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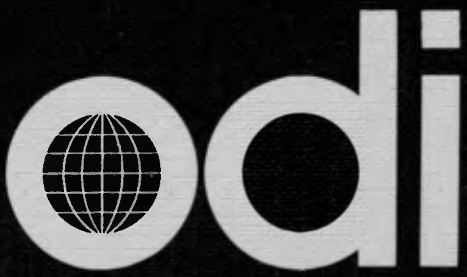
Food Aid and Britain

Hal Mettrick



Food Aid and Britain

That a lifetime of undernourishment and malnutrition is the lot of a large proportion of the world's population is a well-known commonplace. The provision of food aid from surplus stocks would appear to be a natural humanitarian reaction to this; yet the value of food aid to developing countries has not gone unquestioned. If 'surpluses' have to be created specially for shipment as food aid—and the United States is now doing this—then there is even more of a question-mark. The situation is further confused by doubts as to the nature of the 'world food problem'—are we approaching a food crisis of world-wide proportions or is the problem more likely to be one of unsaleable surpluses in developing as well as developed countries?

This study sets out, first of all, to examine two questions. First, what is the nature of the 'food problem' of the developing countries? Secondly, what are the trends of surplus production in developed countries? It goes on to analyse the significance of the answers for food aid policies and asks whether food aid is essential, what contribution it can make to economic development, and whether it is an efficient method of transferring resources from rich to poorer countries? The conclusion reached is that purely economic criteria may have to give way to other considerations, and hence some ways of removing the economic defects of food aid are explored. The principal recommendation is that food aid—other than for emergencies—should only be offered interchangeably with other forms of aid.

A feature of the study is its British orientation. Although the British contribution to total world food aid is still only tiny, it has none the less been sharply increased recently. It is not only Britain's direct contribution which is discussed, but also its possible influence on international food aid policies with a view to ensuring maximum impact. Above all, the study stresses the need for a flexible approach to the aid needs of developing countries if scarce resources are to be combined to produce the maximum benefit.

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Introduction

There is already an extensive literature on the subject of food aid. An addition to this requires an explanation, if not an apology. The decision to undertake this study arose from two considerations. The first of these was concern at the confusion surrounding the topic, caused by divergent views of the nature of the world food problem. If there really was a world crisis impending, then there needed to be a much greater sense of urgency and more purposeful action on the part of the international community. Secondly, for the first time questions of food aid policy were of serious practical importance to Britain, because we were becoming involved in food aid in a much bigger way than ever before as a result of the Food Aid Convention.

As soon as the work of the Convention began it became obvious that the more dire prognostications were exaggerated. The British were sceptical, but this attitude was not shared in some influential quarters overseas, including the United Nations. Over the last year, however, rather more cheerful views have prevailed, as is witnessed, for instance, by the change in tone in the UN report on Multilateral Food Aid between the progress report (E/4352) presented in June 1967 and the final report (E/4538) a year later. The changing views have tended to compound rather than resolve the confusions, and a balanced survey is, if anything, more necessary now than before.

This study is written from the point of view of the development of the developing countries, but its orientation is British. Inevitably, since Britain's actual and potential food aid contribution is so tiny in relation to the world total, the amount of space devoted directly to it is only small. None the less, throughout the study the analysis is conducted with an eye on the possible influence which Britain might have in ensuring that the maximum contribution is made to the development of the poorer countries.

There are six chapters. The first of these examines the world food problem. It looks at some of the recent projections of supply and demand for food in developing countries, and the food deficit which is calculated from them. It also considers whether events during the last year or two justify greater optimism than was warranted a short time earlier. The second takes a brief look at the history of food aid, describing the development of US food aid legislation and of international agreements to provide food aid. The third chapter analyses the changing surplus situation, showing that it is surpluses in the United States, rather than in other exporting countries, which have been run down. This chapter also examines possible future trends in surplus production. The fourth chapter considers the impact of food aid,

particularly on domestic agricultural production in recipient countries and on world trade. It begins with a theoretical discussion and concludes by examining the experience of three recipients, India, Pakistan, and Israel. Chapter 5 is a summary chapter. Thus any reader who, on finishing Chapter 1, 2, 3, or 4, wants it summarised, has only to turn to this chapter, where he will find a summary under the same title. An additional section draws together the various strands in an attempt to define the nature of the world food problem and, in particular, how the emerging situation differs from what has gone before.

The final chapter examines the policy implications arising from what has been covered by the other five. Although food aid is not necessarily the best way of tackling the world food problem, practical considerations might make it necessary. Ways of removing some of its defects are considered, therefore. The principal conclusion is that for food aid to be an efficient way of transferring resources to developing countries there must be some mechanism for relating the relative value of food aid to the recipient to its cost to the donor. It is suggested that this can best be achieved by offering food aid as one of a number of interchangeable options within a complete aid package. The study goes on to discuss international co-operation in the provision of food aid, with a view particularly to how Britain can influence international policies, and concludes by taking a look at Britain's direct contribution.

It would be out of place to repeat in this introduction the various conclusions which were reached, but what does stand out and must be stressed is the need for flexibility in food aid policies, both national and international. The events of the last few years demonstrate how quickly the situation can change, and how responses which were once appropriate rapidly become out of date.

1 Feeding the Billions

'*The battle to feed humanity is over. Unlike battles of military forces, it is possible to know the results of the population–food conflict while the armies are still "in the field". Sometime between* 1970 *and* 1985 *the world will undergo vast famines—hundreds of millions of people are going to starve to death.*'[1]

'*Instead of fearing a world perishing from hunger, we should be on our guard against the opposite danger, of farmers producing surpluses which cannot be sold, while people are dying from overeating.*'[2]

The 'World Food Problem' is now a common phrase. That it is one surrounded by confusion can be seen merely by referring to the two quotations above. Where does the truth of the matter lie? Is the world really on the brink of disaster? A number of people would have us believe that it is. The increasing rate of population growth is compared with lagging food production in the developing countries; the inevitable outcome, we are told, is famine on a scale never seen before. Professor René Dumont[3] has warned, for instance, that catastrophe could come as soon as 1975; there could be widespread famine in the 1980s with India, Java, North-East Brazil, East Pakistan, and the mountains of Peru and Bolivia being most seriously hit.

The situation looked worse a year ago—after two seasons of drought in some areas—than it does at the beginning of 1969. Food production per head—which in each of the developing regions except the Near East was no higher in 1966 than it had been before the Second World War[4]—had fallen in the last few years. Developing countries were having to rely more and more on imports, particularly imports on concessional terms, to feed their burgeoning populations. There seemed little doubt that the inhabitants of the developing countries were becoming less able to feed themselves. However, in 1967—for which figures are now available—there was a dramatic improvement; food production in the developing regions increased by 6%. In some quarters pessimism has been replaced by optimism. How realistic a reaction is this?

It is food aid and not the world food problem which is the subject of this study. In order to discuss food aid, however, we must have a realistic assessment of the need it is intended to meet. We need to know, for instance, what new factors are affecting food production in developing countries and how the trends are likely to develop over, say, the next ten or twenty years. A number of studies have recently been

1. Paul Ehrlich in the *New Scientist*, 14 December 1967.
2. Colin Clark in the *Daily Telegraph*, 11 December 1967.
3. *The Observer*, 10 December 1967.
4. The new FAO index of per caput food production (Table 1 in Appendix 2) does not include pre-war data. A rough comparison of the old and new indices suggests, however, that in Latin America, Africa, and the Far East per caput food production in 1966 had fallen back to pre-war levels.

made which can help us in trying to find answers to these questions; this chapter is based on their findings. The most thorough analysis in terms of detail and comprehensiveness has been made by the Food and Agriculture Organization[1] as part of their work in the preparation of the Indicative World Plan. Other projections have been made by the Secretary-General of the Organisation for Economic Co-operation and Development[2] and the US Department of Agriculture,[3] which, whilst not as sophisticated as those of FAO, are useful in providing an independent—or semi-independent—check.

Production

Any projection is only as good as the statistics on which it is based. This should be borne in mind throughout this chapter, because the statistics of agricultural production in many developing countries are far from perfect. For the same reason too much significance should not be read into small changes in production figures from year to year, particularly in view of the fluctuations caused by climatic variations.

Over the period since the Second World War food[4] production in developing countries has grown faster than population. Between 1953 and 1964 food production per head is estimated to have risen by 9%. In the subsequent two years, largely as a result of droughts in Asia and Africa, it fell off and in 1966 was 4% less than in 1964. In 1967 there was a substantial recovery and a preliminary estimate puts the increase at more than 3%.

One must be careful in considering global trends, because they mask considerable differences between countries. Some countries such as Greece, Yugoslavia, Israel, South Korea, Mexico, and Venezuela have experienced large increases in per caput food production during the fifties and sixties, whilst others such as Algeria, Syria, Iraq, Indonesia, Uruguay, and Colombia have suffered a marked fall.

The growth in production of cereals[5]—which represent the bulk of food production in developing countries—has been slightly greater than the growth in food production. Over the last decade or so this increase has come about as much through an increase in acreage as through an increase in yields per acre; half the increase in production can be ac-

1. *Agricultural Commodities—Projections for 1975 and 1985*, Vols. I and II, (CCP 67/3 (Rev)), FAO, Rome, 1967.
2. *The Food Problem of Developing Countries*, OECD Publications, Paris, 1967. Although in this chapter the source is referred to for convenience as OECD, it is carefully pointed out in the report that it is the work of the Secretary-General and does not commit the Organisation.
3. *World Food Situation*, Prospects for World Grain Production, Consumption, and Trade, Foreign Agricultural Economic Report No. 35, US Department of Agriculture, Washington DC, 1967.
4. Normally taken to include cereals, starchy roots, sugar, pulses, edible oils, nuts, vegetables, fruit, fish, livestock, and livestock products.
5. Cereals is normally taken in this study to refer to wheat, coarse grains, and rice, whereas grains refers only to wheat and coarse grains.

counted for by increases in the acreage under cultivation. This is demonstrated in Table 1. Even in the Far East, where the opportunities

Table 1 Average annual increase in cereals production in developing regions 1952–56 to 1963–65

		Increase in	Per cent
	Area	Yields	Production
Latin America	2·56	1·46	4·06
Near East	1·81	0·62	2·45
Far East	1·12	1·83	2·96
Africa	1·62	1·03	2·66
Developing regions	**1·49**	**1·53**	**3·05**

Source: *The Food Problem of Developing Countries*, OECD Publications, Paris, 1967.

for acreage expansion are severely limited,[1] it represented a large proportion of the increase. In all the regions the increase in yields per acre was considerably less than the rate of population growth. In future there will be fewer opportunities for extending the acreage under cultivation; in the Far East there has been virtually no increase in the acreage under cereals since 1962. The implication is that the rate of increase in yields will have to be greater merely to maintain the same rate of growth of food production.

Because of the complexity of the problems involved, FAO projections of agricultural production are only taken up to 1975. In developing countries, as a result of the large size of the agricultural sector, the rate of growth of agricultural production and the rate of growth of GDP (gross domestic product) are closely related. Each of the projections of rates of growth of food production is associated, therefore, with an assumption about the rate of growth of GDP. There are two of these; the low growth of GDP assumption was selected in the light of the recent slowing down in economic growth in developing countries, whilst the high growth rate assumption took into account the aspirations in national development plans. The low projection of production was thus based on an analysis of past trends and present policies in association with the low GDP assumption. The high projection, associated with the high GDP assumption, 'presupposes the adoption of special development policies and measures designed to increase output through the improvement of technology and institutions, and a sizeable increase in capital resources and current inputs'. The GDP figures chosen for the period 1965–75 are 3·6% and 5·5%, which straddle the 4·6% actually achieved by developing countries between 1950 and 1963.[2] The corresponding growth rates of food and of all

1. In India, for example, the amount of potentially productive land per head of the population in 1965 was estimated to be 0·77 acres.
2. The assumptions of rates of growth of GDP on a regional basis are compared with the actual rates achieved in 1950-63 in Table 2 in Appendix 2.

agricultural products projected to 1975 are shown on a regional basis in Table 2.

