that to Latin America has decreased. The decrease in assistance to Latin America was attributed to increases in the Inter-American Development Bank's agricultural lending to that region.

Perhaps the most important changes in the last 10 years have occurred in the composition and types of Bank activities. Irrigation and drainage projects have been a traditional subsector of emphasis, and they continue to receive substantial dollar assistance, showing the attention given to these problems in East and South Asia, the Middle East, and Africa. However, this type of project has declined from about 59 percent of agriculture operations during 1948-63 to 44 percent during 1964-68 and to about 33 percent during 1969-73.

In contrast, Bank loans for on-farm activities, such as livestock ($682 million) and agricultural credit ($595 million), increased during the past 10 years.

The remaining loans in the agriculture sector ($1 billion) have been spread over a number of activities: food and nonfood crops ($286 million), settlement and integrated development of areas for farming ($246 million), crop processing and storage ($235 million), forestry and fishing ($94 million), agricultural research ($13 million), and a wide variety of miscellaneous activities ($72 million).

The Bank also has made industrial loans ($180 million) for fertilizer production.

Over the years, the Bank has provided a considerable amount of technical assistance annually, through grants and loans. For example, in fiscal year 1973 the Bank provided $25 million for feasibility studies, $49 million for expert and consultant services, and $13 million for overseas training. However, precise information as to the agricultural portion of technical assistance is not readily available.

The Bank is the only major development bank to provide any substantial support for population planning. As of June 1973, approved Bank support totaled more than $65 million for India, Indonesia, Malaysia, Iran, Jamaica, Trinidad and Tobago, and Tunisia.

The International Finance Corporation has also been involved, although more indirectly, in assistance to agirculture and food production in general. As of June 30, 1973, the Corporation reported that it had provided $28 million for food and food-processing industries and $57 million for fertilizer production. Additional amounts for agriculture may have been provided through the Corporation's investments in various development finance institutions, which, in turn, relend primarily to small business enterprises.

In an address to the annual meeting of the Bank's Board of Governors in September 1973, the Bank President described its plans to increase agriculture lending to about $4.4 billion during 1974-78. The essential elements of those plans are:

--Greatly increasing lending to small farmers.

--Assisting governments in reforming their agricultural financial structure.

--Continuing investment in large-scale irrigation projects, emphasizing on-farm development to bring irrigation to small farmers.

--Supporting nonirrigated agriculture, particularly small-scale dairy farming in milk-deficient areas.

WHEAT BEING HARVESTED AT AN EXPERIMENTAL STATION IN THE GHAZVIN AREA OF IRAN WHERE THE WORLD BANK IS HELPING TO DEVELOP WATER RESOURCES AND AGRICULTURE

Source: World Bank

--Expanding training facilities for extension agents to help the rural poor.

--Financing rural works and integrated rural development projects.

--Assisting land tenancy reform programs to help the small farmers.

Bank management subsequently proposed raising the $4.4 billion target to about $5.8 billion, but U.S. officials said that problems associated with the energy crisis might affect the ability and willingness of member governments to contribute the additional capital the Bank will need to achieve future targets.

INTER-AMERICAN DEVELOPMENT BANK

Agriculture traditionally has been a sector of heavy emphasis for the Inter-American Development Bank, which was established in 1959 to contribute to the Latin American economic and social development.

Through December 1973, it had extended about $1.5 billion in agriculture loans, 23 percent of its $6.3 billion total lending. Over half the lending for agriculture has been made in the past 5 years as follows:

	Amount	Percent of annual total
	(000,000 omitted)	
1969	$202	32
1970	236	36
1971	93	14
1972	130	16
1973	187	21
Total	$848	

These loans were concentrated in agricultural credit, irrigation and drainage, integrated farm development, research and extension services, foot and mouth disease, and farm marketing facilities.

Geographically, the five largest recipients received about 65 percent of the $848 million: Mexico, $237 million; Brazil, $113 million; Venezuela, $93 million; Argentina, $60 million; and Ecuador, $53 million.

