The Case for Increasing Food Aid: How Much and to Whom?

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Introduction[1]

It is not possible to estimate accurately the level of the requirement for food aid for some year in the future. Too many uncertain factors influence the final outcome, including world economic conditions, fluctuations in world cereal markets, and variations in growth rates for key variables.

Nevertheless, there are some general principles which may be used on an annual basis to determine the current level of a country's need for food aid. Using these principles and projecting past trends under alternative scenarios, one can also estimate rough orders of magnitude for the future requirements of developing countries in the aggregate, although such estimates do not represent precise indicators of likely future requirements in individual countries.[2]

Quantification of the food aid requirement provides an upper limit to the amount which could be effectively utilised. However, for most countries, the actual demand for food aid is lower than this because economic conditions and management constraints restrict the amount which can be put to good use. Some economic environments are more hospitable than others to food aid programmes which reach the poor. In hospitable environments food aid can be given in two ways. One is to use food aid to create additional demand, thus avoiding disincentive effects for domestic agriculture. However, the administrative costs of demand-creating programmes are usually high. Either countries must provide scarce management skills themselves or rely on expatriate voluntary agency personnel. This cost imposes one kind of constraint on the quantity of food aid a country can use effectively.[3]

Another way is to sell food aid on the open market, perhaps at subsidised prices for consumers, and use the proceeds to support farm prices or otherwise contribute to agricultural development. While disincentives resulting from open market sale can be avoided in the right policy environment, the shift away from a set of economic policies which use imports to support a cheap food policy while taxing domestic agriculture is often politically difficult.

As a practical matter, therefore, increases in food aid should be phased in gradually, in accordance with a recipient country's strategy for effective utilisation. Constraints on donors with respect to developmental allocation and multi-year programming must also be loosened before food aid can achieve its full potential for simultaneously feeding the poor and contributing to sustained economic growth. This article first presents a quantification of the maximum food aid requirement, then goes on to discuss economic and management constraints and their practical implications for food aid policy.

Quantifying the Need

Various attempts have been made to suggest criteria and estimate the need for food aid now and in the future [USDA 1982; FAO 1981]. The approach followed here is to estimate total import requirement under various growth scenarios, and then to estimate the portion of this which is likely to be met with commercial imports, based on assumptions about ability to pay. These assumptions take into account *per capita* income levels, trends in export earnings, and ratios of foreign exchange reserves to total merchandise imports. The residual between total import requirement and estimated commercial imports then represents the requirement for food aid if consumption targets are to be met.

[1] The results reported in this study are drawn from a research report to be published by the International Food Policy Research Institute in early 1983.

[2] Although the margin for error is likely to be quite high for an individual country estimate, this margin can be substantially reduced by aggregating future outcomes for a large number of individual countries. The results presented here cover 99 developing countries, excluding only Indochina and certain of the smaller island countries of Caribbean and South Pacific on grounds of data availability, and five small oil-exporting Arab countries on grounds of exceptionally high *per capita* incomes.

[3] For example, in Bangladesh, Brundin estimates the country could use three or four times as much food aid for food-for-work projects as is now provided, but concluded that management constraints prevent the government from mounting this additional effort. See Brundin [1978].

GNP *per capita* serves as a good proxy for several criteria that bear on a country's requirement for food aid. Higher levels of GNP are generally associated with strong export sectors and hence with capacity to finance needed cereal imports on commercial terms. Also, high levels of *per capita* GNP practically assure that food supply will be adequate in the aggregate, and middle levels increase the likelihood that food supplies will be adequate. Based on data for 1976-78, countries with a *per capita* income of $900 or more (in 1977 dollars) should no longer require food aid.[4]

For middle-income countries (those with *per capita* incomes between $300 and $900 in 1977 dollars), *per capita* supply availability is one indicator of need, and export strength is another. Looking first at the situation in the recent past, the mean for *per capita* staple crop production averaged 211 kg per year for all developing countries in 1976-78, that is, almost 2000 calories per day. In countries at or above the mean, this amount, if distributed equitably, would be sufficient to maintain adequate consumption levels in most countries, even where some portion of the total is consumed by livestock. The adequacy of the food supply is also indicated by the total *per capita* availability of calories in relation to the FAO/WHO minimum standard established for each country. Although this standard has been challenged as being too high [Srinivasan 1981], and it does not take equity considerations into account, it serves as a rough guide as to whether a country has a sufficient food supply to feed its total population adequately.