Table 2 FAO projected growth rates 1962–75 and trends 1953–63 of food and all agricultural production in developing countries

Per cent per year compound

	Production 1953-63		Projected production 1962-75			
	All agricultural products	Food	All agricultural products		Food	
			L	H	L	H
Latin America	3·1	3·0	2·8	3·4	3·0	3·6
Africa	2·8	2·5	2·9	3·6	2·8	3·5
Near East	3·4	3·2	2·3	3·6	2·3	3·6
Asia and Far East	3·0	3·0	2·7	3·5	2·8	3·5
India	2·7	2·6	2·8	3·7	2·9	3·8
Developing countries	**3·1**	**3·0**	**2·8**	**3·5**	**2·8**	**3·6**

Note: L=Low growth of GDP assumption
H=High growth of GDP assumption

Source: *Agricultural Commodities—Projections for 1975 and 1985*, Vol. I, FAO, Rome, 1967.

Similar but cruder projections have been made by the secretariat of OECD. The period covered is 1965–80. Annual rates of growth of food production of 2·6% and 3·1% are postulated, and assumptions made about rates of growth of agricultural production and of GDP which are consistent with these. Even the lower growth rate, it is remarked, implies a substantial improvement in the growth of yields from one year to another, whilst the higher one represents a real technical breakthrough over rather wide areas, requiring a large increase in the availability of inputs such as fertiliser. The results are summarised in Table 4 on page 15.

In the United States projections have been made both by the Economic Research Service of the Department of Agriculture and by the President's Science Advisory Committee. The approach of the President's committee is similar to that of the Economic Research Service and is largely based on work done in the Department of Agriculture. Both use cereals as an indicator. 'Grains occupy over two-thirds of the world's harvested cropland; they provide over one-half of man's food energy supply when consumed directly and a sizeable part of the remainder when consumed indirectly in the form of animal products. Grains constitute one-third of the value of world food trade. Also, data on grain production are more reliable than data on most other crops.'[1] The projections considered here are those published by the USDA in its *Foreign Agricultural Economic Report* No. 35.

In this report four assumptions are made about rates of growth of cereals production in developing countries and their implications considered. Two of these are based on historical trends and assume a rate of growth of cereals production of 2·6% in the 1970s, the same as in the period 1954–66. It might be remarked that for the slightly

1. *The World Food Problem*, A Report of the President's Science Advisory Committee, Vol. II, Report of the Panel on the World Food Supply, Washington DC, 1967, p. 165.

different period of Table 1 the figure arrived at is 3·05%. On one of the historical trends assumptions, *historical trends I*, the rate of growth before 1970 is also assumed to be 2·6%, but on the other, *historical trends II*, it is assumed to be greater as a result of accelerated agricultural development expected in India and Pakistan in the late 1960s. The compound rates for the period 1965–80 on the two assumptions are 2·6% and 2·8%. The third assumption is of a *moderate improvement in production* and it assumes that the less developed countries will place greater emphasis on agricultural development in future, but does not imply a crash programme relative to the production capabilities of the developing countries, or to the capabilities of developed countries to provide assistance. The projected rate of growth for the 1970s is 3·1% and for the period 1965-80 is 3·0%. The fourth assumption is of a *rapid improvement in production* which involves a greatly accelerated programme of agricultural development. The rate of growth in developing cereals-importing countries would increase from 2·5% to 4% by 1975 and continue at that rate. The overall rate implied for the 1970s is 3·9% and for 1965–80 is 3·6%. The results are summarised in Table 5 on page 16.

Demand

Trends in demand are possibly not so difficult to forecast as those in production, but they do present difficulties. Is one thinking, for instance, of the amount of food needed to bring nutrition up to some hypothetical level, or is 'demand' being used in its normal economic sense to mean 'effective' demand as expressed in the market place? If the latter, to what extent can it be said to mirror nutritional needs?

If it is economic demand which is concentrated on here, this is not because the nutritional aspects are thought unimportant. The reasons are these: first, it is projections of economic demand which give rise to much of the concern which was referred to at the beginning of this chapter and out of which a demand arises for a new look to be taken at food aid; and secondly, probably the only effective way of improving the general level of calorie-intake in a country where undernutrition is at all widespread is through the market mechanism, appropriately modified by government action. The problem of distributing food equitably then becomes a problem of income distribution. The question of nutrition is discussed later in this chapter.

The growth of total demand depends very largely on two factors, population growth and the growth of per caput income. To these can be added various other complicating influences such as the distribution of income, the age-distribution of the population, and the rural–urban distribution of the population.

Population growth is by far the most important determinant of demand for food. In the FAO projections for 1975 population growth

accounts for 84% of the total increase in demand for food in the developing countries on the low GDP assumption and for 68% on the high assumption. The annual rate of population growth in the developing countries is now over 2·5%, which is more than twice what it was before the War. In some countries it is over 3%. For the first part of their demand projections to 1975 FAO use the UN medium variant annual rate of population growth of 2·6%, which compares with an actual rate of population growth of 2·3% between 1950 and 1962. For the period 1975–85, however, two population assumptions were used in order to show what the effect on demand could be of a slower rate of population growth resulting from wider adoption of family planning policies. The two figures chosen are the UN low and medium variants, 2·1% and 2·5%, respectively.

The importance of per caput income is that at low levels of income a large proportion of any increase in income is spent on food. In very poor countries the income elasticity of demand for food can be as high as 0·5–0·7, i.e. a 1% rise in per caput incomes leads to a 0·5–0·7% rise in per caput demand for food. Different groups in the community have, of course, different elasticities of demand for food; as incomes rise, elasticities of basic foodstuffs tend to get smaller. Also the demand for different types of food has a different income elasticity. Thus the way in which income growth is distributed has an important effect. In most developing countries the urban population is growing much faster than the total population. The urban population is richer and has a lower income elasticity of demand for food, but a higher demand for higher quality foods and these usually have to be imported. An important feature of the demand for food in developing countries is the high demand for cereals. Whereas in developed countries a rise in income often results in a fall in the demand for cereals, in the developing countries the opposite holds; FAO estimates that a 1% rise in income causes an increase in the demand for cereals of one-third of 1%.

Whereas production was projected by FAO only as far as 1975, demand projections were also made for the period 1975–85. Since there was only one assumption about population growth in the first period, there are two demand projections, one corresponding to the high GDP assumption and one to the low. In the second period there are four projections, since there are two population and two GDP assumptions. The various growth rates of demand for food projected by FAO for the different regions of the developing world are shown in Table 3.

Two estimates of the growth of demand were also made by OECD. Corresponding to each of the assumptions about the rate of growth of food production was an assumed rate of growth of GDP. The amount of income available for consumption is expected to rise a little more slowly than GDP as a larger proportion of it is saved. Under assumption A the amount of income available for consumption is expected to rise

at 1·6% and per caput demand for food at 0·65%, and under assumption B at 1·8% and 0·8%, respectively. Thus at a rate of increase of population of 2·58% total demand for food is projected to increase between 1965 and 1980 at a rate of 3·25% under assumption A and at 3·4% under assumption B.

Table 3 FAO projected rates of growth of demand for food and cereals in developing countries 1965–1985

Per cent per year compound

	1965–1975 L	1965–1975 H	1975L–1985 LA	1975L–1985 LB	1975H–1985 HA	1975H–1985 HB
Food*						
World	2·3	2·7	1·9	2·3	2·4	2·7
Developing countries	3·1	3·8	2·8	3·0	3·6	3·9
Latin America	3·1	3·6	2·6	3·0	2·9	3·4
Africa	2·8	3·6	2·9	3·1	3·7	3·9
Near East	3·3	4·1	3·3	3·6	3·8	4·2
Far East	3·0	3·9	2·8	3·0	3·8	4·0
Cereals						
Developing countries	2·8	3·1	2·4	2·7	2·4	2·7

*Expressed in terms of farm value.

Note: L=Low GDP
H=High GDP
LA=Low GDP and low population
LB=Low GDP and high population
HA=High GDP and low population
HB=High GDP and high population

Source: *Agricultural Commodities—Projections for 1975 and 1985*, Vol.I, pp.34 and 45.

Table 4 OECD projected rates of growth of GDP and food production and demand in developing countries 1965–1980

	Annual increase per cent Assumption A	Assumption B
Population	2·58	2·58
Gross Domestic Product	4·40	4·70
Agriculture	2·40	2·80
Non-agriculture	5·10	5·30
Food demand	3·25	3·40
Food production	2·60	3·10

Source: *The Food Problem of Developing Countries.*

The President's Science Advisory Committee suggest as a rule of thumb that the rate of growth of total food demand can be estimated by adding one-half to three-quarters of the rate of growth of income per head to the rate of population growth. It might be remarked that this gives a greater weight to the income effect than the projections of either FAO or OECD. Growth rates of consumption of cereals in developing countries for the decade of the 1970s as projected by the US Department of Agriculture are shown in Table 5. For the period 1965–80 the corresponding figures are 2·9% and 3·0% under the *historical trends I and II* assumptions, respectively, 3·2% assuming a *moderate improvement in production*, and 3·3% assuming a *rapid improvement in production.*

Table 5 USDA projected rates of growth of cereals production and consumption in developing countries 1970–1980

Per cent

Country or region	Population	Historical trends			Moderate improvement in production[2]			Rapid improvement in production[3]		
		Production	Consumption[1]		Production	Consumption		Production	Consumption	
			Total	Per caput		Total	Per caput		Total	Per caput
India	2·3	2·0	2·8	0·5	2·8	3·0	0·7	3·8	3·2	0·9
Pakistan	2·4	2·9	3·0	0·6	3·2	3·1	0·7	3·9	3·4	1·0
Other less developed countries excluding grain exporters	2·7	2·7	2·9	0·2	3·0	3·4	0·7	3·9	3·6	0·9
Subtotal	**2·5**	**2·5**	**2·9**	**0·4**	**2·9**	**3·2**	**0·7**	**3·9**	**3·4**	**0·9**
Net grain exporters	2·7	3·1	3·1	0·4	3·6	3·4	0·7	3·6	3·4	0·7
Total, all less developed countries	**2·6**	**2·6**	**3·0**	**0·4**	**3·1**	**3·3**	**0·7**	**3·9**	**3·5**	**0·9**

Notes:
1 Differences between growth rates in total production and total consumption reflect the influence of either imports or exports.
2 Assumes that the strong pressures for more emphasis on agriculture in less developed countries will have positive effects on agricultural production and consumption.
3 Rate of growth in production increases to 4% by 1975 and continues at that rate to 1980; rate of growth in per caput disappearance increases to 1% by 1975 and continues at that rate to 1980.

Source: *World Food Situation*, Prospects for World Grain Production, Consumption, and Trade.

The various growth rates of production and demand implied in the projections discussed above are summarised in Table 6.

Table 6 Summary of projected annual growth rates of total food and cereals production and demand in developing countries

Per cent

	Production		Demand	
	L	H	L	H
OECD (1965–80) food	2·6	3·1	3·25	3·4
FAO (1962–75) food	2·8	3·6	3·2	3·7
cereals	2·6	3·6	2·9	3·2
USDA (1965–80) cereals	2·6	3·6	2·9	3·3

Note: The FAO demand figures differ from those in Table 3 as a result of using 1961-63 as time base rather than 1965.

The food deficit

The three sets of projections considered above all point in the same direction. On each of the assumptions production would keep pace with population growth. It is striking, though, that, even though cereals production on the high growth rate assumptions is projected to grow faster than demand, on all assumptions the position is reversed for food production. The implication, of course, is an increasing deficit.

In interpreting the projected food deficit, however, it is necessary to be very careful. In making their projections FAO make the point: 'For the base period 1961–63, the balances between demand and supply represent the actual volume of net imports and exports. For 1975, however, the differences between demand and production are not projections of net trade, but are an indication of the potential gaps which might develop by 1975 in the principal countries and regions, and in the world as a whole, on the basis of the assumptions described above, including that of constant 1961–63 prices. These gaps are most unlikely to materialize as shown in the projections, since adjustments in demand, production and in some cases stocks will take place in such a way as to achieve equilibrium.'[1]

This is of crucial importance, because it is important to understand that the *projections* are not *forecasts* of what will happen. They allow us to assess trade prospects and analyse possible changes in prices and policies, provided always that we take full account of the assumptions on which they are based. In the case of the FAO projections, the basic assumptions are that elasticities and rates of growth of population and income will assume certain values and that prices and policies will remain unchanged. In a sense the assumptions beg the whole question. If all the assumptions were to hold and supply and demand grew as predicted, then the projected deficit is the amount of food which would have to be imported to meet the gap. However, if this amount of imports were not forthcoming, one or more of the assumptions would have to give. Supply and demand could always be made equal to one

1. *Agricultural Commodities—Projections for 1975 and 1985*, Vol. I, p. 13.

another through the price mechanism. It might be, though, that the equilibrium level would be at an unacceptably high level of prices or imports or an unacceptably low level of consumption.

