

# HUNGER, POLITICS, ECONOMICS, AND TRADE

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## **INCREASING THE WORLD'S PER CAPITA FOOD SUPPLY**

Although I do not believe we have entered a new era of food scarcity, increasing hunger and malnutrition, and substantially higher real farm and food prices, I do believe that the United States and the other industrial countries need to undertake serious efforts to significantly increase per capita food supplies in the developing countries. I believe this because it is both desirable and possible to bring about a much more satisfactory food supply situation for the poorer people of the world.

A strong case can be made that the major barriers to significant improvements in the per capita food supply of the developing countries are political in nature. The barriers are not primarily economic, except as economic matters affect both domestic and international political decisions. Neither are the barriers scientific in nature; the productivity of agricultural scientists has been fully documented. Nor are the barriers due to the intractability, ignorance, or laziness of the hundreds of millions of farmers around the world. Quite the contrary. If any of us found ourselves on a three-acre farm in India and had to feed ourselves and our families from the output of that farm, the probability of our starving would be high. Most of the poor farmers of the world make very efficient use of their limited resources.

There are four major areas in which primarily political decisions could have significant impacts upon the world's per capita supply of food. These areas are: (1) agricultural research, (2) international trade liberalization, (3) peace in the Middle East, and (4) reducing the birth rate.

### **Agricultural Research**

No fundamental restraints in nature prevent a major increase in food production in the developing countries. It was not nature that created the very wide gap in grain yields between the developing and the industrial countries over the past four decades. Only four decades ago average grain yields in the developing and the industrial world were the same—about 1.15 tons per hectare; in recent

years grain yields in the industrial countries have been about 50 percent greater than in the rest of the world.

There is enormous discrepancy in the distribution of income, energy consumption, and food production among the nations of the world. One of the most skewed of the distributions is seldom mentioned, namely the distribution of agricultural research effort. In the mid-1960's only 11 percent of the world's publicly supported agricultural research was undertaken in Latin America, Africa, and Asia.

Agricultural research has played a major role in the more than doubling of grain yields in the industrial countries over the past four decades. Obviously many other factors contributed to the increased yield—the reduction in fertilizer costs, improved pest and disease control, and more effective control of weeds. But for all of these changes research results were a necessary condition. Without hybrid corn, for example, lower cost fertilizer would have had only a modest impact on yields.

If we and the other industrial nations are sincere about increasing the food supply in the developing countries, we will support a major expansion in agricultural research in the developing areas. While basic research of value to agriculture can be done anywhere in the world, that knowledge must be applied primarily in the developing countries where the food will be produced.

The expenditures required are not large. Total expenditures on publicly supported agricultural research in 1965 were less than a billion dollars for the world; private research relevant to agriculture was almost certainly less than that. What is required is a long-term commitment by the United States and other industrial countries to provide support for agricultural research throughout Africa, Latin America, and Asia. At present the United States does not seem to have the capacity to provide foreign aid on an annual basis, let alone make a commitment for a decade. We want quick results and as a consequence we are always disappointed.

The industrial countries could assist agricultural research in a number of multilateral and bilateral ways. One is through regional centers. Much of the international funding, both private and public, of agricultural research now appears to be going to such centers. While regional centers are important and can make significant contributions, national research capabilities have to be developed. Such capabilities are required to adapt varieties to local conditions, to continue the fight against the predators of nature—insects and disease, to provide the capacity for independent discovery, and to

create centers for developing the scientists and researchers for the future.

If the industrial nations were to provide \$1 billion annually for a decade and half that amount for the subsequent decade, great strides could be made to bring the benefits of agricultural research to all the major climatic zones of the developing world. Additional scientists need to be trained, but the facilities for such training are readily available.

Creating new research institutions or significantly improving the productivity of existing institutions is no simple matter. If it were, the world would have more highly productive agricultural research establishments today. Barriers to successful public research include institutional arrangements, salary scales, political imbalances and interferences, and political instability, to mention a few. Some of the efforts made would certainly fail. But even if only half of the attempts succeeded, the evidence on the returns to agricultural research in the developing countries indicates that the rate of return on the combined successes and failures would be significantly more than the current rate.

If a major research effort is undertaken and complementary farm inputs are provided, there is no reason why grain yields in the developing countries cannot equal the yields in the industrial countries. An increase in grain yield of 0.1 ton per hectare in the developing countries would amount to 45 million tons of grain annually. To provide the same addition to food supplies by food aid from the industrial countries would cost more than \$5 billion annually, even if grain prices were to decline substantially from current levels.

