Opportunities in the International Economy for Meeting the Food Requirements of the Developing Countries

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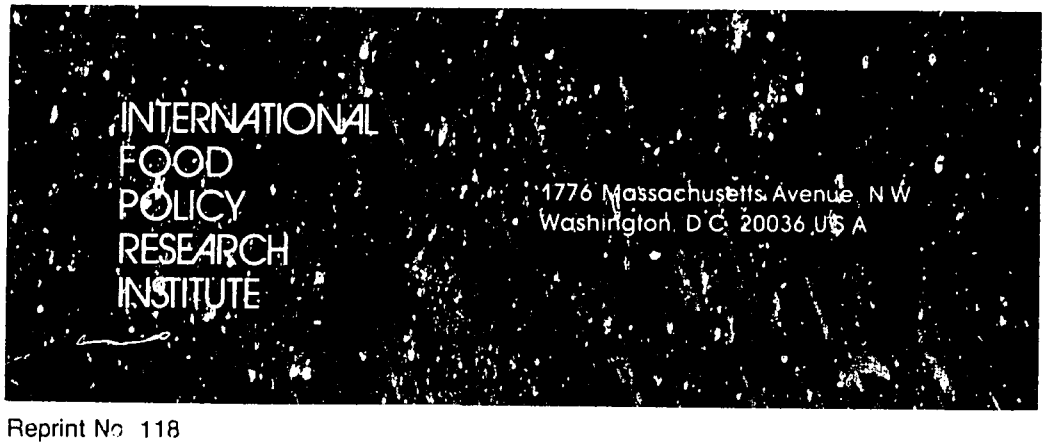

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Most of the human suffering arising from food insecurity is in the developing countries of the world; there the relative availability of food also plays a major role in determining the pace and pattern of economic development. The world's developed countries provide the major source of food exports to developing countries; they possess much of the technological capacity needed to stimulate economic growth in the developing countries. How well the developing and developed countries can cooperate in the mutually important processes of food supply and economic development will have a profound effect on the type of world in which we live.

My purpose in this chapter is to stress the need for increased food, capital, and technological exchanges between developing and developed countries. My thrust is to demonstrate how relations among these countries should be, rather than how they presently are. Such a normative orientation helps focus attention on the fact that present world food problems can—and should—be solved by a judicious mixture of intergovernmental cooperation and communication.

I begin by identifying the character of the food security needs currently facing the Third World. I then stress the need to accelerate current rates of food production growth throughout the developing world. Increased food production not only raises the total amount of foodstuffs, it also helps boost poor people's access to food. Through the direct and indirect multiplier effects of technological change, increased food production growth raises both the purchasing power and the employment opportunities of the poor. I then analyze the policy steps that need to be taken in developed countries to support this strategy of agricultural growth in the Third World. The high-income countries can do much here through the provision of food and technical assistance and the liberalization of trade restrictions. I conclude that a key element in meeting the food needs of the world lies in intelligently stimulating the political and

economic contacts between the developing and the developed countries of the world.

FOOD SECURITY CHALLENGES IN THE WORLD

Two problems are at the crux of the world's food security: chronic food insecurity in most developing countries and widespread fluctuations in annual food production in many developed and developing countries. The first is a long-term problem of aggregate food supply in developing countries, a problem that requires increasing current rates of food production growth throughout the Third World. The second problem is more a short-term one that draws attention to the need for smoothing out the substantial short-run fluctuations in annual food production that have a particularly negative impact on the poor.

The pressing nature of these two problems is easily demonstrated. With respect to the first problem, in recent years aggregate food production in the developing world has just barely kept pace with the rate of population growth. Between 1961 and 1980, food production in the Third World increased at an average rate of 2.6 percent a year (Table 3.1). This was only slightly faster than the average annual population growth rate of 2.4 percent. Thus, on a per capita basis, food production in the Third World as a whole increased by only 0.2 percent. However, this aggregate figure covers sharply different rates of food production growth in various regions of the developing world. For example, while per capita food production in Asia increased by a strong 0.5 percent per year, in sub-Saharan Africa it fell by a shocking 1.2 percent. In both of these areas, as well as throughout the Third World, accelerated rates of food production growth are needed to meet the pressing food needs of the poor.