Bearing this in mind, we can see what the projected growth rate gaps imply in terms of actual food deficits. Considering the importance of cereals, these have been treated in much greater detail than other foodstuffs. Table 7 sets out cereals balances by groups of countries as projected by FAO. It should be stressed that the figures in this table are net for each group of countries—developed, developing, and centrally planned. Thus for each group of cereals the shortfalls in the deficit developing countries are offset by the export availabilities in the surplus developing countries. The net balances give a clear picture of the overall situation, but are of little help in looking at the problems of individual deficit countries.

On the low GDP assumption the net wheat deficit of the developing countries would increase and deficits would emerge in coarse grains and rice. On the other hand, on the high GDP assumption the wheat deficit would grow smaller and be more than offset by surpluses in coarse grains and rice. In either case there would be a very large surplus of wheat in the developed countries—assuming the continuation of present policies—which would more than cover the shortfall in the developing countries. The projected wheat surplus of the developed countries would be more than twice that recorded in the period 1961–63.

The US Department of Agriculture's projected growth rates are similar to those of FAO and hence the deficits projected for 1980 are broadly consistent with FAO's for 1975. On historical trends the developing countries, excluding Communist Asia, are projected to have a total cereals deficit of 34m or 38m metric tons. An interesting feature is the difference between the deficit projected under the assumption of a moderate improvement in production and that projected under the rapid improvement assumption. For the former it is 29·7m metric tons and for the latter 5·8m.

Calculations of net balances such as those in Table 7 allow us to assess whether or not the developed countries are likely to be able to meet the food deficit of the developing countries, if it were to grow as projected. Within the period covered by these projections there can be little doubt[1] that —at least as far as cereals are concerned—they are perfectly capable of doing this. Whether or not the deficit countries can earn enough foreign exchange to buy that food is another matter; the foreign exchange earnings of those developing countries which are exporters are not available to cover the imports of those with a deficit. A better idea of the foreign exchange problem created by the food deficit can be gained by considering the deficits of the importing countries only.

1. See also Chapter 3.

Table 7 FAO projected cereals balances 1975

Million tons

	1961–63 trade			1975 balance					
				Low GDP			High GDP		
	Wheat	*Coarse grains*	*Rice*	*Wheat*	*Coarse grains*	*Rice*	*Wheat*	*Coarse grains*	*Rice*
Developing countries	+14·2	−3·4	—	+21·7	+0·3	+2·4	+8·1	−8·6	−4·9
Developed countries	−14·2	+2·2	−0·7	−38·3	+4·8	−0·7	−39·1	+12·1	+0·1
Centrally planned countries	+9·3	−0·2	−0·1	+5·8	−0·7	−0·6	−0·9	+0·3	−1·1
World balance	+0·7	+1·3	−0·8	−10·8	+4·4	+1·1	−31·6	+3·8	−5·9

Note: Balances, including the world balances for 1961–63, are equal to the difference between production and demand, a positive figure indicating a surplus of demand over production. Trade figures for 1961–63 are not equal to the difference between production and consumption because of changes in stocks.
Coarse grains=rye, barley, oats, maize, sorghums, millets, and mixed grains.
Demand covers all uses, including animal feed.

Source: *Agricultural Commodities—Projections for 1975 and 1985*, Vol. I, pp. 88, 90, and 106.

The sum of the net cereals deficits of the importing developing countries in 1975 on the basis of the FAO projections would be 42m metric tons on the low GDP assumption and 22m on the high, compared with average imports of 23m in 1961–63.[1] The corresponding USDA figures for 1980 are 59m and 54m on the historical trends assumptions and 52m and 28m, respectively, on the moderate and rapid improvement assumptions. If for each deficit country, on the basis of FAO's low and high projections for 1975, the individual deficits of each cereals group—wheat, coarse grains, and rice—are summed up separately and projected surpluses ignored, the totals arrived at are 38m and 47m, respectively. The value of these at 1961–63 prices would be $2,400m and $3,400m.

A similar calculation can be made for other major food items. The total deficit of developing importing countries in 1975 for cereals, milk and milk products, fats and oils, sugar, and meat would grow from $3,000m in 1961–63 to $8,100m on the low GDP growth assumption and $8,500m on the high. Although the cereals gap would be less on the high growth rate than on the low, for the other, higher-quality foods it would be greater. In 1961–63 cereals represented 57% of the food imports of importing developing countries; on the low projection they would account for 42% and on the high one only 28% by 1975. Given the assumed price relationships, it is considered unlikely that supplies of some of the higher-quality foods would be available to meet all the increase in demand; there might then be some substitution of basic foodstuffs for these. Taking account of a projected meat shortage only and substituting cereals and skim milk for the shortfall, the total deficit is reduced to $7,200m on both low and high assumptions.[2]

This is an appropriate point to return to a discussion of the significance of the projected food deficits. The gap is a hypothetical one, but in much that has been written about it this point is obscured. The impression is given that the gap can only be met by commercial imports or food aid; no other possibility is considered. An alternative is that food prices could rise. Whether it is desirable that prices should rise is another matter, but it is a possibility that should be constantly borne in mind, particularly in the next paragraph, where the hypothetical deficit is used to calculate the possible food aid requirement. The price response of different commodities will, of course, be different. In particular, one would expect the prices of basic foodstuffs to be more responsive to changes in demand than those of the higher-quality foods. The significance of this difference is immediately apparent if one looks back to the previous paragraph; cereals are projected to be responsible

1. This calculation and the one in the next paragraph are taken from *Multilateral Food Aid*, Progress Report by the Secretary-General (E/4352), United Nations Economic and Social Council, New York, June 1967.

2. In view of the constant price assumption, 'substitution' can have only a very hypothetical meaning.

for an increasingly smaller proportion of the overall deficit. In addition, it can be argued that it is unlikely that the governments of deficit countries will give as high a priority to the stabilisation of the prices of higher-quality foods, mainly consumed by the middle classes, as to the stabilisation of those of cereals, which make up the basic food of the poorer sections of the community. Thus, it is very improbable that imports at a level suggested by the projections will be necessary.

On the basis of the projected food deficit, FAO[1] has attempted to work out the need for food aid. Import propensities have been estimated for each developing country. It is calculated that each 1% increase in GDP in the developing countries is associated with an increase in commercial food imports of 1·1%. Thus commercial imports are projected to rise from $2,200m in 1961–63 to $3,500m by 1975 on the low GDP assumption and $4,100m on the high assumption. Assuming a deficit of $7,200m, the gap remaining would be $3,700 or $3,100m. If this gap were to be filled by food aid it would require a fourfold increase over the $800m of food aid provided in 1961–63.

The OECD calculations of the food deficit are very simple. In 1965 gross imports and exports of food and feed by the developing countries were more or less in balance at $5,500m a year. It is estimated from this that production and consumption were roughly equal at something like $55,000m, although it is pointed out that this is not an easy figure to determine because of the difficulty of estimating the large amount of food which is consumed by the families of the producers. Using the growth rates of supply and demand already estimated (see page 17), projections are derived of total supply and demand in 1980. At 1965 prices there would be a deficit of $8,000m on assumption A and $4,000m on assumption B.

Trade in foodstuffs

Before the Second World War the developing countries were net exporters of cereals, their exports exceeding their imports in the period 1934–38 by some 14m tons annually. Since the War they have become net importers and a preliminary estimate for 1966 put their net imports at some 25m tons. It is this fact, possibly as much as any other, which has alarmed those who believe that the world is on the brink of a massive global famine. A later revision has brought the net import figure for 1966 down to 14m tons, but none the less this represents a marked change from the pre-war position.

On the import side the pattern which emerges from Table 8 is very much what one would expect. Imports have risen rapidly as population and incomes per head have increased. This is not necessarily cause for

1. See *Interagency Study of Multilateral Food Aid*, Director-General's Report to the CCP (E/4370), FAO, Rome, 1967.

Table 8 Trade in cereals in developing regions 1955–57 to 1967

Million metric tons

	Average 1955–57	Average 1964–66	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967 (Preliminary)
Latin America												
Imports	3·9	6·8	4·6	4·3	4·7	4·8	5·6	6·1	6·9	6·4	7·2	7·5
Exports	5·5	12·1	5·7	6·1	6·7	4·0	7·4	6·1	10·2	13·7	12·5	12·5
Net	–1·6	–5·3	–1·1	–1·8	–2·0	0·8	–1·8	–	–3·3	–7·3	–5·3	–5·0
Far East[1]												
Imports	6·4	15·0	9·1	8·8	11·2	10·0	9·5	12·5	13·9	15·0	16·0	16·0
Exports	3·9	5·3	3·6	4·0	4·6	4·6	4·3	5·2	5·6	5·3	4·9	3·9
Net	2·5	9·7	5·5	4·8	6·6	5·4	5·2	7·3	8·3	9·7	11·1	12·1
Near East												
Imports	2·4	4·9	2·7	3·5	4·6	5·0	4·6	5·1	4·4	4·8	5·6	4·8
Exports	1·3	1·0	1·3	0·9	0·6	0·6	1·3	1·3	1·2	1·1	0·8	0·6
Net	1·1	3·9	1·4	2·6	4·0	4·4	3·3	3·8	3·2	3·7	4·8	4·2
Africa												
Imports	1·3	3·2	1·2	2·2	2·3	3·0	2·9	2·4	2·6	2·9	4·2	4·2
Exports	2·1	1·3	2·4	1·5	1·5	1·9	3·1	3·3	2·1	1·0	0·7	1·5
Net	–0·8	1·9	–1·2	0·7	0·8	1·1	–0·2	–0·9	0·5	1·9	3·5	2·7
Total developing regions												
Imports	14·0	29·9	17·5	18·9	22·9	22·8	22·5	26·3	27·9	29·1	32·9	32·5
Exports	12·8	19·7	13·0	12·6	13·4	11·1	16·0	15·9	19·2	21·2	18·8	18·5
Net	1·2	10·2	4·5	6·3	9·5	11·7	6·5	10·4	8·7	7·9	14·1	14·0

Note: Minus sign denotes net export. 1 Excluding Japan and China (Mainland).
Source: *The State of Food and Agriculture 1968*, FAO, Rome, 1968.

concern: 'The substantial commercial grain imports by the less developed countries result from the fact that many have reached a stage of development where they can afford to buy grain. Developing countries with limited potential for increased grain production but with sufficient growth in nonagricultural industries might be expected to increase their commercial purchase of grain in the future.'[1]

The extrapolation of present trends is of very doubtful value, particularly in view of the uncertain effects on world trade in cereals of US concessional exports. These have been large compared with the total of cereals imports into developing countries. Table 9 shows the amounts of wheat and coarse grains shipped to developing countries by the US through special programmes in the period 1954/55 to 1963/64. Although rice is not included in these figures, the omission is not on the whole of great significance since rice has been of minor importance in food aid; by the end of 1965 the entire amount which had been shipped under PL 480 was less than 6m metric tons.

Table 9 US exports of wheat, flour, and coarse grain under concessional programmes 1954/55 to 1963/64

Million metric tons

	54/55	55/56	56/57	57/58	58/59	59/60	60/61	61/62	62/63	63/64
Latin America	0·1	1·0	0·9	0·9	1·0	1·6	1·4	2·5	1·8	2·0
Asia (excl. Japan)	1·2	1·6	4·9	4·6	5·7	6·5	7·7	6·7	8·0	8·7
Africa (excl. South Africa)	0·0	0·5	0·1	0·1	0·7	1·5	1·8	3·6	2·7	3·2
Developing countries	1·3	3·1	5·9	5·6	7·4	9·6	10·9	12·8	12·5	13·9

Source: *Trends and Problems in the World Grain Economy 1950-1970*, Secretariat Paper No. 6, International Wheat Council, London, 1966.

It is striking how closely the rise in gross imports of the developing countries has been matched by the rise in imports from the United States on concessional terms. It should not be inferred from this that the concessional imports have not gone to meet real needs, nor is it necessarily the case that part, at least, would not have been replaced by commercial imports. It does mean, though, that past trends of imports are not a reliable guide for predicting the future pattern; it is impossible to know what the picture would have been in the absence of food aid.