### **International Trade Liberalization**

Attention is not often given to the link between the liberalization of international trade and per capita food supplies in the developing countries. It is unfortunate that the role of trade in increasing incomes and food supplies in the developing countries is so little understood. The industrial countries have gone a considerable distance in removing barriers to trade in industrial products produced by other industrial countries, but have been most reluctant to lower the barriers to their imports of agricultural products and labor-intensive manufactured products from the developing countries. It seems rather odd that although gains from trade among industrial countries in industrial products are widely acknowledged, little progress has been made in extending the same advantages to the developing countries where their products are

competitive with either the industrial or agricultural products of the industrial countries.

The present round of negotiations under the General Agreement on Tariffs and Trade provides an opportunity for reducing the barriers to trade on labor-intensive industrial products, such as textiles, and on farm products that cannot be competitively produced in temperate zones, such as sugar and numerous fruits and vegetables. At least 40 percent of the world's sugar is produced in the wrong places. The gains to the developing countries, especially in Latin America, from liberal trade in sugar would be very large in terms of both foreign exchange and more productive use of their resources.

More liberal trade would not necessarily solve the food problems of the developing countries. For that matter no one single change, except perhaps for a rapid and drastic decline in birth rates, can make a major contribution to per capita food supplies. But more liberal trade is one measure that is essentially costless, after the resource adjustments are made, to those who provide it. None of the other changes can be so described.

#### **Peace in the Middle East**

A stable and durable peace in the Middle East could make a significant contribution to the food supplies of the developing countries. Higher yields will require substantially larger amounts of fertilizer, especially nitrogen. The lowest cost area in the world for producing nitrogen fertilizer is in the Middle East. This area has enormous reserves of natural gas that could serve as the base for a large fraction of the world's output of nitrogen fertilizer. The transportation costs of the fertilizer to the rest of Asia would be less than from the other major low-cost producing areas.

Nitrogen fertilizer production in the Middle East increased significantly following the major developments in the technology of production in the mid-1960's. However, the unstable political situation has seriously inhibited the very large capital investments that are required. If a durable peace could be achieved, such investments would be made, and a very large supply of relatively low-cost nitrogen fertilizer would become available.

The nitrogen fertilizer would be produced at relatively low cost even if the price of crude oil remains substantially above the 1972 levels. While some of the natural gas supplies of the Middle East will find their way into European markets, the gas would likely return most to its owners by being transformed into a finished

product in the region. The production of nitrogen fertilizer is one of the profitable activities that peace would make possible.

There are those who point out that it would be dangerous to concentrate the production of nitrogen fertilizer in the Middle East. To do so, it is claimed, would only add an economic weapon in addition to crude oil that could be used in the future. Perhaps so; no one can say that such would not be the case. But we live in a world in which many risks must be taken. In my opinion, the benefits to the developing world of a substantial increase in the supply of nitrogen at relatively low cost is worth the risk. Increasing grain yields in the developing countries to the current yields in the industrial countries—something that must be achieved before the end of this century—will require enormous amounts of fertilizer. A durable peace in the Middle East is of great importance to the poor people of the world.

### **Reducing the Birth Rate**

The concern over the current rather precarious food situation in the developing countries should not overshadow the food production gains of the past two decades. In spite of population growth rates in the developing countries of 2.1 percent per annum in the 1950's and 2.44 percent in the 1960's, food production has increased slightly more than population.

But significant improvements in per capita food supply can only be achieved as birth rates decline and the population growth rate is reduced. Unfortunately the United States and the other developed countries can have a very limited role in either inducing or aiding in efforts to reduce birth rates. As our own experience shows, there is strong opposition to a government taking an active role in reducing birth rates. And the opposition becomes solidified if a case can be made that outsiders—cultural imperialists—are trying to induce a country to engage in a positive program.

Our greatest contributions are likely to be in maintaining our present policy, namely to undertake research, both basic and applied, to improve contraceptive techniques, and to provide technical assistance when requested for establishing family planning programs. We should emphasize research on contraceptive techniques that are both simple and cheap, that require a minimum input by the medical profession, and that can be made available in the most remote village in the world.