Table 3.1 Population and Major Food Crop Production in the Developing World, 1961–1980

Country group	Average Annual Population Growth Rate, 1961–1980 (percent)	Average Annual Major Food Crop Production Growth Rate,[a] 1961–1980 (percent)
Developing countries[b]	2.4	2.6
Asia (including China)	2.3	2.8
North Africa and Middle East	2.7	2.5
Sub-Saharan Africa	2.8	1.6
Latin America	2.7	2.8

[a]Includes cereals, roots and tubers, pulses, groundnuts, bananas, and plantains. Rice is in terms of milled form.

[b]Includes a total of 105 Asian, African, Middle Eastern, and Latin American countries.

Source: Leonardo A. Paulino, *Food in the Third World: Past Trends and Projections to 2000* (Washington, D.C.: International Food Policy Research Institute, 1986).

With respect to the problem of fluctuations, in recent years the growth of world food production has been accompanied by a steadily increasing degree of production variability. Between the periods 1960/61 to 1970/71 and 1971/72 to 1982/83, the coefficient of variation of total world cereal production increased from 2.8 percent to 3.4 percent.[1] This represented a net increase in production variability of 21 percent (Table 3.2). The major source of this increase in production variability has been in increases in yield covariances among crops and among regions.

Given the importance of the new seed/fertilizer technologies in Third World agriculture, it is tempting to suggest that the introduction of these technologies is inherently related to the observed increase in yield variances. Yet it would be quite premature to draw such conclusions. On the one hand, increased yield covariances may be caused by the spread of varieties with common parentages over wide geographical areas. Now that this problem is recognized, breeders need to give greater emphasis to making full use of different seed and plant varieties to reduce variability. On the other hand, increased yield variances may also be caused by the erratic supply of essential components of the new agricultural technology—fertilizer, irrigation, and electric power. The solution to this problem is, of course, to continue improving the public institutions for providing these inputs and to eliminate any short-term fluctuations in their availability. In any event, it is clear that we need to know far more about the technological and the policy means for dealing with the whole problem of increased production variability. In the meantime, efforts to deal with this variability problem should *not* involve avoiding the use of the very seed/fertilizer technologies that have provided such a stimulus for Third World cereal production.

In recent years the steady growth in world food production has also been accompanied by a rising degree of price variability. Although international grain prices were relatively stable in the 1950s and 1960s, since 1971 they have become highly variable. The coefficient of variation for export prices was more than eight times as high in the 1970s as it was in the 1960s (Table 3.3). For rice, the coefficient of variation for export prices more than doubled between the two decades. The most important factor in increased price variability is the withdrawal of the United States from providing world price stability as a by-product of its domestic farm income support programs.

It is important to realize that the brunt of such fluctuations in price and production fall mainly upon those who can least afford them—the poor. For example, research in India[2] indicates that the poor spend between 60 to 80 percent of their increments to income on food; and that the bottom 20 percent in the income distribution make nine times the adjustments in food expenditures as do the top 5 percent on the distribution to a given decline in supply. Thus, as food supplies decline and prices rise, the poor must bear the brunt of the burden. The poor may suffer either through a reduction in their purchasing power from higher prices or through a reduction in their employment opportunities.

Table 3.2 Changes in the Mean and Variability of World Cereal Production[a]

	Average Production			Coefficient of Variation of Production		
	1960/61 –1970/71	1971/72 –1982/83	% Change	1960/61 –1970/71	1971/72 –1982/83	% Change
	(metric tons)			(percent)		
Wheat	253,454	352,982	39.3	5.46	4.83	–11.5
Maize	210,074	317,303	51.0	3.29	4.41	34.0
Rice	119,971	155,031	29.2	3.97	3.80	– 4.3
Barley	95,283	150,997	58.5	4.81	7.50	55.9
Millet	19,758	21,370	8.2	7.91	7.66	– 3.2
Sorghum	40,233	53,386	32.7	5.22	5.70	9.2
Oats	49,035	47,600	– 2.9	11.30	5.35	–52.6
Other cereals	41,404	35,321	–14.9	4.57	9.31	103.7
Total cereals	829,215	1,133,902	36.7	2.78	3.37	21.2

[a]Does not include People's Republic of China.

Source: Peter Hazell, "Sources of Increased Variability in the World Cereal Production Since the 1960s," *Journal of Agricultural Economics* 36, no. 2 (May 1984), Table 3.

