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# IMPLICATIONS OF CHANGING AID PROGRAMS TO U. S. AGRICULTURE

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President Johnson's message on foreign aid, delivered to Congress on January 14 of this year, charted future directions of foreign aid programs as they pertain to agriculture. Here at the highest level of our government we see emphasis placed upon the important role that agriculture plays in national economic development of the less developed countries. We see a commitment to share our agricultural abundance to further economic growth abroad. We also see a commitment to share our technical skills to assist the developing countries achieve rapid increases in agricultural output and productivity. This sharing includes active participation by state universities and land-grant colleges, the U. S. Department of Agriculture and other agencies of government, and private organizations in planning and carrying out foreign technical assistance programs. In addition, we see emphasis placed upon the interrelationships between aid and trade. It is recognized that economic growth abroad, made possible in large part by improved performance of the agricultural sector, will lead to increased trade and larger foreign markets for farm products in the developing countries.

## ECONOMIC PROGRESS IN AGRICULTURE

Contrary to what may be thought by many, the developing countries generally have been successful in achieving outstanding increases in agricultural production. Recently, the Economic Research Service, in collaboration with the Agency for International Development, completed a new set of index numbers showing changes in crop production since 1948 for 26 of the less developed countries located in southern Europe, Asia, Africa, and Latin America. These 26 countries represent three-fourths of the people, food, and income of all the less developed countries of the free world. The index numbers show that total crop production increased at annual compound growth rates ranging from 1.6 percent in Tunisia to 9.7 percent in Israel. Many countries show increases of 3, 4, and 5 percent a year (Table 1).

TABLE 1. COMPOUND ANNUAL GROWTH RATES FOR CROP OUTPUT AND POPULATION AND CHANGE IN CROP OUTPUT PER PERSON, SELECTED COUNTRIES

| Region and Country       | Crop Output, 1948-63 <sup>1</sup> | Population, 1950-60 <sup>2</sup> | Changes in Crop Output per Person |
|--------------------------|-----------------------------------|----------------------------------|-----------------------------------|
|                          | <i>Percent</i>                    | <i>Percent</i>                   | <i>Percent</i>                    |
| Latin America            |                                   |                                  |                                   |
| Argentina                | 2.8                               | 1.7                              | 1.1                               |
| Brazil                   | 4.2                               | 3.1                              | 1.1                               |
| Chile                    | 2.8                               | 2.5                              | .3                                |
| Colombia                 | 2.6                               | 2.2                              | .4                                |
| Costa Rica               | 5.6                               | 2.3                              | 3.2                               |
| Mexico                   | 6.3                               | 3.1                              | 3.1                               |
| Venezuela                | 4.5                               | 4.0                              | .5                                |
| Near East and South Asia |                                   |                                  |                                   |
| Egypt                    | 2.0                               | 2.4                              | — .4                              |
| Greece                   | 3.7                               | 1.0                              | 2.7                               |
| India                    | 3.1                               | 2.0                              | 1.1                               |
| Iran                     | 3.6                               | 2.2                              | 1.4                               |
| Israel                   | 9.7                               | 5.2                              | 4.3                               |
| Jordan <sup>3</sup>      | — 1.9                             | 2.6                              | — 4.5                             |
| Pakistan <sup>4</sup>    | 1.8                               | 2.2                              | — .6                              |
| Turkey                   | 4.5                               | 2.9                              | 1.6                               |
| Far East                 |                                   |                                  |                                   |
| Japan                    | 2.8                               | 1.2                              | 1.6                               |
| Philippines              | 5.2                               | 3.2                              | 2.0                               |
| Taiwan                   | 4.5                               | 3.4                              | 1.1                               |
| Thailand                 | 4.4                               | 3.2                              | 1.2                               |
| Europe                   |                                   |                                  |                                   |
| Poland                   | 3.0                               | 1.8                              | 1.2                               |
| Spain                    | 2.7                               | .8                               | 1.9                               |
| Yugoslavia               | 5.1                               | 1.1                              | 4.0                               |
| Africa                   |                                   |                                  |                                   |
| Nigeria                  | 2.6                               | 3.7                              | — 1.1                             |
| Sudan                    | 8.0                               | 3.4                              | 4.4                               |
| Tanganyika               | 5.2                               | 1.8                              | 3.3                               |
| Tunisia                  | 1.6                               | 1.8                              | — .2                              |

<sup>1</sup> Estimates by Economic Research Service, U. S. Department of Agriculture.