It is important that we use all available means that can be used quietly and without coercion to induce the developing countries to face up to their population problems. The subject is a delicate one

and requires enormous tact and patience. While the world can produce enough food for 6 billion people by the end of this century, it can do little within that period to significantly improve the diets of the poorer two-thirds of the world's population. And no one can guarantee that total food production can be increased by 2.5 percent annually indefinitely. It is a matter of prudence that major barriers to birth rate reductions be eliminated.

#### FOOD AID

My previous comments have emphasized the political decisions that could have some impact upon per capita food supplies. I have not listed food aid because I do not believe that on a continuing basis it can make a significant contribution to the per capita food supplies of the developing countries. Such aid has two disincentive effects—one political and one economic. The political disincentive is that reliance on a continuing stream of food aid permits governments to give agriculture a lower priority and still survive. The economic disincentive is the effect of food aid, if substantial, upon local grain prices. Some of the price effects can be mitigated if the food aid is used primarily to feed disadvantaged members of the population. But even in this case, a larger domestic food output would provide the same opportunity.

It is time for us to consider economic aid generally—not food aid as such except for emergency conditions. By emergency conditions I mean the consequences of natural catastrophes. We have had the capacity to deliver large amounts of food to most parts of the world in a relatively short time. This capacity should be maintained. This capacity, and our generosity, have made the world a little more tolerable for millions of poor people.

The capacity to meet emergency conditions depends upon two things—the ability to move large quantities of food quickly and the availability of reserves adequate for the anticipated shortfalls that might occur. At present there is a debate on a reserve policy for the United States. Until recently, the world had depended upon North America for its food reserves. Other nations gave little emphasis to the maintenance of reserves because Canada and the United States seemed willing to subsidize the holding of very large reserves of grain—reserves that for almost a quarter of a century were adequate to meet world demand and supply. But all this was changed in 1973.

#### SOME NEW TRADE ISSUES

Recent developments have placed some new or at least rather different trade issues on the agenda. Among these issues are food

reserves, trading with the large planned economies, and access to supplies. The traditional concern in international economic and trade relations has been access to markets by exporters. After the shocks of the past two years—our embargo on soybeans and products, the oil embargo, export taxes imposed by the European Community, and the use of state marketing agencies in Australia and Canada to limit exports—importing countries are now expressing concern about access to supplies upon which they may have to depend. The three issues are quite interrelated.

### **Reserves and Access to Supplies**

The depletion of food reserves in North America following the reduced world grain crop in 1972 has now made the rest of the world conscious of the important role taken by Canada and the United States in maintaining relative stability of supplies for the previous two decades. The stocks held in North America, however, were not the result of a conscious reserve policy but were rather adjuncts of government programs to put a floor under farm prices.

Under the Agricultural Act of 1973 the United States is unlikely to be an inadvertent public storer of grains during the next several years. If the United States is to have government grain stocks it will be only as a result of a deliberate policy decision. The minimum loan rates for wheat and feed grains are sufficiently low that the government is unlikely to accumulate any significant stocks. Inflation may have also made the target prices sufficiently low in real terms so that these prices are unlikely to encourage grain output. This indicates that for the first time in three decades our farm programs are unlikely to be a source of large stocks above what would be held by private firms; we will have to go into the market to acquire them.

Certain dangers are present in any feasible program of reserves. Farmers quite rightly take a rather jaundiced view of the net benefits to them. Yet on balance there should be serious consideration of a grain reserve program designed to meet the emergency needs of the developing countries and to provide greater stability of supplies for regular commercial international trade. The agricultural policies of most of the industrial nations make it unprofitable for the private trade to hold stocks of grains and feedstuffs over and beyond those required for working stocks. This is true for both grain importers and major grain exporters such as Canada and Australia.

Thus if the holding of stocks for commercial exports is left to

the private market, this means that it is left to the private market in the United States. And I can see no basis for believing that the private trade in the United States can accept the risks of holding stocks for a large part of the world. However, I am not in favor of the United States and Canada returning to the pre-1972 position of being the residual suppliers of grain to the world. If there are to be grain reserves, the importing nations should participate in holding a significant part of the total and paying a reasonable share of the costs.

Thus I see no answer to the problems of reasonable stability of supplies and access to supplies except the negotiation of an understanding concerning reserves of grains and storable feedstuffs. I do not mean that reserves should be held internationally, but I do think that there should be an understanding of the joint responsibility of the industrial nations to contribute to the world's reserves.