As food prices rise, the wealthier classes try to maintain their food consumption by reducing their consumption of those very labor-intensive goods and services that provide employment for the poor. A decline in food production therefore not only reduces the food supplies available to the poor, but may also reduce their ability to procure those supplies at higher prices.[4]

FOOD NEEDS AND THE DEVELOPING WORLD

In order to ease the burden on the poor, it is necessary to accelerate current rates of food production growth throughout the Third World. This is because of the tremendous world need for food, if the poor are to prosper, as well as the critical role that the food production sector must assume in any equitable pattern of economic growth.

In some developing countries the initial benefits of a faster rate of food production growth may well tend to benefit the surplus-producing peasant cultivator and not the poorest rural people. However, the record is clear from time series data in India that increased food production and declining food prices are the dominant variables determining the incidence of rural poverty.[5] Concurrently, it is only through cost decreasing technological change that these two variables work to reduce the indigence of rural poverty. Increased food production growth tends to benefit the rural poor mainly through the creation of new employment opportunities.

In most Third World countries food production growth requires more attention to crop yields. Throughout the world, even in Africa, the rate of growth of the cropped area has declined sharply in recent years. This indicates that an

ever-increasing proportion of the food needed to feed the world must come from increased yields per unit of land.

In the past two decades, increased crop yields have, in fact, become the main source of food production growth in the developing world. Between 1961 and 1980 output per hectare of major food crops in the developing world rose by 1.9 percent annually and accounted for more than 70 percent of total food production growth (Table 3.4). During this period increases in the harvested area averaged only 0.7 percent a year and contributed the other 30 percent of total production growth in the Third World.

Increases in yields require prolonged and continuous technological change in agriculture. Depending on the situation, improvements in agricultural technology (such as the use of high-yield seeds, fertilizers, and pesticides) produce yields two to four times higher than those achieved by traditional means. For example, the adoption of new technology in India increased average cereal yields 29 percent between the periods 1954/55 to 1964/65 and 1967/68 to 1977/78. As this point is often neglected, the role of the state in promoting such yield increases needs to be emphasized. In general, the new seed/fertilizer inputs commonly associated with the Green Revolution cannot succeed without considerable state intervention in agriculture. The state needs to come in and establish those types of rural institutions and services that the private sector will not undertake. Most developing countries would have to wait a very long time for the private sector to build efficient agricultural research and technical education systems, or even irrigation and fertilizer distribution systems, in the countryside. All of this focuses attention on the need for a high level of public investment in the basic building blocks of agricultural development: irrigation, input facilities, rural roads, and especially agricultural research systems.

The historic examples of Taiwan, Japan, and the Punjab of India illustrate quite graphically the benefits of a high rate of public investment in agriculture. In India, for example, about 20 percent of the central government budget was devoted to agriculture in the early 1960s.[7] A good deal of this investment focused on the Indian state of the Punjab, an area that already had good water supplies and soil fertility. When the new high-yield seed/fertilizer inputs ap-

Table 3.3 Variability in Export Prices for Wheat and Rice in Real Terms: 1950–1979

	Wheat		Rice	
	Standard Deviation	Coefficient of Variation	Standard Deviation	Coefficient of Variation
1950–1959	26.0	11.2	59.0	11.4
1960–1969	7.0	3.6	89.0	17.5
1970–1979	56.0	30.0	187.6	39.0

Source: Alberto Valdes, "A Note on Variability in International Grain Prices," paper prepared for IFPRI Workshop on Food and Agricultural Price Policy (Washington, D.C.: International Food Policy Research Institute, 1984), Table 1.

Table 3.4 Average Annual Growth Rates of Production, Area Harvested, and Output Per Hectare for Major Food Crops[a] in Developing Countries, 1961–1980

Country Group	Production[b]	Area Harvested	Output per Hectare
		(percent)	
Developing countries	2.6	0.7	1.9
Asia (including China)	2.8	0.4	2.4
North Africa/Middle East	2.5	1.1	1.4
Sub Saharan Africa	1.6	1.5	0.1
Latin America	2.8	1.5	1.3

[a]Includes cereals, roots and tubers, pulses and groundnuts. Rice is in terms of milled form.