<sup>2</sup> From United Nations, *Compendium of Social Statistics*, 1963, Series K, No. 2, Table 1, pp. 22-30, except estimate for Israel is from Y. Mundlak, *Long-Term Projections of Supply and Demand for Agricultural Products in Israel*, Falk Project for Economic Research in Israel, Jerusalem, May 1964, p. 204.

<sup>3</sup> Wheat crop failure in recent years accounts for low growth rate for crop output.

<sup>4</sup> Pakistan has had a marked increase in crop output during the last two years.

These growth rates are much larger than those achieved in the United States, Canada, and West European countries during early periods of their development. In the United States, for example, total farm output increased only 2.2 percent a year during the period

from 1870 to 1920 when the proportion of workers in agriculture decreased from 72 percent to 49 percent.

Increases in agricultural production in many of the developing countries are not large compared with the increases required for national economic development. The upsurge in population growth is greatly expanding food requirements in the developing countries. In most of these countries population is increasing at more than 2.5 percent a year, in many it is over 3 percent, and in some it is close to 4 percent. Death rates in many countries have decreased from about 45 per 1,000 of total population each year to 20 or even 10 per 1,000. Birth rates have continued high at 40 to 50 per 1,000 of total population. This has resulted in net population growth rates of 2.5 to 4 percent a year.

Most developing countries have increased food production as rapidly as population in the last twenty years. But merely keeping food production abreast of population growth is not enough. Most people in these countries are not eating enough food now, and very few are eating food of the type or quality which they desire and which is essential for good nutrition.

The income elasticity for food is high in the developing countries, four to five times as high as in the United States for all food taken as a whole. And for some foods, such as sugar, meat, eggs, and milk, it is many times higher still.

Crop production increased more rapidly than population in 21 of the 26 countries during the 1948-63 period (Table 1). But rates of increase in farm production have decreased in recent years. For the 26 countries studied, compound annual rate of growth averaged 4.5 percent in the first half of the 1948-63 period as compared with 3 percent in the second half. Percentage increases in population have been larger than those for food production in many of the less developed countries during the last three years.

#### TOTAL FOOD DEMAND AND OUTPUT

When we add increased demands for food resulting from income growth to those resulting from population growth, we find that during the 1955-63 period expansion in food production did not keep pace with expansion in total demand for food in 17 of the 26 study countries (Table 2). The margins are small for the remaining 9 countries. Food production has not kept pace with growing economic demands for food in most of the developing countries during the last ten years. Foreign trade data support this observation. Asia and Latin America had net exports of grain of over 10 million tons a year

in the 1934-38 period, but in the last few years they have had net imports of 20-25 million tons.

