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THE WORLD FOOD CRISIS—PERIODIC OR PERPETUAL?

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As the World Food Conference opened in Rome in early November 1974, there were numerous, well-publicized statements that millions would die of starvation before the 1975 harvest. But, widespread famine has not occurred in 1975, and if available supplies are distributed equitably, major famine is unlikely during the current crop year.

I wish to examine: (1) the background of the food crisis of 1972–1974, (2) the World Food Conference and its follow-up, (3) the world prospects for continued pressures on world food supplies, and (4) the dilemmas and policy alternatives that face the United States in both the short and long run.

EVENTS LEADING TO THE CURRENT SITUATION

The world in general, and Americans especially, had grown complacent about their food supplies in the 1960's. As we entered the 1970's, there was a "surplus" psychology in developed and developing countries alike. In the developed countries there was the chronic surplus capacity of our high technology agriculture, and in the developing countries there was the promise of the "Green Revolution."

Indeed, until the early 1970's the world food situation did appear well in hand. World production of grains, the foundation of the food supply for most of the world's population, rose almost every year from 1960 through 1972, interrupted only by poor crops in the USSR in 1961 and 1963 and the great Indian drought of 1965–66. The world output grew steadily despite large-scale production control programs in the United States.

Let me remind you of the importance of grains. Except in the poorest parts of the developing world, where starchy root crops are the staple diet, grains in one way or another are crucial as a source of food supply. In the poor countries, the grains are consumed directly as human food, supplemented by modest quantities of meat, poultry, and fish. In the richer countries, only a small portion of the grains are consumed directly, and the bulk of them are fed to meat and dairy animals and poultry, the products of which are a major element in the diets. Thus, what happens to world grain

production is important to rich and poor alike, and it is what happens to grain supplies and prices that creates a feeling of crisis or confidence about food supplies.

Two factors affect the demand for grains—population growth and income growth.

The world's population is about 4 billion people at present, Nearly three-fourths of these people live in the developing countries and over half of them in Asia. The population of the developed world is only a little over 1 billion. The population growth rate in the developing world is about 2.5 percent per year; in the developed world about 0.8 percent. Thus, each year there are 80 million more people to feed, over 70 million of them in the developing countries.

Now, if all the world's growing population consumed grain at about 180 kilograms (a kilogram is 2.2 pounds) per capita annually, as did the population of the developing countries during their years of highest consumption, 1969–1971, an additional output of nearly 15 million metric tons of grain would be needed annually to keep up with population growth.

In the developed world in 1972, consumption per capita was 550 kilograms, and in the United States it was 850 kilograms. Thus, in the early 1970's the population growth in the developed world needed another 5 million tons of grain annually to maintain consumption levels. For the world to sustain its consumption patterns of the beginning of the decade about 20 million tons annual increase in output is required.

There are other factors. Generally, except for 1974 and 1975, there has been a slow but steady growth in per capita income and with it a rise in the demand for food. In the poor countries, and among the poorest in all countries, the income elasticity of demand for food is high. Thus, increased affluence adds to the demand for grains. As poor people grow wealthier, they increasingly shift to more meat, dairy, and poultry products. A modest rise of income together with population growth will call for an increase of nearly 3 percent per year in food output to keep up with demand without sharp increases in prices. And, a 3 percent increase annually means food production must rise by over 30 million tons per year and double every 23 years!

Finally, the demand for food is highly inelastic—meaning that it responds very little to changes in price. To put it another way, small changes in availability will cause large changes in prices, as

we have seen in the past few years. This instability is increased in developing countries because only a fraction of the grain actually enters the markets. Sales tend to be a residual after family consumption needs are satisfied.

In general, the world did not do badly in keeping up with the increase in demand from 1950 to 1970. World food output increased 0.75 percent per capita per year, and in the developed countries about 1.5 percent. But, this was not enough. The FAO estimated that in 1974 at least 400 million persons were suffering from malnutrition, if not starvation.

But, though not good enough to prevent widespread malnutrition in some developing countries, world production growth kept pace with world consumption increases until 1970. The first trouble started with the corn blight in the United States in 1970, but the United States had huge stocks of grain to meet the deficit between production and consumption.