[b]Annual growth rates of production may differ slightly from those shown in Table 3.1 because the data here exclude the outputs of bananas and plantains, for which estimates on the area harvested are not available.

Source: Leonardo A. Paulino, *Food in the Third World: Past Trends and Projections to 2000* (Washington, D.C.: International Food Policy Research Institute, 1986).

peared, this investment enabled the Punjab to achieve a remarkable 8 percent annual increase in major food grain production between 1960/61 and 1978/79.[9]

Of course, the level of public investment is not the only factor determining agricultural success in the developing world. Certainly such factors as the character of land distribution, the quality of human capital stock, and other socioeconomic factors also play a leading role. But the public investment in agriculture is clearly an important factor, if for no other reason than that the common pattern in many developing countries is to underinvest in the rural sector. For example, in Africa, a continent where per capita food production is now declining, governments have typically spent very little on agriculture. During the period 1978-1980 the median annual expenditure on agriculture in fifteen African countries was only 7.4 percent of the total government budget (Table 3.5).

During this same time period, foreign donors have generally paid less attention to African agriculture than have national governments. As a result, most African countries today suffer from a poorly developed rural infrastructure, little research on food crops, and poorly developed input delivery systems. In the early 1960s, famine-prone Asia represented life for the poor without a Green Revolution; now Africa has taken over that role with terrible consequences for its poor.

In many developing countries the low level of government investment in agriculture is a reflection of the low priority assigned to the agricultural sector. In these countries, agriculture is commonly viewed as a "backward" sector, capable of only providing surpluses—especially taxes—to finance industrial and urban development. In these countries, agriculture is taxed by fixing low prices for its products and by overvaluing national currencies. In some situations the level of such taxation on food and export crops has been so high as to seriously impair production. In Africa, for example, the rate of taxation on ex-

port crops has varied between 40 and 45 percent in recent years.[7] Similarly, in the past, high effective rates of taxation on food crops in Africa have encouraged producers to actively avoid selling their produce to state marketing outlets. In more recent years, however, relative food prices have been rising in Africa, but this has had little effect so far on overall rates of food production growth. That is because of the poor state of public support for technological change in the smallholder farming sector. In Africa the combination of high taxation, a deterioration of the terms of trade against agricultural exports, and a lack of public investment in agriculture have helped create a severe foreign exchange constraint.[8]

If food production is to rise significantly in the Third World, the leaderships of many developing countries must adopt—and the donor community must encourage them to adopt—a more enlightened view of agriculture. Leaders of several Asian countries have already made the type of conscious policy shifts needed to encourage agriculture production, but this is the case in only a minority of African countries. Throughout Africa, investment, pricing, and exchange rate policies must be revised with a view to encouraging agricultural production, not penalizing it. Such policy reappraisals should be guided by a recognition of the three important roles that agriculture can play in the overall development process.

First, food and agriculture can help relieve the important wage goods constraint involved in development. As noted above, the marginal propensity of the poor to spend on food is quite high, typically 0.6 to 0.8. Thus, if development leads to a rapid growth in the employment (and income) of low-income

Table 3.5 Percentage of Central Government Expenditures to Agriculture in Selected African Countries, 1978–1980

	1978	1979	1980	Average All Years
Ghana	12.2	10.4	12.2	11.6
Rwanda	10.3	12.7	—	11.5
Madagascar	11.5	11.4	10.2	11.0
Sudan	9.0	11.3	9.4	9.9
Botswana	10.5	9.2	9.7	9.8
Somalia	12.6	10.6	5.6	9.6
Kenya	8.5	8.4	8.3	8.4
Tanzania	9.3	7.0	—	8.2
Niger	7.1	8.9	6.8	7.6
Liberia	9.0	2.7	3.1	4.9
Cameroon	4.1	4.3	4.2	4.2
Sierra Leone	4.2	4.1	—	4.2
Upper Volta[a]	4.2	3.9	—	4.1
Ivory Coast	2.9	—	3.4	3.2
Nigeria	2.6	1.4	2.5	2.2

[a]Upper Volta is now Burkina Faso.

Source: International Monetary Fund, *Government Finance Statistics Yearbook*, Vol. 5 (Washington, D.C.: IMF, 1982), p. 43.

people, the demand for food will rise concomitantly. If more food is not forthcoming, food prices will rise, the real cost of labor will increase, and investment will swing to more capital-intensive processes." Thus, any strategy of development that entails more employment for the poor will also require the wage goods—particularly food—to support such economic growth.

