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UNITED STATES DEPARTMENT OF AGRICULTURE
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A NEW LOOK AT THE WORLD FOOD SITUATION

Talk by Dr. Martin E. Abel
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Food enough has been a chief concern of most of mankind throughout most of man's history. The specter of hunger has been eliminated in countries containing only about one-third of the world's population.

Probably the most important issue facing man today, aside from world peace, is the ability to adequately feed himself. In a period of a few years the "race" between food supplies and population has again become a much researched and discussed topic. Responsible people from all walks of life have energetically become involved in the world food problem. And there is a wide range of opinion about the size and complexity of this problem.

A few say there is no problem. But their numbers are small and available evidence weighs against them.

Some others see the world doomed to eventual and widespread famine. They hold that neither time nor the means are available to solve the world food problem. They see old man Malthus crawling out of his grave.

However, the vast majority of informed people think that the world food and population problems can be solved; that they can be solved in a way that not merely avoids mass famine, but contributes to economic development and improved well-being of billions of people. This is not to say that the problem will be easily or quickly overcome, or that in some countries there may not be periodic shortages of food. The path to success will not be smooth and free of obstacles. And, the path to success will be costly in terms of the resources that both the rich and the poor nations will have to devote to agricultural development.

The knowledge and the means exist to achieve a favorable balance between food supplies and food demands. The real test in the next 2 or 3 decades is man's willingness and ability to use this knowledge and the resources available to him. The real issue then is not whether man can provide food enough, but whether he will do so.

Man himself created the food and population problems we face today and will face for some time to come. In its simplest terms the problem resulted from a combined population explosion and a failure, particularly in many less developed countries, to devote sufficient resources and attention to food production and population control.

It is not recognized by many people that total food production in the less developed countries has been increasing almost as rapidly as in the developed countries. During the past 10 years total food production increased by 27 percent in the developed countries. The less developed countries increased total food production by 24 percent. Because of difference in population growth between the two groups of countries, per capita food production in the developed countries increased by 13 percent during the past 10 years, but remained about constant in the less developed countries.

It is not enough for the less developed countries to do as well as the developed countries; they must do better.

The war on hunger must be fought on both the food production and population fronts. Marked reductions in the rate of population growth in the less developed countries will greatly increase the returns to investments in food production and total economic development.

A recent economic study of population control efforts in less developed countries by Stephen Enke concludes: "(1) If economic resources of given value were devoted to retarding population growth, rather than accelerating production growth, the former resources could be 100 or so times more effective in raising per capita incomes in many LDC's. (2) An adequate birth-control program in these countries might cost as little as 10 cents per capita yearly, equivalent to about 1 percent of the cost of current development programs. (3) The possible use of bonuses to encourage family planning, whether paid in cash or kind, is obvious in countries where the 'worth' of permanently preventing a birth is roughly twice the income per head."

But current efforts to control the population growth rate do not reduce the rate of growth in the total demand for food for several years. Thus, immediate attention must be given to increasing food production under conditions of rapid rates of growth in population.

There have been several developments that give strong promise for man's victory over hunger.

Scientists are generating the technologies required to slow the rate of population growth and bring about more rapid agricultural development in the less developed countries. Progress has been made in the development of effective, inexpensive, and acceptable methods of population control. Discussion of the need for it is widespread in the less developed countries and progress has been rapid in some, such as Taiwan and South Korea.

Also, developments on the food production front have been encouraging. Such things as incentives, fertilizer, Mexican wheat varieties and rice varieties developed at the International Rice Research Institute in the Philippines have, within the last few years, become common topics for discussion by both farm and nonfarm people in a growing number of less developed countries. Their impact on food production is becoming increasingly convincing.

An increasing number of less developed countries are demonstrating the political will required to achieve accelerated agricultural development. More realistic policies and programs are being formulated and implemented. A larger allocation of resources is being made to agricultural development. Attention is being paid to the development and use of new technologies, the supply of inputs, and production incentives to farmers.