In addition to financing the above loan activities, the Inter-American Development Bank has financed various technical assistance activities, including those in agriculture, through grants and loans.

ASIAN DEVELOPMENT BANK

The Asian Bank made its first loan in 1968, and, at December 1973, its total lending was slightly less than $1.4 billion. The agriculture sector has received $172 million, or about 12.5 percent, and there have also been some additional amounts for technical assistance and loans for fertilizer plants. Agriculture loans in 1973 amounted to $44 million.

The agricultural loans, other than $6 million for miscellaneous activities, are concentrated in three general subsectors.

--Irrigation and drainage loans ($71 million) include area development and some river flood control.

--Fisheries and livestock loans ($50 million) are primarily for financing fishing boats and vessels.

--Industrial crops and agrobusiness loans ($45 million) covering a wide variety of purposes, including tea factories, palm oil mills, and jute development.

Geographically, Indonesia has received about $60 million, or 35 percent of total agricultural lending. Sri Lanka received $20 million, or 12 percent, and a number of countries received the rest.

The Asian Bank also extended about $37 million in industrial loans for fertilizer production and provided about $7 million for agricultural technical assistance, much of it in agricultural loans. Other areas of technical assistance include advisory assistance to agricultural development agencies, sectoral studies in agriculture, seminars on various agricultural subjects, and support for an Asian Vegetable Research and Development Center.

AFRICAN DEVELOPMENT BANK

Membership in the African Development Bank, which was established in 1964, has been limited to African nations, and total resources and lending have been relatively small.

The African Bank reported total lending of slightly more than $80 million at December 1972, with agriculture comprising about $12 million, or 15 percent. Types of projects approved were irrigation, a dairy herd and plant, a commercial farm, and a fertilizer plant. Preliminary figures at December 1973 indicated that total lending rose to about $128 million, with agriculture accounting for $23 million, or 18 percent. The 1973 loans reportedly included about $5 million for the Sahelian zone in Africa, which has been experiencing severe drought conditions.

In 1973 the African Bank set up a concessional loan fund, the African Development Fund. It has been accepting financial contributions to it from African and non-African nations.

U.N. SYSTEM

The U.N. System administers two primary programs and a number of other programs in food and agriculture: (1) FAO's intelligence-gathering and technical assistance activities and (2) the World Food Program, which provides food commodities for development projects and for emergency relief operations.

FAO

FAO was established in 1945. Its primary purposes are to raise the level of nutrition and to improve the production and distribution of food and agricultural products throughout the world, and it does this by gathering and disseminating information on food and agriculture matters and by providing technical assistance at the field level.

FAO is regarded as an authoritative body and a storehouse of information in the food and agriculture fields. Its publications cover not only agriculture but also forestry, fisheries, nutrition, and legislation relating to these matters. FAO sponsors and hosts numerous conferences, seminars, workshops, and studies. It also provides fellowships

to support advanced research and to train personnel of developing countries to improve indigenous capabilities. FAO maintains liaison with other multilateral, bilateral, and private organizations working in food and agriculture.

FAO is the executing agency for projects programed and funded by others, most notably the United Nations Development Program (UNDP). FAO reported that during 1972 nearly 3,300 experts and consultants served in the field and that salaries and related costs for such experts and consultants comprised about 80 percent of annual technical assistance expenditures over the last several years.

At mid-1973, FAO reported that it was operating about 1,639 projects, including, 1,151 programed and funded by UNDP, in 126 countries and territories. More than 80 percent of the dollar value of all projects involved 515 large-scale UNDP projects (over $100,000) consisting generally of broad surveys, such as water and soil resource surveys; or of feasibility studies and development schemes, such as regional development schemes; or institution-building, such as strengthening and upgrading national institutions and government agencies.

Many of the small-scale projects provide a single expert or technical mission. FAO reports that requests are increasing for high-level consultants on short-term assignments for specific projects intended to contribute immediately to increased production, either directly or indirectly.