Export strength represents the ability of a country to finance necessary cereal imports on commercial terms. It is reflected in the performance of the export sector *vis-à-vis* the total economy, as measured by the ratio of export earnings to GNP, and by the size of the foreign exchange reserve, as measured by the ratio of foreign exchange holdings to average annual merchandise imports.[5] Again for 1976-78, the mean export/GNP ratio for all developing countries was 0.324. Countries with higher ratios could therefore be judged to have relatively stronger export sectors, and countries with lower ratios could be judged to have relatively weaker export sectors. Some countries with relatively stronger export sectors nevertheless exhibit weakness in their foreign exchange position, as evidenced by a foreign exchange/import ratio of less than 0.25.

On the basis of these indicators, the 34 middle-income countries can be classified as follows:

    A. exports or reserves strong, production strong;
    B. exports and reserves weak, production strong;
    C. exports or reserves strong, production weak;
    D. exports and reserves weak, production weak.

Countries where both indicators are strong are assumed not to need food aid. Countries with high *per capita* staple crop production but weak balance of payments are also assumed not to need food aid. They may face balance of payments problems if they are currently importing cereals, or if *per capita* intake does not reflect the adequacy of aggregate supply and they wish to import to make up the apparent deficiency. But in both cases, the apparent food problem appears to be more a problem of distribution and market performance than of supply availability. Food aid may be useful in support of activities which will rectify distribution and marketing problems, but this use is quite country-specific, and estimation of the need for such support is not attempted here. Countries with weak food supply and mixed or weak balance of payments positions are assumed to need food aid. However, the amount is constrained by imposing the condition that food aid will be given only when the cost of cereal imports adequate to meet nutritional needs exceeds five per cent of export earnings.[6]

As economies grow and diversify the structure of their imports, it is reasonable to expect that the average ratio of cereal import costs to export earnings will drop. However, Valdés and Konandreas [1981] have shown that fluctuations around the mean ratio can be quite large. By fixing the current average ratio as a balance of payments criterion for determining eligibility for food aid, the food aid can be made to respond automatically to countries' food security requirements. Also, this criterion assures that countries will meet their obligation not to substitute food aid for commercial imports, while being easier to administer than the current usual marketing requirement administered by the FAO Committee on Surplus Disposal.

[4] Of the 99 developing countries considered in this analysis, 26 fell into this category — 5 in Asia, 11 in Latin America, 7 in North Africa/Middle East, and 3 in sub-Saharan Africa. Higher-income countries may still face serious balance of payments problems from time to time, as the case of Mexico in 1982 demonstrates. However, when such problems arise, the structural adjustments required are likely to go beyond the scope of the economic support which can be provided by highly concessional loans for cereal imports. Some relaxation of credit requirements may, however, be envisioned. The volume of food aid to higher-income countries amounted to 955,000 tons in 1976-78.

[5] Among middle-income countries, the export/GNP ratio may sometimes be misleading, since there is a tendency for smaller countries to have higher ratios, due to the smaller size of their internal markets. Where larger countries have low export/GNP ratios but good export growth rates, their basic strength is captured instead by the foreign exchange reserve indicator.

[6] In an internal document, 'Grain storage and distribution in the 1980s: an approach paper', the Economics and Policy Division of the World Bank notes that for developing countries as a whole, the proportion of total foreign exchange earnings spent on grain imports is currently about five to six per cent. Of the 99 countries covered in this paper, 54 spent less than five per cent of export earnings on cereal imports, 22 spent five to 20 per cent, and 22 lacked data.