TABLE 2. COMPOUND ANNUAL GROWTH RATES IN FOOD DEMAND AND IN CROP OUTPUT, SELECTED COUNTRIES

| Region and Country       | Population Growth, 1950-60 <sup>1</sup> | Income Growth per Person <sup>1</sup> | Income Elasticity of Food Demand <sup>2</sup> | Growth in Food Demand <sup>3</sup> | Growth in Crop Output, 1955-63 | Crop Output Less Food Demand |
|--------------------------|---|---------------------------------------|---|------------------------------------|--------------------------------|------------------------------|
|                          | Percent                                 | Percent                               | Percent                                       | Percent                            | Percent                        | Percent                      |
| Latin America            |   |                                       |   |                                    |                                |                              |
| Argentina                | 1.7                                     | — 0.1                                 | 0.17  | 1.7                                | 2.9                            | 1.2                          |
| Brazil                   | 3.1                                     | 2.6                                   | .51   | 4.4                                | 5.2                            | .7                           |
| Chile                    | 2.5                                     | .9                                    | .61   | 3.1                                | 2.3                            | — .8                         |
| Colombia                 | 2.2                                     | 2.3                                   | .55   | 3.5                                | 4.3                            | .8                           |
| Costa Rica               | 2.3                                     | 3.7                                   | .60   | 4.5                                | 7.9                            | 3.4                          |
| Mexico                   | 3.1                                     | 1.9                                   | .58   | 4.2                                | 4.1                            | — .1                         |
| Venezuela                | 4.0                                     | 3.6                                   | .61   | 6.2                                | 4.4                            | — 1.8                        |
| Near East and South Asia |   |                                       |   |                                    |                                |                              |
| Egypt                    | 2.4                                     | 2.5                                   | .65   | 4.0                                | 2.8                            | — 1.2                        |
| Greece                   | 1.0                                     | 4.7                                   | .49   | 3.3                                | 1.7                            | — 1.6                        |
| India                    | 2.0                                     | 1.7                                   | .80   | 3.4                                | 3.0                            | — 0.4                        |
| Iran                     | 2.2                                     | .1                                    | .79   | 2.6                                | 3.3                            | .7                           |
| Israel                   | 5.2                                     | 2.5                                   | .55   | 6.6                                | 5.7                            | — .9                         |
| Jordan                   | 2.6                                     | 1.7                                   | .65   | 3.7                                | — 1.9                          | — 5.6                        |
| Pakistan                 | 2.2                                     | .3                                    | .80   | 2.4                                | 2.8                            | .4                           |
| Turkey                   | 2.9                                     | 3.2                                   | .49   | 4.5                                | 3.1                            | — 1.4                        |
| Far East                 |   |                                       |   |                                    |                                |                              |
| Japan                    | 1.2                                     | 7.6                                   | .58   | 4.4                                | 1.3                            | — 3.1                        |
| Philippines              | 3.2                                     | 1.7                                   | .75   | 4.5                                | 3.2                            | — 1.3                        |
| Taiwan                   | 3.4                                     | 3.7                                   | .63   | 5.7                                | 3.6                            | — 2.1                        |
| Thailand                 | 3.2                                     | 2.4                                   | .72   | 4.9                                | 5.4                            | .5                           |
| Europe                   |   |                                       |   |                                    |                                |                              |
| Poland                   | 1.8                                     | 6.0                                   | .55   | 5.1                                | 3.6                            | — 1.5                        |
| Spain                    | .8                                      | 3.9                                   | .56   | 3.0                                | 2.9                            | — .1                         |
| Yugoslavia               | 1.1                                     | 8.9                                   | .59   | 6.3                                | 4.3                            | — 2.0                        |
| Africa                   |   |                                       |   |                                    |                                |                              |
| Nigeria                  | 3.7                                     | 1.9                                   | .64   | 4.9                                | 2.6                            | — 2.3                        |
| Sudan                    | 3.4                                     | .8                                    | .64   | 3.9                                | 5.8                            | 1.9                          |
| Tanganyika               | 1.8                                     | 1.1                                   | .64   | 2.5                                | 3.1                            | .6                           |
| Tunisia                  | 1.8                                     | 1.7                                   | .65   | 2.9                                | 1.4                            | — 1.5                        |

<sup>1</sup>From United Nations, *Compendium of Social Statistics*, 1963, Series K, No. 2, Table 1, pp. 22-30, except estimate for Israel is from Y. Mundlak, *Long-Term Projections of Supply and Demand for Agricultural Products in Israel*, Falk Project for Economic Research in Israel, Jerusalem, May 1964, p. 204.

<sup>2</sup>FAO, *Agricultural Commodities Projections for 1970*, pp. A 14-15, and supplementary data provided by FAO, Rome.

<sup>3</sup>Population growth plus income growth per person times income elasticity.