UNDP recently converted to a country-programing basis whereby the recipient nations themselves essentially determine the sectors and types of assistance desired. UNDP has reported that, of those countries reporting their requirements to date, there is a lessening of emphasis on agriculture in relation to other sectors. In its 1973 annual report, UNDP reported that, although agriculture continued to be the largest sector for planned expenditures, the share of new project expenditures going to this sector would be about 23 percent, compared with the 30 percent experienced for ongoing projects. UNDP said that the drop in new expenditures for agriculture would be sharp in Asia, the Far East, Latin America, Europe, the Mediterranean, and the Middle East but new expenditures in Africa would increase.

FAO is coordinating relief operations in the Sahelian zone of Africa and expects to have a continued role in future international assistance operations there.

World Food Program

The World Food Program was established under joint U.N. and FAO auspices in 1963 and has a membership of 105 countries, including 88 less developed countries. It uses agricultural commodities, cash, and services donated by member nations to support development projects in less developed countries and to provide food aid for emergency relief. The Program operates on a 2-year pledging target; $340 million was the goal for 1973-74 and $440 million for 1975-76. Through September 1973, the Program had provided commodities and services of about $1.3 billion for approved development projects hd about $133 million for emergency relief operations.

Historically the Program's development projects fall roughly into three categories.

--Human resources development ($466 million, or 35 percent) consisting primarily of maternal and school school feeding programs.

--Public works and social development ($183 million, or 14 percent), including slum clearance, road building, public health programs, and other community development efforts.

--Directly productive projects in the agriculture sector ($666 million, or 51 percent) for land reclamation and improvement, land settlement, livestock and dairy production, and other diversified projects.

The five largest recipients of development assistance (totaling 38 percent) have been Egypt, $147 million; India, $130 million; Turkey, $88 million; Algeria, $78 million; and Mexico, $63 million.

Some of the emergencies to which the Program has responded were the 1970 cyclone and tidal wave which hit East Pakistan; the flooding in Hungary; droughts in India and Kenya; refugee problems resulting from the Indo-Pakistani strife of 1971; and the 1972 earthquake which devastated Managua, Nicaragua.

Geographically the Program was dispersed as follows.

	Development assistance	Emergency relief
	(000,000 omitted)	
North Africa, Near East	$ 453	$ 28
Asia, Far East	354	51
Latin America, Caribbean	193	11
Europe, East Africa	189	19
West Africa	127	24
Total	$1,316	$133

Other U.N. programs

Although FAO is the primary executing agency for U.N. programs in food and agriculture, a number of other U.N. agencies also have programs relating either directly or indirectly to food and agriculture matters. Generally these agencies carry out or coordinate their programs with FAO, and the best available estimates indicate that the programs for each of these agencies may total less than $10 million annually.

Briefly, the World Health Organization provides technical assistance to developing nations on nutrition and food hygiene practices. It collaborates with FAO in establishing world food and nutritional standards and in dealing with preventing diseases communicable from animals to man.

The International Atomic Energy Agency carries out research contracts, training, and other technical assistance oriented toward using nuclear techniques for improving crop yields and strains and for protecting crops and animals against parasites and diseases.

The International Labor Organization and the United Nations Educational, Scientific, and Cultural Organization, along with FAO, conduct training and education projects and projects dealing with broader aspects of rural development in general.

The United Nations Industrial Development Organization is collaborating with FAO in the field of agroindustries. It assists nations in identifying, setting up, and implemeting, for example, food processing, fertilizer, and pesticide projects.

The United Nations Children's Fund conducts nutrition projects to stimulate the local production of milk, support the development of new high-protein foods for infants, and provide advice on nutrition in general.

One other U.N. program which relates at least indirectly to food and agriculture is the United Nations Fund for Population Activities. It supports research, obtaining basic demographic data, training, information dissemination, and other types of family-planning activities. This program is currently operating at about $50 million annually.