Among middle-income countries, the strength or weakness of various indicators may vary from year to year. Food aid programmes should be flexible enough to respond to these varying needs, providing balance of payments assistance when required, and withdrawing food aid when not required. For example, some countries which demonstrated export strength in 1976-78 might require food aid this year because of weakness in the international economy and over-valuation of the dollar.[7]

For middle-income countries, the amount of food aid requirement for 1976-78, compared to actual amounts of food aid received, is shown in Table 1. In all, nine countries would have needed 4.5 mn metric tons, compared to 31 countries which actually received 2.7 mn metric tons. For balance of payments reasons, Egypt would have required more food aid than it actually received, although the total amount of its import requirement would have been less. Because of low *per capita* intake and balance of payments problems, Ghana and Peru would have required substantially more than they received. A cautionary word is in order with respect to effective utilisation of estimated requirements when they represent a large share of consumption. As the next section points out, large-scale food aid can have disruptive economic effects unless deliberate offsetting measures are adopted, particularly when the aid is received as untargeted balance of payments support. All three countries mentioned need to examine carefully their domestic policies *vis-à-vis* agriculture before turning to food aid to finance large-scale cereal imports.

All low-income countries are assumed to require food aid for balance of payments support, even in those few cases where *per capita* intake is adequate by FAO/WHO standards. Since the export sector is still weak and available foreign exchange is badly needed for capital goods imports during the early stages of growth, this seems a reasonable assumption. Also, reliable data for examining a more precise set of indicators to determine eligibility for food aid are often lacking. The amount of the requirement is estimated as the gap between *per capita* staple crop production and imports required to meet the minimum *per capita* nutritional standard, with an allowance for commercial imports equal to two per cent of export earnings. This last condition forces countries to accept some responsibility for allocating their own foreign exchange to cereal imports before becoming eligible for food aid, without imposing a substantial burden on their scarce resources.

Out of the 39 low-income countries shown in Table 1, only Burma, Burundi, and Madagascar did not require food aid, and only Bhutan and Uganda did not receive food aid, in 1976-78. The total received amounted to 4.3 mn tonnes, with roughly 80 per cent going to Asia.[8] The amount required was far larger, amounting to 27.3 mn tonnes, but again nearly 80 per cent would go to Asia.

The total is nearly double the 17 to 18.5 mn tons estimated by FAO as a realistic food aid requirement for 1985, taking into account both need and absorptive capacity [WFP 1979]. Nor is the total much reduced by increasing the ratio of export earnings which countries pay for commercial cereal imports before becoming eligible for food aid. Indeed, the principal reason for the large size of the total requirement is the five-fold increase for Bangladesh and the fourteenfold increase for India to meet nutritional needs.[9] Had these countries received amounts sufficient to eliminate hunger, this estimate puts their combined requirements at 19 mn tons. While the actual size of the need may be considerably less if new, lower estimates of the amount of malnutrition are correct, there is no question that significantly larger amounts are needed to alleviate hunger in these two countries.

Apart from supply considerations, there is reluctance on the part of both donors and recipients to consider increasing food aid by such large amounts for fear the donated commodities will increase dependence on imports and discourage growth in domestic agricultural production. There is also concern that local markets, ration systems, and targeted distributions could not handle sudden large increases in commodity availability. Both issues will be discussed at more length in the following section. But it may be mentioned here that among low-income countries, India and Bangladesh are among the more advanced in terms of thoughtful consideration of appropriate price and distribution policies and creation of public distribution mechanisms which reinforce rather than hinder the operation of local markets. Also, in economies which must rely on their rural sectors to stimulate development, food aid can act as a resource to promote employment through its effect as a cheap wage good. Without such an infusion of external aid, it may not be possible for either country to break the inflationary spiral which could otherwise eat up any growth which is achieved.

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[7] Where export strength is weaker in a current year than in previous years, this should be reflected in a higher than average ratio of cereal import costs to export earnings, if domestic prices are to be kept stable. Exceptionally poor local harvests or high world grain prices would have the same effect.

[8] In recent years there has been a shift in the distribution of food aid away from Asia, particularly to Africa; see Table 3 of Clay's article.