Second, food and agriculture have important employment and growth linkages with the rest of the economy. As the dynamics of these linkage effects are often missed, it is useful to emphasize them here. Technological change in agriculture raises the incomes of landowning farmers, who spend a large proportion of their new income on a wide range of nonagricultural goods and services. In Asia, for example, farmers typically spend 40 percent of their increments to income on locally produced nonagricultural goods and services.[10] The small enterprises that produce such goods tend to be far more labor-intensive than any fertilizer factory or steel mill. They thus provide the rural poor with a whole spectrum of new nonagricultural employment opportunities. This increases the effective purchasing power of the poor at the same time that it provides for new rounds of growth in the economy at large. As the poor begin to work regularly, they demand more and higher valued foodstuffs. This helps to stimulate the demand for foodstuffs and to strengthen the need for more widespread technological change in agriculture.

Third, a focus on food and agriculture in development helps produce the export goods needed to fuel the growth process. To succeed, any development strategy requires the importation of large quantities of capital-intensive goods—for example, fertilizer and pesticides for agriculture, and steel and petrochemicals for industry. In most developing countries such imports must be paid for by increased exports. An agricultural strategy of development, which stresses the increased production of primary and consumer goods, is able to contribute to those export needs. In the early stages of development, a focus on agriculture helps produce those agricultural commodities that are needed to earn foreign exchange. Although it has sometimes been alleged that increased export crop production interferes with domestic food production, recent empirical evidence suggests that this is not so. In general, those countries that have been doing well in export crop production have also been successful at expanding domestic food production.[11]

Similarly, in the middle stages of development, an agricultural strategy encourages the production of those labor-intensive consumer goods—such as clothing and textiles—in which developing countries possess a distinct comparative advantage. Over time, firms specializing in the production of these consumer goods acquire the experience and efficiency needed to compete on the world market. Taiwan is a good example of a country that has used rapidly growing domestic demand to establish the type of labor-intensive industries that eventually came to compete so successfully on the world market.

The relationship between food production growth and employment growth is highly complementary and must be a major focus of policy. In Asia,

with the Green Revolution under way, the focus needs to be on seeing that capital allocations are efficient in order to keep employment growth commensurate with the improved agricultural record. Several Asian countries are deficient in this respect. In Africa, the initial effort must be more production-oriented, simply to get the now-stagnant agricultural sector moving.

FOOD NEEDS, DEVELOPMENT ASSISTANCE, AND THE THIRD WORLD

In the past, efforts by the developed world to assist agricultural development in the Third World have drawn fire from a number of critics, including such people as field practitioners, journalists, and academics. Whatever their perspectives, these critics have usually shared the belief that development assistance to the Third World encourages the neglect of agriculture and places more resources in the hands of the ruling class at the expense of the rural poor. For example, writing on the topic of food aid, T. W. Schultz declared that "aid in kind . . . has the effect of increasing the capacity of the government that receives such aid to continue discriminating against its own agriculture."[9] A more extreme version of this view is contained in the writings of Frances Moore Lappé, who believes that all development assistance "actually increases hunger and repression by reinforcing the power of national and international elites who usurp the resources rightfully belonging to the hungry."[10]

Despite these attacks, development assistance remains a major source of foreign exchange and capital in many developing countries. In some of the developed countries, food aid receives substantial political support from domestic farm groups, who are anxious to dispose of commodity surpluses abroad. In other high-income countries, capital- and technical-assistance programs are justified on moral and humanitarian grounds. In all of these countries, development assistance receives the intellectual support of many thoughtful people, who, although acknowledging the validity of some of the preceding criticisms, still believe that such assistance can make a valuable contribution to equitable growth in the Third World.

Food aid can play two important roles in facilitating Third World economic growth. First, food aid can help developing countries overcome the temporary food demand-supply imbalances that accompany the development process. In these countries the surge in demand for food that occurs in the middle stages of development frequently outstrips the production capabilities of domestic agriculture. Second, food aid can be an important instrument of income transfer from rich people in developed countries to poor people in developing countries. Because the poor spend the bulk of additional income on food, it does little good to raise their incomes without providing added food. Food aid can thus back up national programs for benefiting the poor. It may do so through food-for-work and food-subsidy programs.