INTERNATIONAL AGRICULTURAL RESEARCH CENTERS

These centers have been established in various countries throughout the world to conduct research on some of the more important agricultural problems confronting the less developed countries. They have made gains in wheat and rice production and were instrumental in the Green Revolution.

Six operational and two proposed research centers are linked through a Consultative Group on International Agricultural Research chaired by a World Bank representative and composed of representatives from major international development banks, private foundations, and several countries, including the United States. This Group provides the research centers with direction and funding for their operations. A Technical Advisory Committee, composed of leading agricultural research personnel, reviews programs and budgets and recommends the level of support furnished to the centers by the Group. This Committee also develops long-range plans on international agricultural research needs.

The Group provided support for six international research centers of about $23 million during 1973 and is providing about $33 million for eight research centers during 1974. In addition, during 1974 it plans to spend about $2 million for two research centers being established in Africa and for a proposed network of plant germ plasma centers.

ECUADOR TROPICAL EXPERIMENTAL STATION FOR IMPROVING CORN PRODUCTION

Source: Agency for International Development

The programs at these research centers consist of research, dissemination of results, and training. The centers provide various forms of technical assistance to national governments and institutions which are financed primarily by the recipient or by other donors. The Group finances six ongoing research centers.

--International Rice Research Institute in the Philippines (rice farming in Asia).

--International Center for Maize and Wheat Improvement in Mexico (corn and wheat).

--International Center for Tropical Agriculture in Colombia (bean, cassava, beef cattle, swine, and farming systems).

--International Institute for Tropical Agriculture in Nigeria (cowpeas, sweet potatoes, yams, and cropping systems).

--International Potato Center in Peru, by developing different strains of potatoes to increase their yields per acre and extend the geographical areas in which they may be grown.

--International Crops Research Institute for Semi-Arid Tropics in India (sorghum, millets, chickpeas, pigeon peas, and cropping systems).

Two other research centers which are to begin operation during 1974 are the International Laboratory for Research on Animal Diseases near Nairobi, Kenya, which will focus on two major diseases of livestock in Africa--trypanosomiasis and East Coast fever--and the Internatinal Livestock Center for Africa in Ethiopia to determine the research policies and priorities which should be adopted in developing a livestock production research program for Africa.

In addition to the research centers financed through the Group, there are a number of other international research centers, financed by other means, working on agricultural problems throughout the world, including the Asian Vegetable Research and Development Center and the Institute for Tropical Countries Breeding and Veterinary Medicine in Africa.

USDA officials said that we should recognize regional activities, such as the agricultural activities of the Organization of American States. Its role in planning agricultural activities was thought to be more important than the direct assistance provided. The Inter-American Institute of Agricultural Sciences, formerly a research center, was identified as the agricultural development arm of the Organization. The Institute provides technical assistance and training and general institutional support for agricultural development.

CHAPTER 5

GAO OBSERVATIONS

It is clear that, with rapidly increasing population, one of the challenges facing the world is how to feed its people. There are many views as to the significance of the current food problem. If there is a common view, it is that the developing countries must take concerted action to control population growth and to increase food production to feed their rapidly increasing population.

Famines and food scarcities are not new, but the stock depletions, spiraling prices, and imposition of export controls resulting from the 1972 decline in food production of 1 or 2 percent--3 or 4 percent for grains--indicates that a critical point has approached where even small production declines can have severe adverse effects.

Although the objective of our review was to obtain a perspective of the current world situation and to identify the efforts of the United States and of multilateral organizations to deal with the problem, our overview indentifies issues that need to be faced or, in some instances, faced more forcefully.

PRODUCTION, DISTRIBUTION, AND FINANCING

Some authoritites have expressed the opinion that, if the world's food supplies were appropriately distributed, these supplies would be adequate to feed the world's population. However, the problems of distribution and economics restrict supplies to those in need. Excess production is a problem, at least periodically, for some countries, but inadequate production is a problem for other countries. This situation is projected to continue for many years.