[9] Similar results were obtained by USDA [1982] in its estimation of nutrition-based requirements for 1982-83. Out of a total requirement of 34.5 mn tons, 12 mn went to India, 7 mn to Bangladesh, and 9.8 mn to sub-Saharan Africa.

Table 1

Food aid requirements, 1976-78

middle-income countries	1976-78 actual (000 tonnes)	required	low-income countries	1976-78 actual (000 tonnes)	required
A. Exports or reserves strong: production strong			**Asia**		
			Bangladesh	1,022	5,205
			Bhutan	0	26
			Burma	8	0
Total	128	0	India	1,019	13,876
			Indonesia	636	516
B. Exports and reserves weak; production strong			Nepal	2	225
			Pakistan	464	464
			Sri Lanka	346	1,030
Total	216	0	Total	3,497	21,004
C. Exports or reserves strong; production weak			**Latin America**		
Bolivia	31	196	Haiti	54	429
Egypt	1,778	2,527	**North Africa/ Middle East**		
Mauritania	35	138	Afghanistan	31	934
Peru	18	819	Sudan	64	87
Yemen DR	11	146	Total	95	1,021
Zambia	22	28			
Other	302	0	**sub-Saharan Africa**		
Total	2,197	3,854	Angola	9	33
			Benin	8	66
D. Exports and reserves weak; production weak			Burundi	4	0
			Central African Republic	2	17
Dominican Republic	25	60	Chad	29	277
Ghana	57	251	Ethiopia	67	1,796
Senegal	74	322	Gambia	9	39
Other	41	0	Guinea	29	197
Total	197	633	Guinea-Bissau	17	13
Grand Total	2,738	4,487	Lesotho	18	30
			Madagascar	8	0
			Malawi	3	15
			Mali	25	153
			Mozambique	97	498
			Niger	55	190
			Rwanda	12	54
			Sierra Leone	7	88
			Somalia	70	295
			Tanzania	120	530
			Togo	11	67
			Uganda	0	246
			Upper Volta	24	237
			Zaire	29	84
			Total	653	4,925
			Grand Total	4,299	27,329

If present trends continue, what will the picture look like by 1990? First, the number of higher income countries increases from 26 in 1976-78 to 42 in 1990, and the number of countries potentially eligible for food aid drops from 73 to 57 (see Table 2).[10] Second, total food imports increase from 75 mn tonnes in 1976-78 to over 175 mn tonnes in 1990, under the highest-growth scenario.

Nearly 20 mn tons of food aid are required by the 57 potential recipients under the three effective demand scenarios (see Table 3). Under the nutrition-based scenario, the total quantity required by eligible countries in 1990 would be 35 mn tons. However, since income-generated growth in demand is not included in this scenario, the total food import figure comes to only 85 mn tons. Although the nutrition-based food aid requirement is higher in 1990 than in 1976-78, some low-income countries, particularly India, show improvement. Countries with large nutrition requirements in 1990 include Bangladesh, Ethiopia, Tanzania, Zaire, and the landlocked countries of the Sahel. Whether these countries can absorb and effectively utilise the quantities they will apparently require during the coming decade is a much-debated issue. Nor are the issues involved any less important for countries whose food aid requirement captures less public attention.

Economic Constraints

There is still considerable controversy over whether food aid acts as a disincentive to cereal production in a developing country. In a closed, self-sufficient economy with little or no trade, food aid introduced for open market sale must depress prices. Since food

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[10] Kampuchea, Laos, and Vietnam are excluded from the analysis because of lack of data, but they are potentially large food aid recipients in both periods.

producers in most developing countries do respond to price changes, the availability of food aid will act as a disincentive to production unless offsetting policy interventions are introduced.

However, the pure case of a closed economy where food aid adds to market supply with no offsetting policy interventions is not typical of actual conditions in most countries receiving food aid [Abbot and McCarthy 1981]. For one thing, most developing countries do trade with the rest of the world, even though some are virtually self-sufficient in staple foods. Thus the closed economy model is not appropriate. In an open economy where trade takes place, the chances of food aid depressing prices and discouraging domestic production are much slimmer.