Trade in farm products is not likely to be liberalized significantly unless importing nations feel assured that they will have ready access to supplies. One of the prices we will have to pay for trade liberalization is the willingness to have stocks larger than would be held by the private market. This assurance was largely taken for granted through 1972 due to the large stocks in North America. But now that these stocks have been greatly reduced and there is no automatic mechanism for rebuilding them as the supply-demand situation eases, some steps are likely to be required to rebuild the confidence of importing nations.

I am disturbed by the number of statements made by businessmen and politicians that the United States should maintain sufficient control over the exports of farm products to prevent "undue" increases in prices as a result of a large increase in foreign demand. Why politicians make such statements is understandable, but I fail to comprehend why intelligent and successful businessmen who have lived with the numerous controls of the past three years can argue that the solution to any problem of pricing or distribution is to be found in government control of exports.

Export controls are counterproductive in at least two ways. First, if we make it clear that if domestic prices should rise to politically unacceptable levels we will impose export controls, we will have little chance of achieving trade liberalization for agricultural products in the current round of negotiations. This will not only harm the interests of U.S. agriculture but may also have adverse effects upon the developing countries. Second, the threat of export controls will reduce to some degree the incentive to expand farm output in the United States.



## **Trading With Planned Economies**

The appropriate methods of exporting agricultural products to the planned economies has emerged as a new trade issue for two main reasons. First, there is a rather general view that much of the drawdown of grain stocks and the large increases in grain prices of the last two years have been due to the large sale to the Soviet Union and, second, the variability in grain production in the Soviet Union represents a large share of the year-to-year variability in world grain production. There is a further and more fundamental reason, namely that the two largest planned economies, the Soviet Union and China, have a considerable degree of power to purchase the entire supply available in the grain markets. This power represents significant problems for the major grain exporters, not just the United States with its emphasis upon private trade but also for Australia and Canada with their state marketing agencies.

I believe that agricultural exports to the planned economies are likely to be an important element in our agricultural trade for a number of years. Sometime in the not too distant future the Soviet Union may once again enter world markets to purchase very large quantities of grains and feedstuffs. We could try to insulate the U.S. market from these highly variable purchases by instituting a system of export controls. Such an approach, in my opinion, can create grave dangers for both farmers and the structure of our marketing system.

There is an alternative approach that would be in the interests of both the planned economies and the major exporters of agricultural products. This approach rests on reaching agreement concerning the sharing of information on matters relevant to potential imports and exports. A large part of the advantage of a single large buyer consists of a monopoly of information. In 1972 the Soviet Union used its monopoly of information and used it skillfully. But it is not now clear that secrecy is in the best interests of the Soviet Union since any seller that may be approached becomes suspicious.

### **SOME CONCLUDING COMMENTS**

The politics and economics of hunger are very complex—too complex to be handled by suggesting that each of us eat one less hamburger per week. It is perhaps an indication of the temper of the times that individuals with relatively high incomes should suggest reducing hamburger consumption, even as an illustration, to make more grain available to the developing countries. Most of the individuals in the group making the statement probably do not eat a hamburger per week. And it is even more odd that reducing ham-

burger consumption should be suggested as a means of saving grain—the major sources of U.S. hamburgers are imported grass fed beef from Australia and discarded cows from dairy and beef herds.

While I am moderately optimistic that the world's food supplies will be reasonably adequate for the next few years, neither I nor anyone else can foretell if there will be famine affecting large numbers of people. The present situation is a precarious one. Adverse weather affecting agriculture in a significant area of the world could result in great distress in the developing countries. Just as I cannot be certain that food supplies will be adequate, neither can those who argue the contrary—that there will be a major dearth of food—be any more certain of their position. World grain reserves are low, but they are not lower relative to production than before the United States and Canada embarked upon their price-support programs three decades ago.

From the viewpoint of the developing countries the present food situation is serious. The heavy drain on foreign exchange earnings due to relatively high energy and food prices reduces the ability of developing countries to meet shortfalls in their own food production. Yet high grain prices are not without some small advantage to the developing countries. It is only through such prices that some restraint has been imposed on meat consumption in the industrial countries and thus grain has been conserved for direct human consumption.

Until grain stocks increase some it is imperative that no artificial restraints should be placed upon increasing agricultural production in North America or throughout the world. Expanding production is the only short-run solution; it is also one of the keystones of a long-run solution to the world's food problems. The other major keystone is an aggressive effort to reduce population growth. However, reductions in the rate of population growth can have little effect within a decade. But waiting will not help. The time to do something is now.