Food distribution is thus a problem between countries and also a problem within countries where much of the population does not participate in the market economy or where the distribution facilities are inadequate to reach all population segments. Financing is interrelated with the distribution problem. Developing countries with inadequate food production may not have foreign exchange to buy on the world market, and the poor within the countries may not have money to buy the food that is available.

Obviously obtaining adequate food is a problem facing people throughout the world, but this problem is most critical in developing countries. In the shortrun, a basic problem is transferring food to these countries from those countries with excess production. The concensus of opinion, however, is that ultimately developing countries must increase production to a level where their production and their ability to buy on the world market is adequate to feed their people.

POPULATION

World population growth, about 75 million a year, is the dominant cause increasing food demand. Some authorities estimate that production of grains must increase 24 million tons a year just to keep pace with this growth while maintaining the same per capita grain consumption.

At the current rate of increase, the world's population of about 3.6 billion will double by the year 2000, and over 80 percent of this increase will take place in the developing countries. The effect of such population growth on a country's ability to feed its people is apparent by examining food production on a per capita basis. In the past 20 years, food production in the developing countries increased about 54 percent, or an average of 2.8 percent annually. The production decline in 1972 caused per capita production in these countries to drop to the 1960 level.

It is apparent, therefore, why some authorities believe there can be no longrun solution to the food problem, which does not give due consideration to the critical issue of population growth.

MULTILATERAL ASSISTANCE

In recent years, assistance to world food and agriculture has been increased by multilateral organizations, such as the development banks and organizations of the United Nations. In their respective 1973 business years, these organizations contributed about $1.5 billion to developing nations for food and agriculture, 60 percent of which was contributed by the World Bank Group.

Future prospects for multilateral assistance to food and agriculture and unclear. Overall these organizations have not shown any consistent emphasis among them on agriculture,

and they have placed very little emphasis on population control.

INTERNATIONAL COOPERATION

The developing countries have with the aid of bilateral and multilateral assistance, made notable gains in food production, but considering the rapidly increasing population, these gains have not been adequate. Because of the magnitude of the problem and the evidence of historical experience, the developing countries' food problems are not going to be alleviated by the efforts of donors acting individually. For external assistance to be most effective in meeting immediate food needs and in long-range agricultural development, cooperation among donor countries and agencies is essential.

In discussing the race between grain production and world demand, Secretary of State Henry A. Kissinger summarized the situation before the United Nations on April 15, 1974.

> "No nation can deal with this problem alone. The responsibility rests with all of us. The developed nations must commit themselves to significant assistance for food and population programs. The developing nations must reduce the imbalance between population and food which could jeopardize not only their own progress but the stability of the world."

A World Population Conference was held in August 1974 and a World Food Conference scheduled for November 1974 to consider these problems. It remains to be seen, however, how effective these conferences will be in focusing world attention on the problems and generating international cooperation to deal with them.

U.S. ROLE

Because of its agricultural and technical know-how, the United States is in position to exercise leadership in the fight against world hunger. Through its commercial exports, food aid programs, country-to-country bilateral assistance, and participation in multilateral oranizations, the United States had done much to help. Despite these efforts and those of other donors, the situation in the developing countries is critical, and much needs to be done in mobilizing

international will and resources and in motivating developing countries to bring their population growth and their ability to provide adequate food, through production and purchases, into balance.

FAO reported in April 1974 that total food aid in grain had dropped about one-half from previous levels. That decrease was largely attributable to cuts by the United States that provided about 75 percent of total food aid. If external food aid is to be relied upon as a source of food for developing countries, provisions need to be made which will insure that such assistance will be available in times of short supply.

U.S. food aid is provided primarily under Public Law 480, which states that no commodity shall be available for disposition under the act if its export would reduce the supply below that needed to meet domestic requirements, adequate carryover stocks, and anticipated commercial exports.