When a country trades, it seeks to keep its domestic prices in equilibrium with world market prices. Trading countries which do not regulate imports and are price-takers in world markets can be expected to import the quantity required to keep domestic cereal prices in line with world prices. Cereal imports in such countries will be price-elastic with respect to world price, and domestic prices will fluctuate along with world prices. Since supply and demand will be in equilibrium at the normal level of commercial imports, food aid cannot be introduced as an addition to supply without moving domestic prices away from equilibrium. To keep domestic prices at their equilibrium level, commercial imports will therefore be reduced by the amount of the food aid.

In this situation there is no price disincentive for domestic producers, but neither is there any additional demand creation for consumers. The only benefit to the country is the foreign exchange saving created by the lower dollar cost of its cereal imports.

Table 2

Per capita income by region, in 1977 dollars

| | 1976-78 | | | 1990 | | |
	< 300	300-900	> 900	< 300	300-900	> 900
	(no of countries)			*(no of countries)*		
Asia	8	6	5	6	4	9
Latin America	1	12	11	1	5	18
North Africa/ Middle East	2	8	7	2	5	10
sub-Saharan Africa	23	13	3	16	18	5
Total	34	39	26	25	32	42

Table 3

Cereal imports and food aid requirements in 1990, by region, four scenarios[1]

	income-based		nutrition based		consumption based		import-based	
	imports	food aid	imports	food aid	imports	food aid	imports	food aid
	million tonnes							
Asia[2]	24.1	7.3	24.4	20.3	30.1	5.5	57.2	5.4
Latin America[3]	14.6	0	7.2	0	21.2	0.3	59.9	0.2
North Africa/Middle East[4]	24.1	3.5	24.4	4.3	42.4	10.1	41.5	8.7
sub-Saharan Africa[5]	29.2	5.8	·28.1	10.8	15.1	3.6	17.8	3.8
Total	92.0	16.6	84.1	35.4	108.8	19.5	176.4	18.1

[1] All four scenarios are based on estimation of a gap between demand for cereals and domestic production in 1990. They are derived as follows:

Income-based: *per capita* consumption at 1975 base plus amount necessary to meet income-generated demand at higher levels of *per capita* income, assuming high rates of growth in GNP and UN medium variant population growth rates. Production at 1961-78 trend growth rates.

Nutrition-based: *per capita* consumption at amount necessary to provide 100 per cent of FAO/WHO nutritional minimum, assuming *per capita* consumption at 1975 base plus cereal equivalent of calorie gap and projecting to 1990 using UN medium variant population growth rates. Production at 1961-78 trend growth rates.

Consumption-based: aggregate trend consumption of staple foods minus aggregate trend production of staple crops, projected at 1961-78 growth rates.

Import-based: trend imports projected at 1961-78 growth rates.

[2] India receives almost 10 mn tons of food aid under the nutrition-based scenario, but nothing under the other three. Bangladesh also receives nearly 10 mn tons under this scenario, compared to 3-6 mn tons under the other scenarios. Republic of Korea and People's Republic of China account for the higher total import figure under the import-based scenario.

[3] Mexico accounts for 35 mn tons of the total import figure under the import-based scenario, compared to 4 mn tons or less under the other scenarios. As with Korea and the PRC, this results from applying a high import growth rate to a high volume base.

[4] The two large recipients of food aid in North Africa/Middle East are Egypt and Morocco, with Morocco taking nearly 1 to 4 mn tons and Egypt 3 to 7 mn tons.

[5] Under the nutrition-based scenario for Africa, Ethiopia, Tanzania and Zaire each account for at least a million tons more than under other scenarios. In addition, certain Sahelian countries also require additional food aid to meet nutritional requirements. The differences in total import requirement under different scenarios is accounted for largely by differences in the volume projected for Nigeria.

The majority of developing countries fall into yet another category, that is, trading countries which regulate prices. In these countries, the effect of food aid on demand, price, and production depends primarily on the nature of government interventions in domestic food markets.