Agriculture must do more than produce enough to meet rising economic requirements for food if it is to fulfill its role in national economic development. Economic productivity in agriculture must increase so that there will be an "economic surplus" which can be used for further production in agriculture or can be transferred out of agriculture to provide capital for industrial growth and to meet consumption needs of the urban population.

Fortunately, most of the thought leaders on this subject and most of the countries themselves have come to realize what always should have been known: that no country with three-fourths of its people living on farms can jump very high from a platform of rural stagnation, rural poverty, rural illiteracy, rural indebtedness, and even rural serfdom.

### FOOD AID AND OTHER ECONOMIC AID

In countries where agricultural production is not keeping pace with expanding economic demands, agricultural commodity aid can provide much needed resources for economic development. In fact, food aid may be worth just as much as other kinds of economic aid.

Dr. Erven Long has pointed out that if the agricultural sector of the less developed countries is not able to satisfy food demand, many serious consequences follow.<sup>1</sup> Countries may have to cut back sharply in their general development programs in order to shift resources into food production or into food purchase. As national development is thus slowed down, people become frustrated, lose hope, and manifest this in a wide range of disorganizing activities.

In order to be most effective, agricultural commodity aid should be programmed as a part of realistic long-term national economic development plans. Many countries need large amounts of food aid as well as other kinds of aid for several years in the future in order to accelerate economic growth rates. Food aid to meet emergency conditions that cannot be foreseen, of course, also can contribute to economic growth and human welfare.

Large numbers of people in the developing countries are not fully employed. Agricultural commodities can be used to pay labor that otherwise would be unemployed on capital development projects such as construction of roads, schools, and land improvements for drainage, irrigation, and soil erosion control. Perhaps not enough effort has been made to use food aid in resource development projects.

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<sup>1</sup>See Erven J. Long, "Agriculture in the Developing Countries," address at General Session of the Association of Southern Agricultural Workers, Inc., Dallas, Texas, February 2, 1965.

It is sometimes alleged that food aid tends to lower prices for farm products in recipient countries and discourage increases in farm production. Those who make this allegation overlook the fact that the developing countries have made outstanding progress in expanding food production and that food aid has been used mainly to meet increased demands for food that otherwise would not have been met. Shortage in demand has not been the factor standing in the way of larger increases in food production. Lack of economic incentives, improved technology, better seed, fertilizer, pesticides, and other materials limits yield increases. In instances where lack of economic incentives to expand farm production has acted as a brake on increased agricultural production, deep-seated conditions related to marketing, tenure, or credit arrangements have been mainly responsible.

The United States has supplied large amounts of economic aid and military aid in addition to food aid. In fact, other economic aid has accounted for over half of total economic aid of the United States to foreign countries (Table 3). The share of food aid in the total may be about right in terms of needs for economic development.<sup>2</sup>

TABLE 3. AGRICULTURAL COMMODITY AID IN RELATION TO  
TOTAL NET U. S. ECONOMIC ASSISTANCE, 1956-63

| Calendar<br>Year  | Total<br>Net U. S.<br>Economic<br>Aid <sup>1</sup> | Agricultural Commodity Aid <sup>2</sup> |                           |                 |                          | Agricultural<br>Commodity<br>Aid as<br>Percent of<br>Total Aid |
|-------------------|--|---|---------------------------|-----------------|--------------------------|--|
|                   |  | Mutual<br>Security                      | P. L.<br>480 <sup>3</sup> | Total           | Other<br>Economic<br>Aid |  |
|                   | <i>Millions</i>                                    | <i>Millions</i>                         | <i>Millions</i>           | <i>Millions</i> | <i>Millions</i>          |  |
| 1956              | \$2,270  | \$452                                   | \$ 846                    | \$1,298         | \$ 972                   | 57   |
| 1957              | 2,582  | 283                                     | 1,058                     | 1,341           | 1,341                    | 52   |
| 1958              | 2,472  | 198                                     | 936                       | 1,134           | 1,338                    | 46   |
| 1959              | 3,253  | 132                                     | 858                       | 990             | 2,263                    | 30   |
| 1960              | 2,770  | 145                                     | 1,164                     | 1,309           | 1,461                    | 47   |
| 1961              | 2,711  | 166                                     | 1,234                     | 1,400           | 1,311                    | 52   |
| 1962 <sup>4</sup> | 3,595  | 33                                      | 1,344                     | 1,377           | 2,218                    | 38   |
| 1963 <sup>4</sup> | 3,136  | 0                                       | 1,485                     | 1,485           | 1,651                    | 47   |