The pattern of exports of cereals from developing countries is, perhaps, more alarming than that of imports. Exports are still below their pre-war levels. There are very few developing countries which are significant exporters of cereals. Almost the whole of the 10m ton drop in exports between 1934–38 and 1954–56 was accounted for by three

1. *World Food Situation*, Prospects for World Grain Production, Consumption, and Trade.

producers, Argentina, Burma, and Indo-China.[1] Similarly, the recent upturn in Latin America is largely a result of increased exports from Argentina, although in 1965 there was a notable increase in the exports of both Mexico and Uruguay. Thus export figures are considerably affected by events in a very few producer countries.

Total food imports into developing countries are growing even more rapidly than cereals imports. Food exports are also increasing, but at a slower rate than imports. It has been calculated by OECD that, if food imports and exports were to grow between 1965 and 1980 at the same rate as in recent years, they would reach about $12,400m and $17,100m, respectively. Extrapolation of trade trends is, however, particularly hazardous and too much should not be concluded—as the OECD report quite rightly points out—from these results.

It needs to be stressed that one can only meaningfully interpret trends of food imports and exports in the context of overall economic growth and the general pattern of imports and exports. No country can supply from its own production the complete range of food products which people will demand as their incomes rise. It has been remarked recently that the 'countries with outstanding agricultural performances in recent years—Japan, Taiwan, Israel, and more recently Mexico, South Korea, and Pakistan—have, with the exception of Mexico, *tripled their purchases of U.S. farm products over the past 8 years*'.[2]

Nutrition

Thus far discussion of the food needs of developing countries has been in terms of demand rather than of nutritional requirements. There is some justification for this: 'Beyond a certain point, increases in per capita food consumption are likely to occur only as a consequence of increases in the rate of growth of effective money demand for food products. With few exceptions, subsistence agriculture has not provided adequate nutrition for its practitioners.'[3] The procedure followed by the President's Science Advisory Committee—which is simply the reverse of the one followed in the projections considered earlier in this chapter—was to start by setting a 'critical' food target on nutritional

1. See 'Food Aid', by Judy Lewis and Stephen Sandford, in *The Rural Base for National Development*, edited by Ronald Robinson and Peter Johnston, Cambridge University Overseas Studies Committee, Cambridge, 1968. This is an important paper, since it is written by two members of the Economic Planning Staff of the Ministry of Overseas Development, and is a useful indication of views held in that Ministry.
2. Lester R. Brown, *A New Era in World Agriculture*, presented at first annual Senator Frank Carlson Symposium on World Population and Food Supply, Kansas State University, Manhattan, Kansas, 3 December, 1968.
3. *The World Food Problem*, A Report of the President's Advisory Committee, Vol. II, p. 178.

and demographic grounds and to infer the economic implications from the standpoint of overall growth of demand.

To speak of nutritional needs in the aggregate is not very helpful, because so much depends on distribution. On the whole there is enough food in the world now to give an adequate diet to the entire population, but the developed countries get a disproportionate share. A similarly uneven distribution occurs within developing countries too. To take a specific example, according to a US Department of Agriculture survey in Brazil in 1959–61 the average amount of food available was perfectly adequate. Consumption *on average* amounted to 2,710 calories with 65 grams of protein, one-third of this being derived from animal sources. None the less it is clear that in North-Eastern Brazil diets are far from adequate.

An individual's calorie needs depend upon a number of factors, such as his body-weight, the temperature of his environment, and the amount of work he does. Nutritional targets based on these factors will, however, need revising from time to time, since improved nutrition will lead to increased stature and greater body-weight, thus requiring a higher target. Similarly, if a greater capacity for work is accompanied by a greater amount of work actually done, the targets will need revising upwards on this account as well. Averages for a population depend upon the age and sex distribution of the population.

FAO bases its estimates of calorie requirements on the recommendations of the Second Committee on Calorie Requirements.[1] The assumptions made in calculating 'reference requirements' have been severely criticised.[2] A detailed critique is completely beyond the scope of this study, but whilst it seems fair to cast doubt on the FAO calculations, they do not appear to have been replaced by estimates which are more reliable. Whatever the merits of these targets, they do provide a scale against which the actual availability of calories can be measured. A comparison of calorie consumption in developed countries of 2,900 with that in developing countries of 2,180 becomes more meaningful, for instance, when the figures are set against estimated calorie requirements of 2,530 and 2,270 respectively. The targets set a standard by which the nutritional implications of the demand projections can be assessed. If FAO's projected demand for 1975 is met, then the developing countries as a whole will reach the target. The average, of course, covers wide discrepancies between as well as within countries. In particular, even on the high growth rate assumption, Western South America and North-West Africa are not expected to reach their average requirement.

1. Published in *Calorie Requirements*, FAO Nutritional Studies No. 15, FAO, Rome, 1957.
2. See, for instance, Colin Clark, *Population Growth and Land Use*, Macmillan, London, 1967.

Averages on their own are of little value in estimating the extent of undernourishment in a country or region. One needs to know also how consumption is spread about the average. In poor countries calorie consumption tends to be more closely tied to income than in the rich and there is a wider spread.[1] What this means is that targets at a country level have to be set considerably above average requirements, in order to avoid undernourishment of a large proportion of the population. As a rule of thumb FAO suggest an increase on average requirements of some 15–20%. By 1985, if the demand projections are met, the developing countries as a whole are expected to reach a level of some 6–7% higher than average requirements on the low GDP assumption and only on the high growth assumption do they come near the desired level with 116% of average requirements. Even then areas such as Western South America, the Caribbean islands, and North-West Africa will fall well below the target.

Malnutrition is even more widespread than undernourishment. FAO estimates—although the estimate has not gone unchallenged—that some 60% of the population of developing countries suffer from malnutrition, as a result of dietary deficiencies in the body-building and tissue-repairing nutrients—amino acids, vitamins, and mineral elements. Proteins are a source of both energy and amino acids. If there is a shortage of calories in the diet, protein is turned into energy and is not available for its protective functions. Each protein is made up of a number of amino acids, some of which can by synthesised from other food components and some of which—the essential amino acids—cannot. The quality of protein varies, therefore, depending on the proportion of essential amino acids. Animal protein tends to be of higher quality than vegetable protein.

Protein is thus of particular importance in nutrition and the amount of protein can serve as a useful indicator—although no more—of the extent to which a diet is adequately balanced. It has been found that the total proportion of calories supplied by protein is virtually independent of income, but that the proportion of animal protein is very dependent upon income. On the high GDP assumption FAO expects the demand for calories and protein in the developing countries to grow at an annual rate of 3·4% and 3·5% respectively, with the demand for animal protein growing at 4·6%. If supplies are forthcoming to meet the demand projections, the proportion of calories supplied by proteins will have changed very little by 1985. There will be a small increase in the proportion of animal protein, but this will be matched by a fall in the proportion of vegetable protein.

1. See *Third World Food Survey*, Basic Study No. 11, FAO, Rome, 1963, p. 38.

Optimism or pessimism?

At the beginning of this chapter it was remarked that in the last couple of years pessimism in some quarters has turned to optimism. How can the various projections discussed above help in choosing between the two and to what extent have the projections been invalidated by recent events?

Pessimism might, of course, be caused simply by misinterpretation of the projections. They are not—to repeat what has already been said—forecasts, but an attempt to explore—under certain restrictive assumptions—the implications of various possible rates of growth of production. The projection of an ever-increasing food deficit must be seen in the context of the assumptions on which it is based. Although there are alarming implications for price stability and foreign exchange availability in demand being projected to grow faster than production, the crucial question from the point of view of nutrition is whether food production will grow at an appreciably faster rate than population.

To the extent that governments can and do take action on them, the projections are self-invalidating. By showing where possible imbalances might arise they point to policy changes to avoid the imbalances. If governments of developing countries were to invest more of their resources in agriculture, for instance, so that the proportion of agriculture in the growth of national income was greater, then demand for food would not grow so quickly in relation to production.[1]

Do the latest developments indicate that the projections of food production are unduly pessimistic? One good season, of course, is a far from sufficient basis for coming to this conclusion, but there are other reasons for taking a more cheerful view; many governments are adopting a more positive attitude towards agricultural development after the recent disastrous harvests, and even more significantly there is strong evidence that some farmers, particularly in Asia, are welcoming the new improved seed varieties and making good use of them.

Even before the projections were prepared, governments were taking more interest in agriculture.

> 'Virtually all the deficit countries have embodied in their latest economic plans new and higher targets for agricultural investment and output. Brazil, replacing coffee trees by rice, maize, beans and pastures, is planning a one-million ton surplus of rice by 1970, self-sufficiency in coarse grains and a 2·8 million-ton (61 per cent of consumption) deficit in wheat. Ceylon has put rice production on "an emergency footing" and is aiming at a 40 per cent increase between 1966 and 1970, to bring the country "near to self-sufficiency". India's fourth five-year plan is designed to raise food-

1. The most rapid rates of increase in demand are projected for higher-quality foods, however, whereas the 'breakthrough' discussed below is in cereals production.

grain production to 120 million tons by 1970/71—an unprecedented rate of expansion which, if achieved, would make the country more or less self-sufficient in basic foodstuffs. Malaysia's 1966–1970 plan includes an acceleration in the expansion of rice production to a rate of 7·6 per cent a year. Pakistan has set a target of 5·6 per cent a year for the increase in its food-grain production during its third five-year plan (1966–1970). The Philippines has embarked on a "crash programme" to achieve self-sufficiency by 1969. The United Arab Republic has allocated to agriculture 70 per cent more in its second plan (1965/66–1969/70) than in its first and is aiming at a crop increase of 3·5 per cent a year.'[1]

The report from which the above quotation was taken went on to remind its readers that intentions are far from synonymous with attainment. 'The history of agricultural development plans is not altogether a reassuring one: the obstacles to change have often proved much greater than had been allowed for, so that failures have been more common than successes.'[2] None the less it pointed out that both the internal and external pressures on countries, impelling action in the agricultural sector, are much greater than ever before. Together with the new technologies they can be a powerful force for agricultural change.

For optimism to be justified the rate of increase in yields per acre will need to be greater. Even FAO's low assumption—an annual increase in grain production of 2·6% during the period 1961–63 to 1975 compared to 3·0% from 1949–53 to 1958–63—assumes an acceleration in the rate of increase in yields per acre from 1·2% to 1·5%. The rate of increase in acreage would fall from 1·8% to 1·1%. Where does hope for increasing yields lie?

One of the most encouraging developments in recent years has been the breeding of high-yielding varieties of a number of crops, most important among them being wheat, rice, and maize. What is more to the point is that work has been done in adapting some of these to the particular conditions of specific developing countries. The story began with the Rockefeller Foundation's work on wheat in Mexico, beginning in the 1940s. Average wheat yields in Mexico were increased from 880 kg/hectare to 2,400 kg/hectare in 15 years, but it seemed unlikely until very recently that the Mexican experience could be generalised. In the last two seasons, however, there has been a remarkable expansion of the acreage planted to new varieties in Asia, particularly of rice from the International Rice Research Institute in the Philippines, although it should be remarked that it is still only a small fraction of the total rice acreage. Estimates of the acreage planted to new varieties of rice in the last five seasons in several Asian countries are shown in Table 10.

1. *Multilateral Food Aid*, 1967, p. 36.
2. Ibid, p. 37.

Table 10 Estimated acreage planted to new varieties of rice in various Asian countries 1964/65 to 1968/69

Thousand acres

Country	Total rice acreage 1965/66	64/65	65/66	66/67	67/68	68/69
India	86,542	0·2	14	937	5,000	7,600
West Pakistan	3,452				10	100
East Pakistan	22,726			0·5	200	598
Philippines	7,683			185	588	944
Malaysia	1,206				11	74
Indonesia	18,155					618
Vietnam (South)	6,002				2	109

Source: Randolph Barker, *The Role of the International Rice Research Institute in the Development and Dissemination of New Rice Varieties*, paper prepared for the International Seminar on Change in Agriculture, Reading University, September, 1968.

It has been claimed that the world has entered a new agricultural era, beginning in about 1967.

'The new era is characterized by explosive increases in production of principal crops in the larger developing countries of Asia. The 1968 Pakistan wheat harvest was 37 per cent over the *previous record*, possibly an increase without precedent in any major country. India's wheat crop this year was up 35 per cent over the *previous record*; its total food grain harvest up 12 per cent. Ceylon's rice crop has increased 34 per cent during the past two years. The Philippines, with two consecutive dramatic gains in its rice crop, has apparently ended half a century of dependence on rice imports.