The developed world has its most immediate role to play in supplying commercial and food-aid imports to the Third World. Between 1961-1965 and 1973-1977, net food imports by the developing world increased nearly fivefold, from 5 million to 23 million tons per year (Table 3.6). Linear projections of per capita production and consumption dynamics in the Third World suggest that the level of such food imports will reach 80 million tons by the year 2000. The factors underlying such a dramatic rise in food imports to the developing world may be easily summarized. In the initial stages of development, people are generally quite poor. They wish to consume more food, yet are unable to do so because of low income. In these early stages, poverty causes high death rates and hence leads to only modest rates of population growth. The result is a 1.5 percent or less growth rate in the effective demand for food, which can generally be met through traditional processes of growth.

As development occurs, the population growth rate increases. But, even more important, income begins to grow rapidly, and a high proportion of that income is spent on food. These factors together increase the growth rate of demand for food to 4 percent or more annually. Such a rate of growth in food demand exceeds all but the most rapid rates of food production growth. For this reason, most countries in the high growth, medium-income stage find it necessary to rely upon food imports to meet a significant portion of their rising

Table 3.6 Net Imports and Growth Rates for Imports and Exports, Food Staples, in Developing Countries, 1961–1965, 1973–1977, and Projections [a] of Net Imports to 2000

Country Group	Net Imports (million tons) 1961–65	1973–77	2000[a]	Annual Growth Rate (percent) 1961–65 to 1969–73 Exports	Imports
Developing Countries[b]	5.3	23.0	80.3	2.1	5.4
By Region					
Asia[b]	6.3	10.9	−17.9	2.5	3.5
North Africa Middle East	3.6	10.6	57.3	−2.0	7.3
Sub-Saharan Africa	0.9	2.9	35.5	4.6	7.1
Latin America	−3.7	−1.4	5.4	3.6	6.9
By GNP Per Capita Growth Rate					
Less than 1.0%	1.6	8.0	39.5	−5.1	7.7
1.0% to 2.9%	2.8	−1.1	−48.5	1.8	3.3
3.0% to 4.9%	1.7	4.0	24.1	4.8	5.5
5.0% and Over	4.7	12.1	65.2	2.9	6.6

[a] The projections are based on differences between extrapolations of 1961–1977 country trend production and the aggregate projections of demand for food, animal feed, and other uses; projections of demand for animal feed were assumed to follow the country growth rates of meat consumption, i.e., no change in feeding efficiency. A basis for such adaptation is being pursued at the International Food Policy Research Institute, but the results are not yet available.

[b] Excluding the People's Republic of China

Source: Calculated by Leonardo A. Paulino and others at the International Food Policy Research Institute, Washington, D.C.

demand for food. In the later stages of development, of course, population growth rates decline and growth in income begins to have less effect on the demand for food. Meeting demand growth then becomes more manageable, because by then food production growth rates have become institutionalized at relatively high levels.

Consistent with this analysis is the observation that rates of growth in food imports in the developing world seem to vary positively with the rate of per capita income increase. For example, according to the data in Table 3.6, developing countries with the highest rate of GNP per capita growth experienced a 6.6 percent annual rate of growth in food imports, as they more than doubled their level of imports during the period of this study.

The only exceptions to this finding are the slowest-growth countries (less than 1 percent GNP per capita increase). On the whole, the high level of food imports by these countries reflects the impact of food-aid and assistance programs. Between 1976 and 1978 these slowest-growth countries received about 35 percent of their total cereal imports from food aid. Many of these countries are located in sub-Saharan Africa, an area that has been beset by chronic food production shortfalls. The importance of food aid to these very poor African countries serves to highlight the importance of this particular policy instrument.

In previous years, much attention has been focused on the alleged disincentive effects of food aid on domestic agriculture in the Third World. Yet more recent empirical studies suggest that the negative impact of food aid on local agriculture has been overemphasized. For instance, Simon J. Maxwell and Hans W. Singer, in their review of twenty-one studies on the impact of food aid, found only seven cases reporting "significant" disincentive effects on either prices or production. On this basis, they conclude that any disincentive effect of food aid on local agriculture "can be and has been avoided by an appropriate mix of policy tools."[4]

Food aid must not be allowed to adversely affect local agriculture because increased domestic production still represents the best long-term solution to the food problems of the Third World. This is so more because of the role of agricultural growth in increasing rural employment than in providing the food itself. As noted above, progress toward this long-term solution will require much assistance by the high-income countries of the world. Most important, it will demand that these countries extend the technical and financial assistance needed to support an agricultural-oriented strategy of development in the Third World.