Sometimes governments are pursuing policies which distort incentives to farmers quite apart from whether or not food aid is available. For the most part, distortions take the form of cheap food policies which governments pursue on behalf of urban consumers. If food aid forms a large share of total consumption, its availability may induce countries to pursue such policies more vigorously than they otherwise would. But for most countries food aid does not represent a very significant share of total staples consumption (less than five per cent in 81 out of 99 cases).

In these countries other macroeconomic policies such as overvalued exchange rates, export taxes, procurement quotas at low official prices, and outright fiscal subsidies provide the means for maintaining low consumer prices in urban areas.

In other cases, food aid may be used by governments as a resource to offset the potential disincentive effects by creating additional domestic demand, financing a price wedge which provides income support to farmers, or supporting a stocks programme to even out seasonal price fluctuations. In fact, if properly used, food aid can provide an incentive for reducing or eliminating price distortions rather than reinforcing them. First, it can be used to create additional demand for food consumption, and thus reduce the depressing effect of additional supply on market price. To achieve the desired effect, the demand-creating mechanism

must be directed at low-income groups, where a high proportion of any resource transfer is usually used for food. The form of the transfer may be either food or cash, and the food aid commodity may be used either for direct transfer to target groups or for open market sale. If the latter, the proceeds may be used either for cash transfers or for purchase of local commodities for distribution to target groups.[11]

Food aid which is used to support demand creation among low-income groups has double benefits. First, it avoids the production disincentive which additional food sold on the open market might otherwise create. Second, it makes a positive humanitarian contribution toward enhancing nutritional status among groups where the hunger problem is most acute. Even though some leakage will almost inevitably occur, since families rarely spend 100 per cent of an income increment on food, the contribution to improved quality of life can be substantial [Stevens 1979:199]. In some countries, this use of food aid is valid only in certain years when domestic harvests are poor and relief aid is needed for rural areas. In addition to meeting immediate food needs, use of food aid to meet variable food security requirements can contribute to production stability and long-run growth because poor farmers no longer have to sell or mortgage their capital assets to pay for tomorrow's food.

In other countries, chronically malnourished groups may require supplementary food for some period of time. In an economic environment which is favourable to labour-intensive development, food aid targeted at these groups can provide a wage good which enables supply to keep pace with demand without inflationary pressure [Mellor 1979]. Eventually, as growth continues, the aid can be phased out and replaced with domestically-produced or commercially-imported supplies.

For a variety of reasons, demand-creation may not always be the preferred use of food aid. First, administrative mechanisms for reaching target groups in rural areas are frequently non-existent or very costly. Second, given their resource limitations, many governments attach more importance to stimulating domestic production than to alleviating chronic malnutrition. Third, if there are to be demand-creating subsidies for food consumption, many governments find it difficult to offer these to the voiceless poor while denying them to the more vocal and politically powerful middle classes.

An alternative strategy for using food aid effectively takes these factors into account. It entails creating additional demand either by fixing official retail prices at subsidised rates or by forcing domestic market prices below world market prices by using food aid commodities as an additional source of supply for open market sale. To prevent a disincentive effect on production, this policy of subsidising consumer prices must be offset by a policy which fixes producer prices at a level higher than that established by the market. Since the food aid represents a free or low-cost resource to government, most, if not all of the funds generated by open market sales can be used to finance this price wedge. Other uses of counterpart funds are possible, but none has as clear-cut and immediately stimulative effects in a situation where the food aid represents additional supply and is used to support a cheap food policy for consumers [Krishna 1967]. These other uses of counterpart funds are suitable in situations where market prices are not regulated, food aid is not additional, and its value is primarily that of a budget resource. Consumer subsidies coupled with producer price supports and targeted distribution programmes are not mutually exclusive. Especially for low-income countries, some combination of the two probably represents the optimum use of food aid.