'Favourable weather has contributed to the record harvests in some countries, such as India, but it is only one factor; these countries are now achieving takeoffs in yield per acre comparable to those achieved in the developed countries during the first half of this century. Increases in per acre wheat yields in Pakistan and India and of rice yields in the Philippines over the past *two years* may exceed those of the preceding *several decades*.'[1]

Some of this evidence was available already, of course, when the FAO projections were prepared. The increased emphasis in India's (draft) Fourth Five-Year Plan was commented on, with its aim of

'providing for better guaranteed prices to farmers, more extensive and efficient irrigation, more intensive and better organized fertilizer use (one million tons a year) and a "crash" program for hybrid strains of millet and maize and high yielding varieties of wheat and rice. In 1967, the new varieties have been harvested for the first time from a relatively large area with impressive results. Although it is too early to judge the long-term effect of the introduction of the new varieties, it appears to be feasible for India to reach self-sufficiency in food grains by 1975, provided sufficient use is made of fertilizer and

1. Brown, op. cit.

other necessary agricultural inputs and steps are taken to ensure that farmers outside the special programs are not neglected.'[1]

The target in the Indian Plan is self-sufficiency by 1970/71.

The provisos mentioned here are very important. A rapid increase in production by the wealthier farmers can close the apparent food gap, but will, if anything, exacerbate the problems of the rural poor—in Asia usually the worst-fed—who will find the prices which they get for their occasional surpluses reduced. The new varieties are designed to be responsive to inputs which are normally beyond the reach of the poorer peasants unless special provision is made. If a breakthrough in food production is to be achieved, the investment in agricultural inputs will need to be enormous. A crude estimate by the President's Science Advisory Committee is that an agricultural growth rate of 4% will require an additional annual investment in capital stock for seed mechanisation, plant protection, and fertiliser production of nearly $4 billion a year by 1985, to say nothing of investment in irrigation, transport, storage, processing, etc. Investment on this scale without a very sizeable contribution in the form of aid on the part of the developed countries seems improbable.

It would seem then that there are reasonable grounds for a rather more optimistic view of the food situation in developing countries than of late, but one that is tempered with caution.

'Certainly the potentialities for increasing output are very considerable—especially if double and triple cropping can successfully replace single cropping with all its associated under-employment in the cereal sector. As the new varieties spread the rate of increase in food production could rise very sharply. But it still remains impossible to predict with any certainty how rapidly the acceleration of output will take place, and how many countries will be significantly affected. Some major importing countries, such as India and Pakistan, are confidently expecting to be self-sufficient in food grains, at least in years of normal weather, by 1970/71. But in many other developing food deficit countries the progress has so far been very limited. Generally, it should be kept in mind that farming the new varieties is a far more exacting exercise than traditional agriculture is used to in most parts . . .'[2]

It must not be forgotten that as yet the 'green revolution' tends to be concentrated on just a few countries, and on limited areas, for example the Punjab, within them.

1. *Agricultural Commodities—Projections for 1975 and 1985*, Vol. I, p. 87.
2. *Multilateral Food Aid:* Programme of Studies called for in General Assembly Resolution 2096 (xx), Report of the Secretary-General (E/4538), UN Economic and Social Council, June 1968, p. 13.

2 A Brief History of Food Aid

'It is hereby declared to be the policy of Congress to expand international trade among the United States and friendly nations, to facilitate the convertibility of currency, to promote the economic stability of American agriculture and the national welfare, to make maximum efficient use of surplus agricultural commodities in furtherance of the foreign policy of the United States and to stimulate and facilitate the expansion of foreign trade in agricultural commodities produced in the United States by providing a means whereby surplus agricultural commodities in excess of the usual marketings of such commodities may be sold through private trade channels and foreign currencies accepted in payment therefor. It is further the policy to use foreign currencies which accrue to the United States under this act to expand international trade, to encourage economic development, to purchase strategic materials, to pay United States obligations abroad, to promote collective strength, and to foster in other ways the foreign policy of the United States.'[1]

Although there had been emergency food aid and other concessional transfers at an earlier date, food aid as we are concerned with it here really only began in the early 1950s. It grew out of the paradoxical situation in which a large number of people in the world were underfed whilst at the same time large stocks of surplus food, notably wheat, were being accumulated in certain producer countries, principally the United States. This chapter traces the history of the main food aid programmes; overwhelmingly the largest of these has been that of the United States.

However, before the various programmes are described it might be as well to remark that there is a serious problem—even more so than with other forms of aid—in estimating the value of food aid. Does one take the value as the price paid to the farmer; the cost to the budget of the producer country; the internal price in the producer country; the world market price; an estimate of the world market price if all surpluses were sold; the price the recipient would have been prepared to pay on world markets; the price paid by the consumer, etc.? Theodore Schultz[2] has estimated the value to recipient countries of commodities provided by the United States under PL 480 at only 37% of the Commodity Credit Corporation (CCC) price, which is how they are valued internally. The export market value is based mainly on world market prices at which the US has been prepared to sell.

1. The Agricultural Trade Development and Assistance Act of 1954 (Public Law 480—83rd Congress).
2. Theodore W. Schultz, 'Value of US Farm Surpluses to Underdeveloped Countries', *Journal of Farm Economics*, Vol. 42, No. 5, December 1960, pp. 1019-30.

Schultz takes this as 70% of CCC cost, but argues that it would have been substantially lower if the US had sold all its exportable farm surpluses at whatever price they would fetch on the world market. He guesses that this would have been in the neighbourhood of 50% of CCC cost and then arrives at his 37% figure by estimating the value to recipients as three-quarters of this. This seems highly speculative, but it does indicate the problems involved in valuing food aid.

The United States

Food for Peace

In 1954 the United States took steps to deal with its growing agricultural surpluses in two ways: by inducing farmers to cultivate smaller acreages, and by disposing of stocks on concessional terms to needy countries. The most important food aid legislation has been the Agricultural Trade Development and Assistance Act, better known as PL 480, which was passed in June, 1954. This was expected to run for only three years, after which time the surpluses would be exhausted and the programmes would stop. However, annual surpluses actually became larger and after only thirteen months an additional $800m was added to the initial authorisation of $1,000m and a year later a further $1,700m had been authorised.

During the next thirteen years the United States shipped some $18,800m worth of surplus food and other commodities under special programmes, mainly PL 480. Not all of this went to developing countries, however, and not all that which did can be considered as aid; barter contracts—mostly with the richer countries—accounted for some $2,400m of the total of all special exports. Developing countries[1] in this period received commodities worth $13,150m, of which $915m was by barter. PL 480 has been the main instrument of the 'Food for Peace' programme and 85% of the commodities transferred under it have been food. PL 480 and other special shipments are compared in value with commercial exports from the United States in Table 11.

Not surprisingly, the region which has received the most commodities under special programmes is the Near East and South Asia, which includes India, Pakistan, and Egypt. What perhaps is rather surprising is that over a quarter of all shipments have gone to Europe. As time has gone by, however, the shift has been away from Europe and Japan to developing countries; thus in 1967, apart from a small amount for Iceland, the entire amount of PL 480 was programmed for developing countries. The principal recipients of commodities under special programmes, i.e. those who have received more than $400m, are listed in Table 12.

1. Excluding European countries and Japan.

Table 11 US agricultural exports under government programmes and commercial sales July 1954 to December 1967[1]

Calendar year	Sales for foreign currency	Contributions under Public Law 480			Barter	Total Public Law 480	Mutual security AID[2]	Total government programmes (less barter)	Commercial sales[3]	Total agricultural exports	$ million Public Law 480 as percentage of total
		Long-term dollar credit sales	Government donations for disaster relief and economic development	Donations through voluntary relief agencies							
1954 (July-December)	—	—	28	20	22	70	211	259	1,304	1,585	5
1955	263	—	56	186	262	767	351	856	2,081	3,199	24
1956	638	—	65	187	372	1,262	449	1,339	2,459	4,170	30
1957	760	—	39	175	244	1,218	318	1,292	2,970	4,506	27
1958	752	—	43	159	65	1,019	214	1,168	2,622	3,855	26
1959	731	—	32	111	175	1,049	158	1,032	2,748	3,955	27
1960	1,014	—	49	124	117	1,304	157	1,344	3,371	4,832	27
1961	878	1	93	151	181	1,304	179	1,302	3,541	5,024	26
1962	1,007	42	81	178	137	1,445	35	1,343	3,554	5,034	29
1963	1,162	52	99	160	74	1,547	11	1,484	4,026	5,584	28
1964	1,239	97	62	186	123	1,707	23	1,607	4,618	6,348	27
1965	926	143	73	180	188	1,510	26	1,348	4,693	6,229	25
1966	820	226	79	132	260	1,517	47	1,304	5,317	6,881	22
1967	716	187	108	179	314	1,504	33	1,223	4,849	6,386	24
July 1954 to December 1967	10,906	748	907	2,128	2,534	17,223	2,212	16,901	48,153	67,588	25

Notes: 1 Export market value.
2 Sales for foreign currency, economic aid, and expenditures under development loans (1964-1967). Public Laws 87-195, 665, and 165.
3 Commercial sales for dollars include, in addition to unassisted commercial transactions, shipments of commodities with governmental assistance in the form of short- and medium-term credit, export payments, and sales of government-owned commodities at less than domestic market prices.

Source: *Food for Freedom: New Emphasis on Self-Help, 1967 Annual Report on Public Law 480*, Washington DC, 1968.

Table 12 Principal recipients of US agricultural exports under government programmes (excluding barter) July 1954 to June 1967

	$ million
Europe (total)	4,864·7
Italy (including Trieste)	486·8
Poland and Danzig	539·1
Spain	768·2
Yugoslavia	1,081·7
Africa (total)	818·5
Near East & South Asia (total)	7,244·2
India	3,642·6
Israel	405·1
Pakistan	1,094·6
Turkey	544·1
UAR (Egypt)	908·8
Far East & Pacific (total)	2,942·5
Korea, Republic of	946·4
Taiwan	590·3
Vietnam	504·4
Latin America (total)	1,438·0
Brazil	618·9
Total, all countries	16,390·5

Note: Only recipients of commodities valued at more than $400m are included. The figure given includes all PL 480 transfers (excluding barter contracts) and Mutual Security (AID) programmes.

Source: *Food for Freedom: 1967 Annual Report on Public Law 480.*

The commodity composition by value of all shipments under PL 480, including barter, is shown in Table 13. Cotton and tobacco are the only non-food items of any importance and they have accounted for some 15% only. By far the largest item has been cereals, representing two-thirds of the total. One half of all shipments under PL 480 have consisted of wheat and flour.

Table 13 Value of commodities shipped under PL 480 July 1954 to December 1967

		$ million
Cereals		11,545
of which, wheat and flour	8,687	
Fats and oils		1,511
Oilseeds and meal		27
Dairy products		1,339
Meat and poultry		59
Fruit and vegetables		56
Cotton (including linters)		2,020
Other (mainly tobacco)		704
Total		17,262

Source: *Food for Freedom: 1967 Annual Report on Public Law 480.*

PL 480 operates under a number of titles. The content of the titles has recently been revised, but the significance of the change can best be seen by examining how the law was administered under the old titles. Title I was the most important of these, accounting for some two-thirds of total PL 480 shipments. It provided for the sale of surplus agricultural commodities for payment in the local currency of the recipient. This

local currency could then be used either for US purposes[1] or for those of the recipient, as stipulated in the agreement signed by the two parties. US uses would cover such items as the cost of running the embassy or of trade fairs, whilst local use would cover mainly loans and grants for economic development.

Table 14 shows the allocation of uses of local currencies under Title I agreements. The amounts shown are those appearing in the agreements and are subject to adjustment when actual commodity purchases and currency allocations have been made. Of the total of $12,016·9m in the agreements, $11,418·8m had been collected and $8,828·0m had been disbursed by 31 December 1967. By the middle of 1967 disbursement of grants for economic development had accounted for $1,553·0m and that of loans to foreign governments for $4,115·9m.