The Congress stopped short of amending this provision, but in the Foreign Assistance Act of 1973, it expressed the sense of the Congress that Public Law 480 should be amended to permit the Secretary of Agriculture to determine what part of the U.S. food supply available for export should be used to carry out the national interest and humanitarian objectives of Public Law 480.

Continuing food aid programs have shown the humanitarian concern of high-income countries for conditions in developing countries. The recent cut backs in food contributions make it apparent, however, that food assistance policies require more cooodination and continuity to avoid abrupt reductions in food available to developing countries or sharp increases in external payments for food which may be in tight supply or not available. In 1973 and 1974 such adjustments were severe for many countries.

Although the United States has made substantial contributions in the area of food and agriculture, it now faces the challenges of (1) generating international cooperation to meet immediate food aid needs and expand agricultural production and (2) motivating developing countries to improve their capability for providing food adequate for their population growth.

CHAPTER 6

SCOPE OF REVIEW

The objective of our review was to provide an overview of the world food situation and some of the major factors impacting on the situation and to identify the chief U.S. and multilateral organizations and resources contributing to alleviating the food shortages in the developing countries. This report was prepared from published documents of U.S. agencies and multilateral organizations, from discussions with U.S. officials, and from statements of various other authorities.

Officials of the Departments of Agriculture, State, and Treasury and the Agency for International Development and the Peace Corps reviewed our report, and their informal comments have been considered in the text.

Additional information on many of the specific subjects covered in this report can be obtained from published documents listed in appendix I.

SELECTED U.S. AND MULTILATERAL PUBLICATIONS

RELATING TO U.S. AND WORLD FOOD SITUATION

DEPARTMENT OF AGRICULTURE

United States and World Fertilizer Outlook 1974 and 1980, ERS, USDA, Feb. 1974.
Fertilizer Situation, ERS, USDA, Jan. 1974.
The President's Annual Report on Public Law 480.
Indices of Agricultural Production in Africa and the Near East, ERS, USDA, May 1973.
Indices of Agricultural Production for the Western Hemisphere, Excluding the United States and Cuba, ERS, USDA, Apr. 1973
Indices of Agricultural Production for East Asia, South Asia, and Oceania, ERS, USDA, Apr. 1973.
Agricultural Outlook Digest, ERS, USDA, periodic.
Outlook for U.S. Agricultural Exports, ERS and FAS, USDA, Feb. 1974.
1973 Handbook of Agricultural Charts, USDA Agricultural Handbook No. 455, Oct. 1973.
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World Agricultural Situation, ERS, USDA, Dec. 1973.
Grain Stocks Issues and Alternatives, A Progress Report, ERS, USDA, Feb. 1974.
Nutrition Realities in the Lower Income Countries, ERS, USDA, Apr. 1973.
Economics of Protein Improvement Programs in the Lower Income Countries, ERS, USDA, July 1971.
Multilateral Assistance for Agricultural Development, ERS, USDA, Oct. 1973.
FAO, its Organization and Work and United States Participation, FAS and USDA, Apr. 1969.

OTHER DEPARTMENTS AND AGENCIES

Food for Peace, an evaluation of Public Law 480 Title II, report by Checchi and Company, prepared for AID, July 1972.
World Fertilizer Market Review and Outlook, TVA National Fertilizer. Development Center, report prepared for AID, Mar. 1974.
Program Presentation to the Congress, AID, annually.
World Population Year 1974, Department of State, Jan. 1974
Peace Corps Annual Operations Report, fiscal year 1973.

ACTION, Fiscal Year (annual) Budget, Peace Crops, Submission to the Congress.
Eximbank and the World of Exports, Statement of Condition, Fiscal Year 1973.
First Steps--The Inter-American Foundation, The Inter-American Foundation's First Three Years 1971-1973.
Overseas Private Investment Corporation Annual Report, fiscal 1973.
International Economic Report of the President, Feb. 1974.
Economic Report of the President, Feb. 1974.
Annual Report to the President and to the Congress, National Advisory Council on International Monetary and Financial Policies.
U.S. Participation in the U.N.--Report by the President to the Congress for the year 1972.