<sup>1</sup>Includes assistance to international agencies.

<sup>2</sup>Excludes Title I and MSA local currencies used for U. S. uses and military grants.

<sup>3</sup>Excludes Title III barter sales.

<sup>4</sup>Fiscal year.

SOURCE: U. S. Department of Commerce, *Foreign Grants and Credits by the U. S. Government*.

<sup>2</sup>For additional information on economic aid programs of the United States and other countries, see Frank Barlow and Susan Libbin, *The Role of Agricultural Commodity Assistance in International Aid Programs*, U. S. Department of Agriculture, ERS-For. 118, March 1965.

Other developed countries also provide development assistance. However, if we include food aid in economic aid, the United States was the source of about one-half of world development assistance. Economic aid of other countries is mainly in the form of loans and relatively little in the form of grants. However, loans account for an increasing share of U. S. aid commitments. They accounted for 62 percent of the total in fiscal year 1964 as compared with 30 percent in fiscal year 1961. The U. S. suppliers' share of aid commodity purchases has increased steadily from about 40 percent in fiscal year 1960 to 87 percent in fiscal year 1964. Emphasis has been placed upon purchases in this country because of our balance-of-payment problems. But it is important to note that other economic aid as well as food aid has helped generate economic activity in the United States.

#### FUTURE OF FOOD AID

What about the future of food aid? Can the developing countries effectively use larger amounts? The total value of agricultural commodity aid has not changed much in the last seven or eight years. It totaled 1.4 billion dollars in 1956 and 2 billion dollars in 1957 as compared with 1.5 billion dollars in 1963 and 1.6 billion dollars in 1964. Of course, there have been important reductions in some countries and increases in others.

Marketing and distribution facilities limit the amount of food aid that can be used effectively in most countries. This is true of program aid designed to meet general food needs or shortages, as well as project aid used to carry out specific development projects. Program aid accounts for most of the 14 billion dollars of U. S. agricultural commodity aid during the 1955-64 period. Food used as wages for workers on development projects accounts for a small part of the total. Title II of P. L. 480, which provides grants of food for disaster relief and other assistance including child feeding programs and food used as wages for workers on development projects, accounted for only 1.1 billion dollars or about 8 percent of the total.

Additional food aid probably can be used effectively for resource development projects in some countries. But careful planning of projects is required if they are to be successful. Administrative arrangements need to be made for employing workers and for paying them with food. In most instances, technical assistance needs to accompany food aid used directly for resource development projects. Moreover, workers cannot be paid entirely with food. Other materials, including tools and equipment, also are required to construct roads, schools, and storage and marketing facilities or to carry out



land improvement projects. Some studies suggest that only about 20 percent of the total cost of development projects can be financed with food.

There appear to be large potentials for using more food for development purposes if other economic aid also is made available. Certainly, many countries will require large amounts of food aid to maintain and improve consumption levels as long as population growth continues to be high. But developing countries need to plan the use of food aid over the years ahead so that they gradually will become self-supporting and can purchase food imports as well as other imports on a commercial basis.

#### FOREIGN AID AND AGRICULTURAL TRADE

Our agricultural exports have risen greatly in the last few years and this growth in exports has been dependent upon income growth abroad. The total value of agricultural exports increased from a little under 4 billion dollars a year in 1958 and 1959 to over 6 billion dollars in 1963 and in 1964. Nearly all of this increase has been in commercial sales for dollars. Dollar sales to the developed countries account for most of the increase, but there also have been significant increases in commercial sales to several of the less developed countries.