In 1972, the weather was adverse simultaneously in the Soviet Union, Asia, and Africa, and world grain production dropped nearly 40 million metric tons, compared to an increase of 85 million tons the previous year and an average increase of 28 million tons per year over the previous decade. As a result of this decline, and the Russian decision to purchase from U.S. markets—a decision abetted by our unsound export subsidies and lack of export monitoring, world stocks, which had largely been held by the United States, plummeted. By the beginning of 1973, grain stocks were down to 10 percent of annual consumption, and prices began to rise, sharply in the United States and wildly in some of the food-deficit developing countries.

In 1973, world production recovered, with over half the increase in the United States and the USSR; but still output did not exceed consumption, and stocks were not rebuilt. Then, in 1974, world output declined again, by over 50 million tons, with the decline largely in the United States and the USSR. By the time of the World Food Conference, grain prices were at record levels. The United States had de facto export controls, and there were no significant reserve stocks in the non-Communist world.

The developing countries, buffeted by high fuel prices, fertilizer shortages, and inadequate grain supplies, were frightened and rightfully so. Some, like India and Bangladesh, faced severe shortages, if not starvation. India and several other countries used precious foreign exchange to buy high-priced food grains, thereby setting back their development plans for years. Concessionary food

aid, which had been ample when food was available and low-priced, was sharply reduced, and the largest source of such aid—the United States—refused to commit itself to increasing its food aid in late 1974 when it appeared most needed.

THE WORLD FOOD CONFERENCE

The background papers prepared for the World Food Conference suggested that unless the *rates of increase* in food production in the developing countries were increased by 40 percent in Asia, 50 percent in Africa, and 30 percent in Latin America over the performance of the previous decade, by 1985 the developing countries would have a net annual food deficit of 85 million tons in average years and as high as 100 million tons in adverse years. This compares with a net deficit of about 22 million tons in 1972–73. Import requirements of 85 to 100 million tons by developing countries are impossible to deal with either financially or logistically, even if this amount could be produced in the developed countries.

The first emphasis of the conference was on increasing food production in developing countries. Resolutions were passed calling for more and better research and extension, additional fertilizer capacity and better fertilizer use, more investment in agricultural infrastructure, and new institutions to further these objectives. The need for improved policies to encourage agricultural production was mentioned, but the nature of such policies was never spelled out.

The second emphasis of the conference was on world food security—a better food information system, a stocks system, and a food aid system to avoid the occurrences of 1972 and 1974. The FAO was given the responsibility for the information system, but no significant action was taken on the stocks issue. A resolution was passed requesting the various donor nations to pledge a minimum of 10 million tons of food aid annually.

The third area of concentration was on trade. Little was expected on this issue, and the developed countries guaranteed this outcome by insisting trade issues could be discussed only in the trade negotiations already under way.

What has come out of all this? First, several new United Nations institutions were created. One is the World Food Council, a 36-nation body responsible for overseeing national and international activities aimed toward increasing agricultural production in developing countries, developing an adequate food security system, and providing food aid. Members are elected by the General

Assembly of the United Nations. The Council reports to the Secretary-General of the United Nations and the General Assembly. Its first Executive Director is John A. Hannah, long-time President of Michigan State University, U.S. AID Director, and Deputy Secretary-General of the World Food Conference. He has a small but able staff in Rome, backed by the FAO. The first official meeting of the new Council, in June 1975, was hardly auspicious in either conduct or outcome.

To meet agricultural development goals, the flow of external funds would need to be doubled to about \$5 billion a year. This task was given to two other new institutions. One is the International Agricultural Development Fund, called for by the conference to raise an additional \$1 billion a year from the new oil-rich countries and the old rich countries. An organizational meeting was held in Geneva in May 1975 to determine the intent, rules, and potential commitment of these countries to provide such funding. The U.S. Senate version of the AID bill contains \$200 million as the U.S. contribution to such a fund. The Administration gave support for such a contribution.

The second new institution created was the Consultative Group on Food Production and Investment. Its purpose is to increase the flow of and improve the coordination of the many bilateral and multilateral funds for agricultural development.

The mandate and governing council of the FAO's World Food Program was reorganized to become the coordinating body for concessionary food aid, which will remain largely bilateral programs.

In summary, the World Food Conference met, passed the desired resolutions, set up new institutions, and is a part of history. As yet it has produced no additional money for agricultural development, has helped organize an improved but still inadequate food information system, has created no stocks system, and has not fed any hungry person better than before. Yet, the crisis predicted for early 1975 did not occur and complacency was again apparent by mid-1975. Now, suddenly, we are back in a near crisis situation, with a hold on exports to the USSR (at least temporarily) and the prospect of any significant rebuilding of stocks again declining. Is the crisis real this time and, if so, how do we meet it?