Table 14 Uses of PL 480 Title I foreign currency under agreements signed July 1954 to December 1967

	$ thousands	Percentage of total
Common defence	1,254,461	10·4
Loans to private enterprise	586,127	4·9
Loans to foreign governments	5,568,427	46·3
Grants for economic development	1,788,193	14·9
Grants for family welfare	18,558	0·1
Purchase of goods and services for friendly nations	18,854	0·2
US uses	2,782,321	23·2
Total	12,016,941	100·0

Source: *Food for Freedom: 1967 Annual Report on Public Law 480.*

Title II authorised grants for famine and disaster relief, community development, school feeding, and other economic development purposes overseas. Aid provided under Title II for economic development purposes could not be used, however, to replace other sales, including sales under Title I for local currency. It is under this title that the United States has made its contribution to the World Food Program (WFP), which has had 40–50% of its resources provided by the US. Amounts authorised under Title II are shown in Table 15.

Title III provided for domestic donations of surplus commodities as well as overseas donations through American voluntary agencies and international organisations such as UNICEF. By the end of 1967 overseas donations through these organisations had amounted to $2,128m. Domestic donations under this title have amounted to about one half of foreign donations and are not shown in Table 11. Another

1. Foreign currencies devoted to US uses would not, of course, count as aid in the OECD aid statistics. To the extent that foreign currency earnings are lost to the recipient in this way, the food aid involves a dollar cost. Since 1965 recipients have also been required to pay the shipping costs. US legislation requires at least 50% of US aid to be shipped in US flag vessels, the United States paying the difference between the cost of shipping in US and foreign vessels. Thus at least 50% of the shipping cost is also a dollar cost to the recipient.

eature of Title III was the provision of surplus commodities for barter to obtain, in particular, strategic materials. This, of course, has nothing to do with aid and often barter contracts have been made with developed countries. By the end of June 1967, for instance, Britain had exchanged $337m worth of goods and services under barter arrangements.

Table 15 PL 480 Title II government-to-government and World Food Program authorisations July 1954 to December 1967

$ thousands

	WFP	Total
Disaster	33,515	958,234
Child feeding	14,661	263,135
Refugees	1,087	199,189
Voluntary agency	—	22,617
Economic development	121,031	635,833
Other	—	26,497
Total	170,294	2,105,505

Note: Commodities authorised are valued at Commodity Credit Corporation cost plus ocean transport. In Table 11 actual disbursements are shown at market value.
Source: *Food for Freedom: 1967 Annual Report on Public Law 480.*

Title IV, added in 1961, was the title in the old legislation which provided for the sale of surplus agricultural commodities on a long-term supply basis and for dollar credits. Delivery periods could be up to ten years and repayments up to 20 years with a two-year grace period. Interest rates were similar to those on AID loans. It was anticipated that countries would graduate from Title I to this type of sale and thence to imports on a normal commercial basis. Table 11 illustrates how dollar-credit sales have grown in recent years. In fact, they form the heart of the new legislation.

The Mutual Security Act of 1953 was the first US legislation to provide for the sale of surplus commodities for foreign currencies. The section which provided for this was, however, dropped when the Act was replaced by the Act for International Development in 1961. Shipments under the Mutual Security Program were highest in 1954/55, but declined steadily thereafter. Sales for local currency amounted in that year to $444m, of which Europe accounted for $296m.

What is significant about the tailing off in exports under this programme is that difficulty was found in finding outlets. Sums of money were allocated annually to recipients for a variety of purposes, only one of which was the purchase of food. Food aid under the Mutual Security Program was thus an alternative to other forms of aid, rather than additional. When recipients were given a choice between food aid and other aid the former was given a low priority only.

Food for Freedom

'The Congress hereby declares it to be the policy of the United States to expand international trade; to develop and expand export

markets for United States agricultural commodities; to use the abundant agricultural productivity of the United States to combat hunger and malnutrition and to encourage economic development in the developing countries, with particular emphasis on assistance to those countries that are determined to improve their own agricultural production; and to promote in other ways the foreign policy of the United States.'[1]

At the end of 1966 PL 480 was extended for a further two years and was substantially revised. The amended objectives above may be compared with those of the earlier Act which were quoted at the head of this chapter. The new 'Food for Freedom' approach, which the President had first announced in February 1966, has a number of important features, two of which are particularly significant.[2] The first of these is that the surplus requirement is removed. Commodities for export under the new Act need merely be 'available' and are not required to be 'surplus'. What is more, the United States will produce agricultural commodities deliberately for shipment as food aid. On signing the bill, President Johnson announced that half the 60m acre cropland reserve of the United States would be returned to production. Secondly, there is to be a shift away from local currency sales to dollar credit sales. It is expected that, except for US requirements, there will have been a complete shift to dollar sales by the end of five years.

There are also other important changes. Self-help is to be made an integral part of the US food aid programme. In order to qualify for food aid recipients must, whenever practicable, be themselves undertaking measures to increase food production per head and improve storage and distribution facilities. In particular, they are expected to devote land resources to the production of needed food rather than non-food crops—especially those in world surplus. Provision is made for the use of foreign currencies for the export of food to support family planning programmes. Another aspect is that there is to be an increased emphasis on nutrition. Additional stress will be placed in the donation programmes on the prevention of malnutrition in children. The Commodity Credit Corporation is authorised to finance the enrichment of foods to improve their nutritional value. There is also provision for better co-ordination of food aid with other economic assistance.

The Act calls on the President to encourage other advanced nations to make increased contributions for the purpose of combating world hunger and malnutrition. It looks to the expansion of international food and agricultural assistance programmes, particularly through the expansion of the World Food Program.

1. The Food for Peace Act of 1966 (Public Law 808—89th Congress).
2. Details of the revised legislation can be found in *The Food Aid Program 1966: Annual Report on Public Law 480*, Washington DC, 1967.

Title I under the new legislation combines the former Titles I and IV. This title provides for the sale of US farm products for local currencies and also for dollars—cash or credit—but the former are to be phased out by 31 December 1971. Payment in foreign currencies after that date may only be agreed if the President determines that they are needed for US uses, including common defence, or for 'financing, at the request of such country, programs emphasizing maternal welfare, child health and nutrition, and activities, where participation is voluntary, related to the problems of population growth . . .'.

Title II incorporates the old Title II and part of the old Title III. It authorises donations to 'meet famine or other urgent or extraordinary relief requirements; to combat malnutrition, especially in children; to promote economic and community development in friendly developing areas; and for needy persons and nonprofit school lunch and preschool feeding programs outside the United States'. Title III is now confined to barter deals.

Title IV no longer refers to a specific method of transfer of commodities, but contains a number of general clauses. In particular, it stipulates that the authority and funds provided by the Act will be used in 'a manner that will assist friendly countries that are determined to help themselves toward a greater degree of self-reliance in providing enough food to meet the needs of their people and in resolving their problems relative to population growth'.

Canada

Canadian food aid has been concentrated almost exclusively on Colombo Plan countries. By the end of 1966/67 fiscal year Canada had allocated some $260m in bilateral food aid, all except $5m of which had gone to Colombo Plan countries. The bulk of Canadian food aid has been provided as a grant, the counterpart funds generated being largely used to finance the local cost element of Canadian-financed aid projects. Shipping costs are borne by the recipients. There was a huge increase in Canadian food aid in 1966/67 in response to crop failures in the Indian sub-continent and in Africa; Canada's contribution in that year—both bilateral and multilateral—came to $100·5m compared with an allocation of $35m the previous year and a total of $139m in the fifteen years prior to that. The distribution of Canadian food aid is shown in Table 16.

World Food Program

In addition to bilateral programmes, food aid is supplied on a multilateral basis through the World Food Program (WFP). This began for an experimental three-year period in January 1963 under the joint sponsorship of the United Nations and FAO. Contributions are voluntary and may be in the form of commodities, services, or cash. A target figure of $100m was set and pledges came to $94·5m, of which $67·8m was in foodstuffs and the rest in cash and services. The main impetus for the creation of the World Food Program came from the United States, which in the experimental period contributed over half its resources.

In 1965 it was decided to continue the Program indefinitely and a second pledging conference was held in January 1966 to cover the three-year period 1966–68. At the conference a sum of $205m was pledged towards a target of $275m. Of this, however, $130m was from the United States, which was not prepared to contribute more than 50% of the commodities or more than 40% of the cash resources (to a maximum of $6m) of WFP. Since the amount pledged by other countries during the period only reached some $85m, the total available amounted to only $170m, and more than one-third of the US pledge could not be used.

The third pledging conference was held in January 1968. This time the period to be covered is only two years, 1969 and 1970, and the target set is $200m, slightly more annually than in the previous period. Pledges to the value of $160m were announced, but the US pledge of $100m included $70m in commodities, again on a 'dollar for dollar' basis. The United States insists on shipping its contribution in US vessels and $27m of the remainder was to cover the cost of this. Of the total pledged, the actual amount available was only $119m, consisting of $79·5m in commodities, $16·2m in services, $21·2m in cash, and a further $2·1m unspecified. By April 1968 the total had risen to $128·5m and has continued to grow slowly since, mainly as a result of pledges obligated under the Kennedy Round Food Aid Convention (see below). By the end of September 1968 Australia, Denmark, Finland, Norway, and the United Kingdom had pledged all or part of their Food Aid Convention commitment to the World Food Program, but this represented only 3·2% of the total obligation of the signatories of the Convention.

Three fields of activity are prescribed in the General Regulations of the World Food Program.

'The Program shall, on request, provide aid for:

(a) meeting emergency food needs and emergencies inherent in chronic malnutrition (this could include the establishment of food reserves);

Table 16 Canadian food aid allocations 1951/52 to 1967/68

Canadian $ million

	1951/52 to 1965/66	1966/67	1967/68
Multilateral	3·64	8·35	11·4
Algeria	—	1·00	—
Burma	3·35	—	—
Cambodia	0·10	—	—
Ceylon	16·42	2·00	2·0
Ghana	—	2·00	2·0
India	103·03	77·00	50·0
Indonesia	2·55	0·35	—
Morocco	—	1·50	—
Nepal	0·06	—	—
Pakistan	43·64	7·40	8·5
Senegal	—	0·50	—
S. Vietnam	1·00	—	—
Thailand	—	0·40	—
Total	173·79	100·5	75·0*

* Includes allocations which cannot be assigned to a particular country.

Source: *17th Meeting of the Colombo Plan Consultative Committee: Commemorative Volume*, Colombo Plan Bureau, Colombo, 1966.
External Aid Office, *Annual Review 1966-67*, Queen's Printer and Controller of Stationery, Ottawa, 1967.
Canadian International Development Agency, *Annual Review 1967-1968*, Queen's Printer and Controller of Stationery, Ottawa, 1968.

Australia

Although one of the world's principal grain exporters, Australia does not give food aid a high priority. Until recently all Australian food aid was provided under the Colombo Plan. Local currencies generated by the sales of food aid are used for Australian aid projects. Between 1951 and 1961 wheat and flour to the value of $A20m were supplied to India, Pakistan, and Ceylon. In 1962/63 India received $A7m in wheat and Pakistan $A6m. During the period 1961–66 Ceylon received some $A6·81m worth of flour.

In recent years there have been special arrangements outside the Colombo Plan. There have been four separate gifts to India: $A7·6m worth of wheat in 1965; two gifts of wheat flour and milk powder in 1966 valued at $A8m and $A9m; and wheat worth $A8·8m in 1967. In 1967 there was an emergency gift of wheat to Pakistan worth $A1·38m.

Total bilateral food aid from Australia during the period 1951–67 was thus of the order of $A75m or £30m sterling at the rates of exchange then prevailing. In addition Australia has contributed some $A400,000 a year to the World Food Program.

(b) assisting in preschool and school feeding;

(c) implementing pilot projects, using food as an aid to economic and social development, particularly when related to labour-intensive projects and rural welfare.'[1]

The governing body of the World Food Program is the Inter-Governmental Committee (IGC), which is made up of 24 member countries elected equally by the FAO Council and ECOSOC on behalf of the United Nations. The IGC meets only twice a year and for emergency aid it delegates its responsibility, making $10m a year available to the Director-General of FAO to enable him to respond to urgent appeals. WFP does not maintain stockpiles of its own and can only respond to sudden disasters if it can borrow local stocks which can be replaced in time from stocks in donor countries. In the first three-year experimental period the $7m set aside for emergencies was not fully used up. In 1966, however, the Program's emergency allocation had to be increased to $15m and even this was felt to be inadequate.