The increased political will to achieve more rapid agricultural development in large measure stems from the increasing realization of the importance of agriculture in the total economic development process. In most of the less developed countries agriculture is the largest single sector of economic activity. An unfavorable rate of growth in agriculture acts as a drag on the total economy. Conversely, more rapid agricultural development yields more rapid total development. This is particularly important when increased agricultural output is achieved by the modernization of agriculture; i.e., by the use of increased amounts of off-farm inputs such as fertilizers, pesticides, new implements, etc. This type of agricultural expansion creates a large and ready market for industrial products and helps speed industrialization. Similar demands for nonfarm products and services are created by the marketing and processing of larger quantities of agricultural products.

The President's Science Advisory Committee, in its report, The World Food Problem, states:

"The Panel is convinced from its study of the world food problem that food shortages and high rates of population growth in the developing countries are not primary problems. Rather, they are manifestations of a more fundamental difficulty, lagging economic development in the hungry countries."

The President's Science Advisory Committee report views the world food problem as awesome, but indicates that it can be solved. However, solutions will not come easily. The report states:

". . . the aggregate analysis and the experience of individual developing countries such as Mexico indicate that growth rates (of agricultural production) of the order suggested above are not beyond the range of possible attainment. To reach the goal within the next two decades, however, will require a commitment on the part of developed and developing countries alike on a scale that has never before been achieved in peacetime."

The less developed countries can do a better job and some are showing signs of doing a better job to increase the rate of growth of agricultural production. But for some time many less developed countries will require food assistance. And, the level of food import requirements will increase significantly before it declines. The pressures of population growth and increased economic demands for food, for many years, will likely increase faster than food production in the less developed countries.

The full significance of a continued increase in food import needs of the less developed countries for some years to come--even as they improve their own rate of agricultural development--can be evaluated only if we also look at agricultural development prospects in the developed countries. These prospects, of course, will determine whether or not sufficient food will be available to meet the food import needs of the less developed countries. They also will determine future levels and patterns of world trade in agricultural products.

A recent study by the Economic Research Service, U.S. Department of Agriculture, entitled, The World Food Situation: Prospects for World Grain Production, Consumption and Trade, takes a look ahead to 1980 at the world grain situation. The report deals only with grains. But most of man's food comes, directly or indirectly from grains, so that trends in grain production and consumption are a good indicator of trends in the total food situation.

The World Food Situation report examines the grain situation in both developed and less developed countries. Projections of future production assume that world market prices of grains remain at the average levels of the past three years and that excess production over consumption at these prices would be withheld from markets in the form of either idled production capacity or increased grain stocks.

A single set of projections is made for the developed countries reflecting the most likely rates of growth.

Four alternative rates of growth in grain production were used for the less developed countries ranging in magnitude from a continuation of historical trends to a situation of such rapid improvement that output would reach an annual growth rate of 4 percent by 1975. Changes in the rates of growth in grain consumption were varied directly with changes in the rates of growth in production. This relationship reflects the impact of accelerated growth in food production on incomes and, in turn, on food consumption.

What does the World Food Situation report indicate?

First, it confirms the results of other studies that indicate that future grain import requirements of the less developed countries are likely to increase considerably. In the 1959-61 period, the grain importing less developed countries imported 20.7 million metric tons of grain annually. In 1964/65 the same countries imported 29.0 million metric tons. By 1970 their grain import

requirements are estimated to be 30.7 million metric tons. By 1980 these countries would, even with likely improvements in their rates of growth in grain production, require grain imports in the neighborhood of 52 to 54 million metric tons. This projected level is nearly double that of 1964/65 A part of these imports would be on commercial terms, but much of the growth would have to be on concessional terms

Second, the report indicates that there will continue to be relatively rapid growth in grain production in the developed countries and in the less developed grain exporting countries such as Argentina, Mexico, Burma, Thailand, and Cambodia.

-- Grain production in the less developed grain exporting countries is projected to grow sufficiently fast as to enable them to increase their exports from an annual level of 15 million metric tons in 1964/65 to just over 20 million metric tons in 1980.

-- Eastern Europe and the USSR are expected to be nearly self-sufficient in grains by 1980, compared with a net import level of 7.5 million metric tons in 1964/65. And, the increase is likely to be sufficient to support a rather rapid expansion in livestock production.

-- The developed free world countries other than the grain exporters will likely increase their grain imports from 37 million metric tons in 1964/65 to about 73 million metric tons in 1980--a near doubling of imports in 15 years.