Dr. A. B. Mackie of the Economic Research Service recently completed a study of foreign economic growth and market potentials for U. S. agricultural products.<sup>3</sup> His study shows that we export about \$1.00 worth of farm products per \$100 of income to the less developed as well as the developed countries. In the developed countries where incomes averaged \$700 per capita in 1959-61, we had farm exports of \$6.09 per capita. In the less developed countries where incomes averaged \$111, we had farm exports of \$1.19 per capita. Moreover, analysis of changes since 1938 indicates that U. S. agricultural exports to both developed and less developed countries have increased about 1 percent for each 1 percent increase in income. Because of the large numbers of people in the less developed countries and population growth expected in the future, they are large potential markets for U. S. farm products.

A large share of the growth in agricultural exports to the less developed countries during the last decade has been sales for foreign currencies and other shipments under other food aid programs. But

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<sup>3</sup>A. B. Mackie, *Foreign Economic Growth and Market Potentials for U. S. Agricultural Products*, U. S. Department of Agriculture, For. Agr. Econ. Rpt. No. 24, April 1965.

several countries have shifted from imports under food aid programs to commercial imports for dollars in the last few years. Japan is the outstanding example. In fiscal year 1956 U. S. agricultural exports to Japan totaled 372 million dollars, and of this amount 123 million dollars moved under food aid programs. In 1963-64, U. S. agricultural exports to Japan totaled 742 million dollars, nearly all of it dollar sales.

Greece, Spain, Israel, Taiwan, and Poland are other countries where exports under food aid programs have declined and commercial dollar sales have gone up significantly in the last few years. Dollar sales of farm products to Spain increased to 112 million dollars in 1963 as compared with only 10 million dollars in 1955. We had little or no dollar sales of farm products to Greece, Israel, Taiwan, or Poland in 1955. But in 1963 we exported 32 million dollars of farm products to Poland, 24 million dollars to Israel, 22 million dollars to Taiwan, and 11 million dollars to Greece. In each of these countries substantial economic growth has occurred in the last few years and per capita incomes have increased. Food aid programs have been converted into commercial sales for dollars. Obviously, quick results cannot be expected in all countries. Economic development will require longer periods in countries that are beginning from lower income levels.

It is a mistake to assume that expansion of agriculture in the less developed countries means smaller markets for our products. Consider what has happened in Japan during the last decade. Its domestic agricultural production increased 3.7 percent a year, while its population increased only about 1.4 percent annually. Yet, during that same decade, Japan became our largest customer for farm products—with a volume over 750 million dollars during fiscal 1964-65.

The connection between aid and trade is thus abundantly clear. Increased international trade will benefit all Americans and will be of special benefit to American agriculture. We must remember that trade with the less developed countries can increase only as their economies grow and their incomes rise. And this economic growth, in turn, depends upon their ability to improve their agriculture and achieve real rural development. Assistance in rural development abroad is therefore clearly in the national interest of the United States because our own continued economic growth demands rising standards elsewhere, among people with whom we hope to develop expanding trade relations.

## SOCIAL AND POLITICAL CONSIDERATIONS

The economic implications of foreign aid programs are important, but we should not neglect the political, social, and moral considerations. We share our agricultural abundance and the know-how that makes this abundance possible because it is morally right. Famines and starvation cannot be tolerated in the world today. If food supplies do not keep pace with population growth, the peace and security of the entire world will be threatened.

We need only scan the headlines of any newspaper to see how much we are affected by conditions and events in the less developed countries of the world. Our own security depends in large measure on the prevalence of conditions under which the people of those nations can hope to achieve higher standards of living and other benefits in peace and freedom. If the developing nations can be helped to achieve satisfactory growth rates under free institutions, the security of the free world will be immeasurably strengthened.

Foreign aid is a powerful tool for the realization of our country's deepest aspirations for a future of peace and security.

PART III

*Politics and Agricultural  
Policy*