In the case of development projects, requests involving food valued at more than $750,000 have to be referred to the IGC, but sums less than this can be approved by the Executive Director of WFP. Criteria used in the assessment of a project, other than its technical and economic feasibility, are whether it is labour-intensive; whether the food will be distributed in kind rather than sold; whether it is sufficiently large to make a significant impact; whether there is co-ordination with other aid programmes; whether the project has a self-help aspect; and whether the country can continue the project after WFP has pulled out.

In its first five years the World Food Program provided about $45·5m in emergency relief in 44 countries and embarked on some 264 development projects, representing a total investment of $250m. All WFP aid is in grant form, but recipients usually provide a large part of the cost of a project themselves; on average they found four-fifths of the cost of all projects signed up to the end of 1966. In general, the recipient has to pay the costs of transport within his borders, the cost of ocean transport being provided by WFP. An interesting feature of the World Food Program is that many developing countries are themselves contributors; there are in all some 70 or so donors. The multilateral nature of WFP also means that there has to be as wide a spread as possible amongst recipients; in 1967 food aid from the United States direct to recipients under Title II PL 480 went to seventeen countries, but through WFP it went to 34 countries. One of the principles laid down is that no country shall normally receive more than one-tenth of WFP's resources, a principle which obviously penalises India.

British contributions to the World Food Program have been comparatively small. In 1963/64 and 1964/65 the contribution was £0·6m;

1. *World Food Program Basic Documents*, UN/FAO, Rome, 1963, p. 3.

it was £0·8m in 1965/66 and then fell back to £0·4m in 1966/67 and £0·5m in 1967/68. For the two years 1969 and 1970 Britain has announced a total pledge of £2·68m. This will consist of a 'basic' pledge of £620,000 for each of the years, two-thirds to be in commodities in surplus in Britain, such as dried egg and dried skim milk, and one-third in cash. A further £1·2m will provide grains under the Food Aid Convention, to which will be added £240,000 in cash to help with handling costs.

1967 Food Aid Convention

One of the results of the Kennedy Round of trade negotiations was a three-year food aid convention to be operative from 1 July 1968. It forms a part of the International Grains Arrangement and constitutes an agreement on the part of the countries party to the Convention to contribute wheat, coarse grains, or the cash equivalent as aid to the developing countries. The proposal put forward originally was for an annual programme of 10m metric tons of wheat. In the course of negotiations this was reduced to 4·5m metric tons and extended to cover coarse grains as well.

The trade negotiations produced only the barest outline of a food aid agreement after some very hard bargaining.

> 'The Europeans definitely wanted an agreement to stabilize the world market for grain but thought that food aid was a quite separate problem that had no place in the negotiations. To put it bluntly, the EEC, Britain and Japan heartily disliked the exporters' proposal. The United States, for its part, made it plain that without food aid provisions there would be no grains agreement, and that without a grains agreement it would offer few concessions on industrial products. Tough and tense negotiations ensued; neither side was easily budged from its initial position. Only at the last possible moment, in May 1967, was complete deadlock averted and the Kennedy Round saved from ignominy.'[1]

1. David R. Wightman, *Food Aid and Economic Development*, International Conciliation No. 567, Carnegie Endowment for International Peace, New York, March 1968.

Minimum contributions are fixed as follows:—

Table 17 Minimum contributions—Food Aid Convention

	%	Thousand metric tons
United States	42·0	1,890
Canada	11·0	495
Australia	5·0	225
Argentina	0·5	23
European Economic Community	23·0	1,035
United Kingdom	5·0	225
Switzerland	0·7	32
Sweden	1·2	54
Denmark	0·6	27
Norway	0·3	14
Finland	0·3	14
Japan	5·0	225

Source: *International Grains Arrangement, 1967.*

This Convention does not replace in amount the US bilateral programme, which has been running at over 15m metric tons a year. It does represent, however, a large increase in the contributions of other countries, including Britain. For countries making a cash contribution a price equivalent has been set at $1·73 per bushel. At this price the British contribution comes to some $14·3m or £5·96m per year, ten times more than the erstwhile contribution to the World Food Program.

'Food aid in the form of grain shall be supplied on the following terms:—

(a) sales for the currency of the importing country which is not transferable and is not convertible into currency or goods and services for use by the contributing country.[1]

(b) a gift of grain or a monetary grant used to purchase grain for the importing country.

'Grain purchases shall be made from participating countries. In the use of grant funds, special regard shall be had to facilitating grain exports of developing member countries. To this end priority shall be given so that not less than 25 per cent of the cash contribution to purchase grain for food aid or that part of such contribution required to purchase 200,000 metric tons of grain shall be used to purchase grains produced in developing countries. Contributions in the form of grains shall be placed in f.o.b. forward position by donor countries.'

In order to supervise the functioning of the Convention a Food Aid Committee is established whose membership is the same as the membership of the Convention. The original signatories were required to sign the Wheat Trade Convention also, but this does not apply to any governments joining subsequently. Any government may accede to the Convention on conditions to be set down by the Food Aid Committee, provided that it is a member of the UN or of one of the Specialised Agencies. The Committee is specifically required to keep

1. Under exceptional circumstances an exception of not more than 10% could be granted.

under review the purchase of grains financed by cash contributions, with particular reference to the obligation quoted above concerning purchase of grain from developing participating countries. It is also required to exchange information, where it is available, on the effects of the arrangements on food production in recipient countries.

Signatories of the Wheat Trade Convention are expected to 'undertake appropriate measures to ensure that concessional transactions are additional to commercial sales which could reasonably be anticipated in the absence of such transactions. Such measures should be consistent with the Principles of Surplus Disposal and Guiding Lines recommended by the Food and Agriculture Organization of the United Nations and may provide that a specified level of commercial imports of wheat, agreed with the recipient country, be maintained on a global basis by that country.'

3 What Happened to the Surpluses?

'In the past our food aid programs have been based on the existence of food surpluses in the United States. These surpluses are gone. Until the less-developed countries are able to provide for themselves, our domestic farm programs must be geared to ensure that we produce enough to meet pressing foreign needs as well as the demand here at home.'[1]

It was the existence of large stocks of agricultural commodities, particularly cereals, which led to the inception of food aid programmes. If these stocks have now disappeared, how will food aid be affected? This chapter discusses changes in the surplus situation and possible future trends; the implications for food aid are considered later.

It is not literally true that America's granaries are empty. What is meant by saying that the surpluses are gone is that stocks have been reduced to a manageable size. Bearing in mind the increase in world trade, US stocks of most foodstuffs are now considered no larger than necessary to cover seasonal fluctuations. It appears then that PL 480 has achieved—some dozen or more years after it was passed—its prime objective of reducing surplus food stocks. Table 18 shows how the most important of these—the stocks of wheat and coarse grains—have changed over the years; it will be noted that both have started to rise again from their recent minimum level.

Surplus production

The significance of changes in the surplus position can be seen more easily by considering current production[2] of surpluses rather than stocks. The relationship between food aid and surpluses then becomes clear. Until 1961 surplus grain production in the United States actually ran at a higher rate than exports under concessional programmes, so that surpluses continued to grow. Since then, however, the position has been reversed; food aid has been greater than surplus production and stocks have been drawn down. A glance at Table 19 shows that the watershed was caused, not by any shift in food aid policy, but as a result of a dramatic fall in surplus production. Coarse grains which had previously been running a surplus of some 10m tons a year averaged a 5½m tons deficit in the subsequent five years. Surplus wheat production also fell

1. Lyndon B. Johnson, Preface to *The Food Aid Program 1966: Annual Report on Public Law 480*, Washington DC, 1967.

2. Given that $S_1 = S_0 + P - C + M - X - A$, where S_0 = stock at beginning of period, S_1 = stock at end of period, P = production, M = imports, C = domestic consumption, X = commercial exports, and A = special exports; surplus production is defined as $S_1 - S_0 + A$ or $P - C + M - X$. Implicit in this definition, of course, is the notion that special exports do not substitute for commercial exports.

Table 18 Stocks of grains in exporting countries 1952–1968

Million metric tons

	Date	1952	1956	1960	1961	1962	1963	1964	1965	1966	1967	1968 (fore-cast)
Wheat												
United States	1 July	7·0	28·1	35·8	38·4	36·0	32·5	24·5	22·3	14·6	11·6	14·8
Canada	1 Aug.	5·9	15·8	16·3	16·5	10·6	13·3	12·5	14·0	11·4	15·6	19·5
Argentina	1 Dec.	0·1	1·2	1·2	0·8	0·2	0·5	2·2	3·3	0·2	0·4	0·9
Australia	1 Dec.	0·5	2·4	1·6	0·7	0·5	0·6	0·6	0·7	0·5	2·0	0·3
France	1 July	1·2	1·6	1·9	2·3	1·7	3·2	2·3	2·0	2·7	1·7	2·2
Total 5 Major Exporters		**14·7**	**49·1**	**56·8**	**58·7**	**49·0**	**50·1**	**42·1**	**42·3**	**29·4**	**31·3**	**37·7**
Coarse grains												
United States	1 July	18·5	39·3	68·0	77·2	65·4	58·2	62·9	50·1	38·6	34·2	38·3
Canada	1 Aug.	3·6	4·3	4·7	4·5	2·8	4·5	5·7	4·2	4·5	5·7	4·0
Argentina	1 Dec.	0·4	0·5	0·3	0·5	0·4	0·2	0·4	0·4	0·3	0·6	0·3
Australia	1 Dec.	—	—	0·1	0·1	0·2	0·2	0·4	0·4	0·4	0·7	0·6
France	1 July	0·2	0·6	1·6	2·2	1·1	1·2	1·8	1·0	1·3	1·1	1·2
South Africa		0·4	1·1	0·7	0·7	1·1	1·2	1·0	0·6	0·3	—	—
Total 6 Major Exporters		**23·1**	**45·8**	**75·4**	**85·2**	**71·0**	**65·5**	**72·2**	**56·7**	**45·4**	**42·3**	**44·4**
All grains												
United States		25·5	67·4	103·8	115·6	101·4	90·7	87·4	72·4	53·2	45·8	53·1
Others		12·3	27·5	28·4	28·3	18·6	24·9	26·9	26·6	21·6	27·8	29·0
Total—ALL GRAINS		**37·8**	**94·9**	**132·2**	**143·9**	**120·0**	**115·6**	**114·3**	**99·0**	**74·8**	**73·6**	**82·1**

Sources: *The State of Food and Agriculture 1968*, FAO, Rome, 1968.
Trends and Problems in the World Grain Economy 1950–70, Secretariat Paper No. 6, International Wheat Council, London, 1966.
Grain Crops No. 12, Commonwealth Secretariat, London, 1967.

Table 19 Wheat and coarse grains: current surplus and US concessional programmes

Million metric tons

		49/50	50/51	51/52	52/53	53/54	54/55	55/56	56/57	57/58	58/59	59/60	60/61	61/62	62/63	63/64	64/65	65/66
Wheat																		
US concessional programmes [1]							4·3	6·6	10·2	6·7	8·2	10·2	12·4	13·4	13·2	13·7	15·4	15·5
Surplus production [2] : United States		+3·2	—0·7	—3·9	+9·5	+8·9	+7·1	+6·5	+6·8	+6·0	+19·4	+10·8	+15·0	+11·0	+9·7	+5·7	+13·2	+7·8
Other [3]		+0·3	+0·7	+1·1	+6·5	+7·8	—0·4	—0·6	+3·2	—3·0	—0·4	+0·2	—0·7	—7·3	+4·6	—	+2·4	—5·2
	World [4]	+3·5	—	—2·8	+16·0	+16·7	+6·7	+5·9	+10·0	+3·0	+19·0	+11·0	+14·3	+3·7	+14·3	+5·7	+15·6	+2·6
Coarse grains																		
US concessional programmes							1·0	4·6	3·8	2·0	2·4	3·1	2·8	3·1	2·1	2·1	1·7	2·3
Surplus production: United States		+0·2	—1·8	—7·6	+6·2	+4·7	+8·9	+6·6	+8·9	+11·4	+10·2	+9·5	+12·0	—8·7	—5·1	+6·8	—11·1	—9·2
Other		—0·7	+1·3	+0·9	+1·6	+0·5	—0·7	+0·5	+3·4	—2·5	—0·1	+0·1	+0·6	—2·4	+1·7	+2·0	—2·7	+0·2
	World	—0·5	—0·5	—6·7	+7·8	+5·2	+8·2	+7·1	+12·3	+8·9	+10·1	+9·6	+12·6	—11·1	—3·4	+8·8	—13·8	—9·0
Wheat and coarse grains																		
US concessional programmes							5·3	11·2	14·0	8·7	10·6	13·3	15·2	16·5	15·3	15·8	17·1	17·8
Surplus production: United States		+3·4	—2·5	—11·5	+15·7	+13·6	+16·0	+13·1	+15·7	+17·4	+29·6	+20·3	+27·0	+2·3	+4·6	+12·5	+2·1	—1·4
Other		—0·4	+2·0	+2·0	+8·1	+8·3	—1·1	—0·1	+6·6	—5·5	—0·5	+0·3	—0·1	—9·7	+6·3	+2·0	—0·3	—5·0
	World	+3·0	—0·5	—9·5	+23·8	+21·9	+14·9	+13·0	+22·3	+11·9	+29·1	+20·6	+26·9	—7·4	+10·9	+14·5	+1·8	—6·4

Notes: 1 To developed and developing countries.
2 Surplus as defined in the footnote on page 45.
3 Canada, Argentina, Australia, France, and South Africa. Only stock changes are included, i.e. food aid is neglected.
4 Sum of the two items above.