DEVELOPMENTS IN 1975

By January 1975, the U.S. government still had not passed its foreign aid appropriations which fixed the level of concessionary

food aid. Then, several events occurred rather rapidly. First, the USSR and China, both of which had earlier made purchases in the U.S. market for 1974-75 delivery, suddenly cancelled or deferred purchases. As a result, U.S. grain prices began to decline significantly.

Second, members of the Congress at the World Food Conference were concerned by the President's refusal to increase U.S. food aid commitments. When the foreign aid bill was passed, it contained a section that said "not more than 30 percent of concessional food aid should be allocated to countries other than those which are most seriously affected by the current food shortage." But, by this time the United States had made food aid commitments to so many of its political friends not on the list of seriously affected countries that to meet these commitments, the total budget for concessionary food aid had to be increased to \$1.47 billion, a 73 percent increase over the \$849 million expended in fiscal year 1974.

In the meantime, prices had declined and a combination of lower prices and more funds meant that nearly 5.8 million tons of food aid could be provided during the 1975 fiscal year compared to 3.1 million tons last year. Once this became apparent, the U.S. government moved as rapidly as possible to commit and move grain supplies. These were added to the concessionary aid already pledged by Canada and some Western European nations at the Food Conference.

While the world was waiting for the U.S. government, some of the developing countries, especially India, bought in world commercial markets; and as a result of the combination of these purchases and increased food aid, India and Bangladesh were removed from the FAO's critical food shortage list in March. The world scraped by for the first half of 1975.

During and since the Food Conference there has been much talk and some guilt feelings about the heavy grain consumption in the United States as a result of our high red meat consumption. There were campaigns to have meatless days, eat less beef, and many similar ideas. About 35 million metric tons of the 52 million ton drop in world grain output last year was in coarse grains, or feed grains. Virtually all of the decline in coarse grain output occurred in the United States.

What happened in 1974-75 was that the extraordinarily high grain prices and worldwide recession in the developed countries resulted in the sharpest curtailment of grain fed to animals in his-

tory. The USDA estimates that grain fed to livestock in the United States was down by 32 million metric tons during the 1974-75 crop year, and coarse grain exports were down by 5.6 million metric tons. Thus, the market did allocate grain from feed to food consumption, at great cost to domestic cattle, hog, dairy, and poultry producers, and at substantial cost to U.S. consumers. In countries where markets do not allocate supplies, there was no such diversion; grain fed to livestock in the Eastern Bloc actually rose.

World wheat production was also down by about 19 million metric tons in 1974-75, with the decline concentrated in the USSR and South Asia. The high prices and short supplies reduced the feeding of wheat in the United States and its direct consumption in India.

We can sum up our adjustment to last year's crisis by noting that the United States reduced its grain consumption per capita by nearly 10 percent. The other developed market economies reduced consumption little, if at all. The centrally planned economies reduced per capita consumption by 1 or 2 percent, and the developing economies about 1 percent. There were great disparities among the latter. South and Southeast Asia took the brunt of the decline while the newly rich developing countries expanded consumption. The world's richest and poorest nations made the adjustment in 1974-75, a fact that is not widely publicized by the U.S. government, probably because our policies (or lack thereof) hurt us and the world's poorest nations the most.

LOOKING AHEAD

During 1975 crop prospects in the Soviet Union and Eastern and Western Europe have deteriorated markedly, and those in the United States and Canada are still subject to uncertain weather conditions. Estimates of Soviet import requirements now range up to 25 million metric tons. They had purchased about 16 million tons by mid-September. Fortunately, most of the world outside Europe and the Soviet Union is enjoying good weather, and prospects are good for a record rice crop in Asia. Even so, the food-deficit developing countries will need both commercial imports and large-scale food aid to avoid further reductions in their already inadequate consumption and further food price inflation.

The most optimistic projections for production in the 1975-76 crop year now are something under 1.3 billion metric tons of all grains. This is about the 1973-74 level and well below the trend line for world grain production. Assuming that the Soviets get a major portion of the supplies needed to maintain their livestock herds,

there will be little or no rebuilding of world stocks. We will face the 1976-77 crop year with the same uncertainty as in the last two years.