From a technical standpoint, scientists of all kinds—social, biological, and physical—need to lend their services to the Third World. Economists need to help developing country governments create the proper incentives to encourage technological change in agriculture, and political scientists and anthropologists need to analyze the socioeconomic impact of such change on different rural groups. Agronomists, plant breeders, and the like also must lend their services to the agricultural research systems in the developing world. These

specialists need to contribute to building the type of educational and research facilities in the Third World that will enable these countries to educate their own agricultural experts. In the process of building indigenous facilities, it is important to note that the current revolution in the biological sciences makes going it alone quite inefficient. Over the next few decades the returns to close international collaboration in science will be quite high.

From a financial standpoint, more support is required to underwrite the costly infrastructure improvements—especially road and water improvements—needed to increase food production in the developing world. One recent estimate puts the capital costs of producing enough food to feed the Third World by the year 1990 at $98 billion.[15] Increased levels of development assistance from the high-income countries of the world would be of immense help in meeting this need.

The industrialized countries also need to take certain steps to help the developing countries to help themselves. They need, for instance, to liberalize the international trade environment in such a way so as to encourage labor-intensive exports by the Third World. A number of developing countries, particularly those in Asia, possess a significant comparative advantage in the exportation of clothing, textiles, and other inexpensive consumer goods. In many cases, the sale of such goods on the world market can help pay for the capital and technological imports that are needed to support the whole development process. Finally, international institutions such as the International Monetary Fund (IMF) need to revise their institutional structures for financing food trade to the developing countries of the world.

CONCLUSION

The key to meeting the world's food needs lies in stimulating the political and economic contacts between developing and developed countries. These countries need to cooperate in order to achieve the central goal of accelerating food production in the Third World. Expanded food production provides the means for eliminating the most extreme cases of hunger and malnutrition in the world. It also helps to provide the wage goods and the income multiplier effects needed to stimulate further economic growth. Because such economic growth is labor intensive, it is also equity-oriented in the sense of providing more income and employment for low-income people. It is important to recognize that although a rural-based, employment-oriented development strategy has its limitations, from both a growth and an equity standpoint it is far superior to either the capital-intensive or the import-substitution strategy of growth.

Such a pattern of development requires an active partnership between the developing and the developed world. The developing world must recognize the positive role that agriculture can play in its development. It must attempt to stimulate agricultural output by revising investment, pricing, and exchange-

rate policies. The developed world, in turn, must seek to encourage such policy reappraisals by making available the resources necessary to support an agricultural strategy of development in the Third World. The developed world must also be prepared to provide the food imports (and food aid) that, surprisingly, accompany the process of agricultural growth in the developing world. From the dynamics of such a partnership, the world could conceivably evolve into a place where adequate food is not just a right of all people but an accomplished fact.

NOTES

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1. Peter Hazell, "Sources of Increased Variability in the World Cereal Production Since the 1960s."

2. John W. Mellor, "Food Price Policy and Income Redistribution in Low-Income Countries."

3. John W. Mellor and G. Desai, eds., *Agricultural Change and Rural Poverty*.

4. Ibid.

5. Uma Lele, "Terms of Trade, Agricultural Growth and Rural Poverty in Africa."

6. Y. K. Alagh and P. S. Sharma, "Growth of Crop Production: 1960/61 to 1978/79—Is It Decelerating?"

7. World Bank, *Accelerated Development in Sub-Saharan Africa: An Agenda for Action*, p. 55.

8. Lele, "Terms of Trade, Agricultural Growth and Rural Poverty in Africa."

9. John W. Mellor, *The New Economics of Growth: A Strategy for India and the Developing World*.

10. Peter Hazell and Ailsa Roell, *Rural Growth Linkages: Household Expenditure Patterns in Malaysia and Nigeria*.

11. Lele, "Terms of Trade, Agricultural Growth and Rural Poverty in Africa."

12. Theodore W. Schultz, "Effects of the International Donor Community on Farm People."

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