CONGRESSIONAL HEARINGS

U.S. Foreign Agricultural Trade Policy, Hearings before the Subcommittee on Foreign Agricultural Policy, Senate Committee on Agriculture and Forestry, Mar. and Apr. 1973.
World Food Grain Situation, Hearing before the Subcommittee on South Asian Affairs and the Subcommittee on African Affairs, Senate Committee on Foreign Relations, Oct. 5, 1973.
U.S. and World Food Situation, Hearings before the Subcommittee on Agricultural Production, Marketing, and Stabilization of Prices and Subcommittee on Foreign Agricultural Policy, Senate Committee on Agriculture and Forestry, Oct. 17, and 18, 1973.
Fertilizer Shortage Situation, Hearings before the Subcommittee on Department Operations, House Committee on Agriculture, Sept. and Oct. 1973.

MULTILATERAL ORGANIZATIONS

United Nations Development Programme, The Administrator Reports, August 1973.
World Food Programme, FAO, 1971.
FAO in 1972 (published annually).
United Nations Development Programme--Annual Reports of the Administrator for 1972 and 1973.
Review of FAO Field Programmes 1972-73, August 1973.
Annual reports of various U.N. agencies (International Labor Orgazization; World Health Organization, United

Nations Children's Fund; United Nations Educational, Scientific, and Cultural Organization; International Atomic Energy Commission; and United Nations Fund for Population Activities).

The Determinants and Consequences of Population Trends, New Summary of Findings on Interaction of Demographic, Economic and Social Factors, Volume 1, United Nations, 1973.

FAO Commodity Review and Outlook, 1972-1973.

Agricultural Commodity Projections, 1970-1980, FAO, 1971.

The State of Food and Agriculture, 1973, FAO (published annually).

Volume 26, Production Yearbook, 1972, FAO, June 1973.

Monthly Bulletin of Agricultural Economics and Statistics, FAO.

Energy and Protein Requirements, report of a joint FAO and World Health Organization Ad Hoc Expert Committee, Mar. 22-Apr. 2, 1971.

Lives in Peril, Protein and the Child, FAO World Health Organization, and the United Nations Children's Fund Protein Advisory Group, 1970.

Agriculture Sector Working Paper, World Bank, June 1972.

Population Planning, Sector Working Paper, World Bank, Mar. 1972.

Policies and Operations, the World Bank, International Development Association, and International Finance Corporation, June 1971.

World Bank and International Development Association annual reports.

International Finance Corporation annual reports.

Asian Development Bank annual reports.

African Development Bank annual reports.

Inter-American Development Bank annual reports.

1973 Review--Development Co-operation Efforts and Policies of the Members of the Development Assistance Committee, OECD, Nov. 1973.

APPENDIX II

PRINCIPAL U.S. OFFICIALS RESPONSIBLE FOR ACTIVITIES DISCUSSED IN THIS REPORT

	Appointed	
SECRETARY OF STATE:		
Henry A. Kissinger	Sept.	1973
ADMINISTRATOR, AGENCY FOR INTERNATIONAL DEVELOPMENT:		
Daniel S. Parker	Oct.	1973
SECRETARY OF AGRICULTURE:		
Earl L. Butz	Dec.	1971
SECRETARY OF THE TREASURY:		
William E. Simon	May	1974
DIRECTOR, OFFICE OF MANAGEMENT AND BUDGET:		
Roy L. Ash	Feb.	1973
DIRECTOR, ACTION:		
Michael P. Balzano, Jr.	Apr.	1973
PRESIDENT AND CHAIRMAN, EXPORT-IMPORT BANK OF THE UNITED STATES:		
William J. Casey	Mar.	1974
PRESIDENT, OVERSEAS PRIVATE INVESTMENT CORPORATION:		
Marshall T. Mays	Sept.	1973
PRESIDENT, INTER-AMERICAN FOUNDATION:		
William M. Dyal, Jr.	Mar.	1972

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