Another possibility with which some countries are experimenting entails using food aid to support the creation of working stocks and food security reserves. This requires the investment of complementary resources in storage and transport facilities, and the operation of a government procurement and price support programme which acquires and releases stocks with a view to stabilising market prices for both producers and consumers. This approach permits some government intervention through the use of food aid and domestic stocks to avoid the distress caused by sharp fluctuations in price. But it permits the market to establish the long-run equilibrium price, and thus prevents distortions in either demand or supply. This is feasible wherever the country needs to import a portion of its total domestic supply, but lacks financial resources to import adequate amounts. Of course, in countries which are self-sufficient at adequate levels of *per capita* consumption, governments should be able to operate procurement and price stabilisation programmes entirely from domestic supplies.

To summarise, economic constraints to effective utilisation of food aid can be overcome in three ways: through the use of food aid for demand-creating, targeted distribution programmes; through the sale of food aid at subsidised prices for consumers and use of the proceeds to finance farm price supports; and through creating food security reserves to stabilise prices at market equilibrium. However, each approach

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[11] There is some evidence that when transfers are given in the form of food, the demand-creating effect will be greater than when they are given in the form of cash, but research in this area is still too new for definite conclusions to be drawn.

requires management skills and political commitment to an agriculture-based growth strategy.

Practical Implications

Two classes of countries continue to require food aid. One is the group of middle-income countries which are beginning to solve their more serious food problems, but still need balance of payments support. For the most part, these countries should be reaching the point where they can manage targeted food distribution programmes without external assistance. However, to maintain the level of cereal imports necessary to supply domestic markets at stable prices, these countries may need concessional assistance from time to time. The amount of assistance required will fluctuate from year to year, according to the level of domestic crop production and volume of cereal imports required, the level of world cereal prices, and the levels of export earnings and foreign exchange reserves in relation to the value of total import requirements and debt servicing obligations. Since the amount required will fluctuate from year to year, the most appropriate form of support is programme aid where food commodities are sold on the open market and proceeds are used for general budgetary support in a policy environment conducive to agricultural growth.

Constraints on increasing food aid to this group of countries may include the inappropriateness of food aid commodities for local markets, lack of handling capacity for additional imports, pricing policies which subsidise urban consumption but do not stimulate domestic production, and marketing systems which hinder the free flow of local cereals from production centres to market centres. Also, because of the fluctuating nature of the balance of payments situation, it is not possible to project a smooth trend in the amount of each individual country's food aid requirement.

The other class of countries requiring food aid is the low-income group where inadequate levels of domestic food production and lack of purchasing power combine to depress consumption for large numbers of poor people. Until these countries graduate to a higher income status, it can be assumed that they face pressing balance of payments problems, and that imports of cereals will have to be financed primarily with concessional or grant assistance. The amount of food aid required will therefore be the amount of additional imports needed to bring *per capita* consumption up to a minimum nutritional standard for different sexes, age groups, and activity levels. This amount equals the difference between domestic production and the total supply required to meet effective market demand plus unsatisfied nutritional needs. In low-income countries there will be a continuing requirement for food aid until *per capita* incomes reach higher levels. Multi-year commitments could therefore be envisioned at levels equal to the anticipated gap between desired consumption and trend production, with some provision for a gradual increase in commercial imports as the balance of payments situation improves, and annual adjustments which respond to fluctuations in production.

Since the primary objective of food aid in low-income countries is to improve nutritional status by increasing demand and supply simultaneously, the most appropriate form of support is project aid, where commodities are used to finance targeted food subsidies or distribution programmes which reach the poor directly with additional food. As pointed out above, this approach could be managed to benefit the malnourished with relatively little effect on domestic market prices. In addition, projects which are seasonal or which vary in size with local production conditions also reduce risk for small farmers and landless labourers by providing an income supplement when harvests are poor, or when food prices are high.[12] This contribution to rural stability can have important long-run benefits for agricultural growth and development.

Programme aid can be used to complement targeted food distribution projects through the generation of complementary resources needed to finance administrative and transport costs and complementary development-related activities in rural areas. In addition, some low-income countries will also require programme aid as balance of payments support from time to time. However, for low-income countries, an approach which provides programme aid for cereal imports sold in urban markets without taking into account the needs of the rural poor is not likely to contribute to development, and may well hinder it.