-- The developed grain exporting countries could easily increase grain exports from the 1964/65 level of 65 million metric tons to 152 million metric tons. This projected increase is based in part on an expansion of harvested grain acreage in the United States from the 1964 level of 158 million acres to a 1980 level of 186 million acres, which is about the same level that was in production in the late 1950's

What do all these numbers add up to?

They add up to a likely surplus capacity in world grain production with world prices at about the average of the last three years, of about 30 to 40 million metric tons annually in 1980.

What are the implications of the analyses contained in the World Food Situation report?

One implication is that the world food problem is basically one of disparity of food production and food availability between the developed and developing nations. It is inseparable from the problem of the development gap between rich and poor nations. The less developed countries of the world will have to achieve a better rate of growth in food production. They need to do this in order to avoid a growing dependence upon external food supplies and all the problems of distribution, both between developed and less developed countries and within the less developed countries that growing grain import requirements imply. They need to do this in order to provide significantly better diets for their people. Most of all, they need to do this in order to achieve a much better rate of total economic development.

Another implication is that the rate at which grain production capacity in the developed countries increases will be largely independent of the rate at which production grows in the less developed countries. The rate of improvement in agricultural production in Eastern Europe, the USSR, and free-world developed importing countries--particularly the countries of Western Europe which have highly protective agricultural policies--probably will not be influenced very much by what happens to food production in the developing world. Also, the probable growth in agricultural production potential in the developed grain exporting countries will continue to be affected little by the rate of growth in food production in the developing countries. Continued increase in the capacity of developed countries to produce food is an important element in the total world food picture.

It is important to distinguish between production capacity and actual output which reflects the degree to which production capacity is utilized.

The future rates of agricultural development in both the less developed and the developed countries and the projected surplus grain production capacity have very important implications for the pattern and level of world trade in grains. A balance of some sort will be achieved in world grain production, consumption, and trade. But there are many ways in which this balance could be achieved.

One way is by stimulating commercial trade in grains through the elimination or neutralization of trade barriers. This could insure a slower rate of growth in grain production and a higher rate of growth in grain imports by the developed importing countries that now have highly protective agricultural policies.

Another way would involve controls on the rate of growth in production to achieve the desired balance between quantities and prices.

If a balance were to be sought by decreasing output and increasing consumption by means of lower grain prices, the major impact of lower prices would fall on the grain exporters, both developed and developing. The major grain importing countries would not likely share in the price adjustment because their protective trade policies would insulate domestic prices from declines in world prices. The aggregate demand for grain imports and the supply response are probably quite price inelastic. Thus, policies to maintain somewhat lower prices could still result in surpluses of a magnitude which, on world markets, would further seriously depress world grain prices.

Undoubtedly some combination of the above approaches will be considered, so each is at best only a partial solution.

The International Grains Agreement represents a first step towards a multilateral approach to developing an equitable solution to the trade problems posed by the continuing surplus production capacity in the developed countries.

There are several implications of the World Food Situation report for the United States.

-- The United States will be able to substantially increase its grain exports, maintain or increase its share of world grain trade, but still require some controls on grain production. It is estimated that by 1980 about 165 million harvested acres of grain would be required in the United States. This is about the same level that was harvested in 1967. The U.S. grain production required to supply all likely outlets will require fewer production resources, particularly land, than will be available for future use.

-- The analysis also suggests that maintaining stable world grain prices will continue to be a problem. Increased production in the developed importing and exporting countries, other than the U.S., adds to the world grain surplus. A resulting downward pressure on prices might be avoided by arrangements among nations for sharing the task of restraining supply and supplying the concessional markets.

In summary, there are three major dimensions to the world food problem.

First, it is imperative that the less developed countries improve their rates of growth in food production. They need to do this in order to break their growing dependence on food aid and to achieve a better rate of economic growth.

Second, it will require an unprecedented commitment of will and resources by both developing and developed countries to bring about significant improvements in the rate of growth in food production in the less developed countries.

Finally, growth in grain production capacity in the developed countries will continue to press against growing demands with a resulting downward pressure on prices and a continuing need to balance supply with demand at favorable price levels.