We come to the short-term policy dilemma: Should we allow our market to remain open to unlimited exports even if it: (1) significantly adds to domestic inflationary pressures, (2) significantly raises import prices to poor developing countries or reduces the quantity of food aid to them, and (3) leaves the United States little or no reserves in the event of a bad crop in 1976 either at home or abroad?

Another way to put the question is: Does the "market," even supplemented by food aid abroad and food stamps at home, assure sufficient food grains and equitably divide supplies among countries and between years? My personal answer is "NO." I believe the immediate policy decisions must alter the current international food marketing system to better serve our own and the world's needs.

There appears to be ample evidence that the "market" will not induce enough private storage to reduce substantial year-to-year fluctuations in grain prices, given variations in weather. Most of the world's consumers would probably prefer a more regular distribution of output between years.

Even more important, it would seem unreasonable to depend so heavily upon the "market" for distribution among consuming countries, especially when the major destabilizing country in the market does not use the price system internally to indicate to its consumers that grain supplies are short.

The second set of policy issues revolves around how we can build a system that can withstand the shock of bad weather whenever and wherever it occurs. This, of course, involves some sort of stocks scheme, a subject of infinite economic and political complexity. Above all, it involves a commitment on the part of the United States, as the world's largest exporter, to take the leadership. This commitment has been stated by our Secretary of State but is not shared by high officials in the USDA or by our farm organization leaders.

The world has consumed more grain than it has produced in five of the last six years. World stocks are at an all-time low. Until we have at least two or three years of good harvests, well distributed around the world, we will not be in a position to handle a large drop in output without a serious reduction in someone's consumption. The prospect of serious famine is not imminent but neither is it impossible in the next few years.

The third set of policy issues concerns the ability of the world to feed its growing population and the U.S. role in that task. The recent crisis may have positive results in that it has turned the attention of world leaders (other than Ministers of Agriculture) to food problems.

As we look ahead, the task of feeding the world is a formidable one! The statistics quoted earlier are worth repeating. To keep up with prospective population growth will require a sustained increase in world food output of 2.5 to 3.0 percent per year, and most of it must occur in the developing countries. Most of the easy gains are gone, especially in Asia, where the problems loom largest. Most of the available land suitable for crop cultivation is being used; in fact, farming on land that is too dry and too steep threatens irreversible ecological damage in some areas. Despite high fuel and fertilizer prices, most of the expanded output must come from higher output per area of land. This means more irrigation, better varieties, more intensive cultivation, and better farming practices. Behind this there must be research, investment, education, and the mobilization of national and international will. The margin of safety is too narrow and the price too high to allow our efforts to lag.

There is substantial disagreement on this subject. Some already have predicted widespread famine as inevitable in major areas of the world and have even talked about "triage," a concept which I personally find both morally unacceptable and politically unrealistic.

On the other side are those who view the recent situation as only temporary. They believe that technology is adequate and that it will be adopted through the normal pull of market forces.

My own view is that the situation is somewhere in between. In the absence of marked changes in priorities and a much greater effort to increase food production in developing countries, the pessimists could be proven right. However, given what is known and not yet applied, and prospects for future research developments, there is no reason that the world cannot meet its food requirements for at least the next decade. The determinant is likely to be the political will, both in developing and developed countries, to make the hard policy choices to encourage the necessary production and equitable distribution of food.

Finally, what is the role of the United States? First, we must produce at full capacity for the foreseeable future. Even so, we cannot feed the world. Most of the increased food needed must be

produced in the developing countries themselves. But we can, as we have in the past, do several things:

1. We can continue to be the world's major surplus food producer to provide food for those nations unable to grow their own and rich enough to buy from us.
2. We can continue to supply a significant portion of the concessionary food aid needed by the poor countries for short-term emergencies and long-term deficits.
3. We can, and should, as one of the world's largest producers and exporters, take the leadership in developing an adequate world food reserve system. We should do this for our own good, as well as for the good of those countries hurt worst by world shortages and high prices.
4. We can, and should, do our share in aiding the development of food production in developing countries. This means increasing our financial, technical, and managerial contributions to one of the most important international efforts.

None of this sounds very dramatic and it may not satisfy those with a guilt complex or a penchant for self-sacrifice. But, they are, I believe, in the long run the elements which could lead to a much more stable situation.

If the United States exerts its leadership in these directions, there will be real prospects that the international community can eliminate the potential for food crises, whether periodic or perpetual.