In many low-income countries marketing systems are not well-developed and price policies do not serve the interests of farmers. Food aid can facilitate policy reform by providing a food security cushion. With a small back-up reserve, governments can introduce price and procurement policies which allow markets to operate freely within a price band which protects the interests of both consumers and producers.

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[12] This is particularly important for farmers who do not produce enough to feed their own families without additional purchases. Such farmers often sell their crops at harvest when prices are low in order to repay debts. Subsequently, they must purchase food when market prices are high, necessitating new debt. Judicious food aid programming can help break this vicious cycle.

Constraints on increasing food aid to low-income countries may include the high administrative cost of targeted programmes and lack of local management personnel, lack of data on the nutritional status and consumption behaviour of intended beneficiaries, unsuitability of food aid commodities for local diets, and rigid marketing systems and price policies which tax producers for the benefit of consumers. If data and management constraints can be removed, narrowly-targeted programmes may achieve their objective of improving nutritional status, even though government policies are not oriented toward rural development. But broader subsidy programmes or projects which use food aid in support of development-related activities are not likely to achieve their objectives over the long-term unless the policy constraint is also removed.

These constraints suggest that food aid cannot actually be used in the amounts projected. Nevertheless, the projections provide a clear indication of need, particularly in the low-income countries where the hunger problem is most serious. The extent to which various constraints prevent countries from absorbing the quantities of food aid which they appear to need will differ from country to country. Further, even if the presence of various constraints can be clearly identified, their effect on capacity to use additional food aid effectively is difficult to quantify.

An alternative approach for estimating food aid requirements for individual countries on an annual basis would avoid this problem by simply starting with the existing programme level and asking, first, is the quantity now being received effectively utilised? Second, if yes, how much additional quantity could be effectively utilised, and in what kinds of programmes? Third, if no, could the same or a larger quantity be effectively utilised in some other programme mode? In countries where existing levels are small, and represent primarily aid to targeted distribution programmes, sizeable increases over this very low base might be envisioned, providing some agency is prepared to accept the administrative responsibility. In countries with well-established distribution networks and adequate handling capacity to move grain from port to rural markets, sizeable increases in food aid to support dual price systems, food security reserves, and market reforms could also be envisioned. In countries which lack good transport networks, where rural markets are not well-integrated with urban centres, where there are few distribution centres from which targeted programmes can operate, food aid can only increase as complementary resources are provided to overcome these constraints. Assuming these countries are moving toward a favourable policy environment, food aid increases could be programmed in increments of, say, 10 per cent a year, along with programming of other development assistance resources to assure effective use of the food aid.

While it may seem strange to suggest gradual increases in food aid levels when the ultimate objective is to phase it out, the growth process which will ultimately free low-income countries from dependence on food aid will not be accomplished within the next decade. If programme planning begins now for incremental increases in food aid leading to levels of the order of magnitude of those suggested above for 1990, it will be from that point that the growth process can really take off and the eventual phase-out occur. The record of today's middle-income countries suggests that this transformation can be accomplished, although the importance of a growth strategy which emphasises rural development is probably even greater today than it was 20 years ago.

To use food aid effectively while pursuing such a strategy requires a strong commitment from recipient countries. Equally important, however, are the commitments donor countries must make to avoid using their food resource in counterproductive ways. These commitments include: need-based allocation policies, simpler approval procedures, and timely deliveries.

There is a case for increasing food aid to almost triple the current volume, with about 90 per cent of the total going to low-income countries. But the justification rests on the proposition that both recipients and donors will commit themselves to policies which assure that the food aid will be used in the service of long-term agricultural development and economic growth. Once need has been established, the extent of this commitment should therefore determine the amounts and allocations of food aid increases. While political objectives and supply management considerations both enter into the food aid allocation process, it is not unrealistic to suppose that donors would agree to programme any increases above current levels according to developmental criteria. With grain surpluses again accumulating it is timely to focus attention on ways to improve food aid programming to meet immediate human needs and to contribute to the eventual elimination of world hunger.

For references see page 61.