Sources: *The State of Food and Agriculture 1968*, FAO, Rome, 1968.
Trends and Problems in the World Grain Economy 1950–70, Secretariat Paper No 6, International Wheat Council, London, 1966.
Grain Crops No,12, The Commonwealth Secretariat, London, 1967.
US Embassy, London.

and in the same five-year period, 1961/62 to 1965/66, only accounted for two-thirds of the amount shipped under concessional programmes.

A number of factors have contributed to the decline in surplus production in the United States. The most important of these has been control of the acreage under cultivation. In 1962 and subsequent years the area sown with cereals was only three-quarters of what it had been in the years 1948–52. None the less, because of increasing yields per acre,[1] acreage control has not succeeded in preventing a fairly rapid rise in production. Total US cereals production, including rice, rose from an average of 137m metric tons in 1948–52 to 183m in 1965. However, commercial demand also rose rapidly, with the result that, whereas food aid was responsible for 60% of total US grain exports in 1956/57, it was down to 13% in 1963/64, although the absolute amount had increased. During the decade beginning in the mid-fifties the United States increased its share of world trade in cereals to 40% from less than 30%. Total world trade in cereals rose by something like 80% during this period.

Tables 18 and 19 illustrate the importance of the United States both as a holder of stocks and as a producer of surpluses. The combined stocks of the other major exporters—Canada, Australia, Argentina, France, and South Africa—have remained remarkably stable over the last decade, although there have been individual variations, of course, particularly of Canadian wheat stocks. Thus the reduction in stocks referred to above is confined to the United States. Canadian wheat stocks are larger than ever, in fact they now exceed those of the United States.[2] The cereals exports of these five countries increased from 22·3m metric tons in 1960 to 39·5m in 1965. Their contribution to food aid during this period probably amounted to less than two million tons.

Future trends

It would appear from the above that the surplus problems of the grain producers are no longer serious. The evidence presented here, however, is far from sufficient to allow such a conclusion; so much depends upon policy decisions, not only in the producer countries, but also in the principal importing countries. If the British Government, for instance, accepts the recommendation of the Economic Development Committee for Agriculture to increase grain production by 3·5m tons, the export market for producer countries will be that much less.

1. Average wheat yields increased, for example, from 1,120 kg/hectare in 1948-52 to 1,790 kg/hectare in 1965.

2. Since this was written the International Wheat Council have forecast a sharp rise in wheat stocks by the end of the season (June 1969). Stocks in the seven major exporting countries are expected to be some 57m tons, not far short of the 1960/61 peak figure of 63·6m tons. However, in 1960/61 stocks were almost entirely held by the United States and Canada; they are now likely to be more widely distributed. Holdings are of a generally lower quality than previously.

There have been three main developments contributing to the increase in world trade in cereals over the last decade or so; to varying extents they might be expected to continue into the future.[1] The first of these is the demand from the developing countries themselves for food grains. In the past much of this has been met by food aid and its importance in the future will no doubt be largely conditioned by the extent to which food grains are made available on concessional terms. The second is a sharp increase in the demand for feed grains for livestock production, particularly in Japan and Western Europe, which has stimulated domestic production of coarse grains as well as leading to an increase in demand for imports. The third, and least predictable, factor is demand for imports from the USSR and China. The USSR, which imported less than half a million tons of wheat in 1962, imported over seven million tons two years later. The Soviet wheat crop in 1966/67, an exceptionally good year, totalled 100m tons compared to the poor harvest of some 60m tons the previous year.

Agricultural price support and production policies are complex and vary considerably from country to country.[2] Because of its enormous agricultural capacity, the policies of the United States are of crucial importance in considering the generation of surpluses. The United States offsets its price support system by policies designed to keep land out of production under conservation crops. To meet increased commercial requirements and to produce a deliberate surplus for food aid, land from the reserve has now been brought back into production. In May 1966 it was announced that the national wheat acreage allotment of 51·6m acres for the 1966 harvest would be increased by 15% to 59·3m for 1967. However, in August 1966 it was increased by a further 15% to 68·2m, in view of the stock position at the end of the 1965/66 season. The allotment for the 1968 harvest was 59·3m acres.

FAO, in making their projection for 1975, assumed that policies will remain unchanged.

> 'In developed countries . . . grain production is projected to increase almost as fast as in the previous decade, primarily because it is assumed there will be no further decline in the North American grain area. Grain yields are expected to improve less rapidly than in the fifties in view of the relatively high average already achieved; this is seen in the lower growth rate expected in grain production in developed importing countries.'[3]

The balances projected by FAO were summarised in Table 8 on page 22. On the basis of the underlying assumptions, the developed countries as a whole are projected to produce almost 40m tons more wheat than they consume by 1975. In view of the investment plans of the USSR, demand from the centrally-planned countries is expected to

1. See *Trends and Problems in the World Grain Economy, 1950-1970.*
2. For a review of those affecting cereals see *Grain Crops No. 12.*
3. *Agricultural Commodities—Projections for 1975 and 1985,* Vol. I, p. 84.

decrease, and on the high GDP growth assumption a surplus is even projected. Even assuming there is no unsatisfied demand in developing countries, i.e. that food aid will be available to meet any demand not met by commercial imports, a world surplus of 10–30m tons is projected. Since, however, a shortfall of 4m tons in the production of coarse grains is projected, it might be expected that there would be some movement in prices and substitution between wheat and coarse grains, particularly since it is the developed countries which are largely expected to account for the shortfall.

A more recent set of projections of production and consumption of major foodstuffs in the OECD countries plus Australia and New Zealand has been made by the OECD secretariat. 1961–63 has been chosen as a base so that the projections may complement those for the developing countries in FAO's Indicative World Plan. Both FAO and OECD assume that present policies will remain broadly unchanged, but instead of a constant price assumption OECD assume that prices and costs will develop according to their present trends. Projections for the EEC countries are based on the common agricultural policy as at March 1968, but no account is taken of the possible enlargement of the

Table 20 Projected food balances in developed countries[1] 1975 and 1985

Thousand metric tons

	1961—1963		1975	1985
	Stocks[2]	Net trade[3]	Balance[4]	
Bread Grains[5]				
Australia	—36	—6,030	—9,154	—10,457
Canada	—1,349	—11,792	—18,447	—22,671
EEC	—206	+1,799	—1,535	—2,807
United States[6]	—4,213	—19,543	—27,979	—33,457
Total	—5,145	—24,508	—47,828	—58,249
Coarse Grains				
Canada	+370	—258	—3,953	—6,195
EEC	+152	+9,028	+9,620	+9,660
United Kingdom	+98	+4,677	—522	—2,118
United States	—3,572	—14,626	—57,019	—78,862
Total	—3,435	+4,174	—41,957	—62,538
Rice[7]	—413	—789	—2,434	—3,626
Sugar[8]	—422	+8,636	+8,175	+9,488
Beef and veal[9]	+14	+256	+1,661	+1,907
Mutton and lamb[9]	—3	—51	—189	—145
Pig meat[9]	+12	—113	—277	—361
Poultry meat	+8	—87	—139	—146
Eggs	+2	+8	—95	—105
Butterfat	+24	—151	—386	—254
Milk solids—non-fat	+6	—768	—1,242	—892

Notes: 1 OECD countries plus Australia and New Zealand.
2 Stock increase + ; stock decrease —.
3 Imports + ; exports —.
4 Projected utilisation less projected production.
5 Virtually synonymous with wheat.
6 Military use is treated as an export item.
7 Husked.
8 In refined equivalent.
9 In carcass weight.

Source: *Agricultural Projections for 1975 and 1985*: Europe, North America, Japan, Oceania. Production and consumption of major foodstuffs, OECD, Paris, 1968.

EEC. The important assumption about US acreages is based on decisions taken up to 1967, i.e. a partial return of reserve land to cropping.

The conclusions reached are that on independent projections of production and utilisation the production of wheat will exceed consumption in 1975 by 48m metric tons and in 1985 by 58m. Corresponding figures for coarse grains are 42m metric tons[1] and 63m metric tons. The projections are summarised in Table 20. Projections made by the Economic Research Service of the US Department of Agriculture[2] are more conservative than those of OECD, but still forecast a surplus of production over consumption by 1980. On the basis of an assumption of 186m harvested acres in 1980, compared with 150m in 1964, the United States would produce a surplus of 109·5m metric tons of grain. Other developed exporting countries would produce a surplus of 42·5m metric tons, whilst the import requirements of the rest of the developed world would be 73·2m.

It should be stressed that these projections are not forecasts of net trade, but extrapolations of present trends in the light of present policies. They give an indication of likely capacity rather than actual production. Now that an approximate balance between production and demand has been achieved it seems unlikely that producer countries will be willing to accumulate large stocks again. Experience of the management of excess capacity without the production of unwanted surpluses is increasing, although some policies—particularly the common agricultural policy of the EEC, which is currently troubled with surpluses of dairy products—will not be easy to change. It is perhaps more realistic then to think in terms of excess capacity rather than surplus production. The significance of this is that the policy implications of a 'surplus' deliberately produced for food aid are different from those arising from an 'unavoidable' surplus. This anticipates, however, the argument of a later chapter.

1. If one compares this with the 12m tons *deficit* projected by FAO on the high GDP assumption, the need for caution in interpreting the various projections is obvious.

2. *World Food Situation*, Prospects for World Grain Production, Consumption and Trade, Foreign Agricultural Economic Report No. 35, US Department of Agriculture, Washington DC, 1967.

4 The Impact of Food Aid

'Not enough is known of the extent to which food aid contributes to economic development and food output in the developing countries. Is food aid like giving an alcoholic a case of whiskey as a bribe to make him stop drinking—hence worse than nothing? Or is it like the small amount of water poured into a leaky pump cylinder that will seal the valve—and thereby bring manifold results?[1]

Food aid began as a simple reaction to an obvious case of need. As a way of transferring resources it was justified by its cheapness, resulting from the existence of surpluses. A theory of how it could contribute to economic development came only later. It was then argued that any possible detrimental effects of food aid on local agricultural production can be mitigated by demand being created *additional* to normal demand. More recently the case for the continuance of food aid has tended to rest on the apparent growing difficulty developing countries find in feeding themselves. Deliberate surpluses are being produced to meet this situation. There is, however, a certain inconsistency in producing a surplus to meet unsatisfied demand whilst simultaneously setting out to create additional demand in recipient countries in order to utilise the surplus without harming local production. A study of the impact of food aid on the recipient economy is thus of central importance.

There has been considerable discussion amongst economists about the possible effects of food aid, but there is surprisingly little hard information about what has actually happened in specific instances. Much of the argument has been conducted in purely theoretical terms and this is summarised in the first part of this chapter under the headings:– (1) consumption and nutrition, (2) development, (3) domestic production, (4) inflation and foreign exchange, and (5) world trade. The chapter ends by taking a look at the experience of a number of particular recipient countries.

Consumption and nutrition

At first sight it would appear obvious that food aid cannot help but raise the level of food consumption, and possibly also of nutrition in countries whose populations are undernourished. If food aid were merely to substitute for local production, however, there would be no overall increase, although there might well be a reshaping of the pattern of consumption. Some evidence of the extent to which consumption has been increased in India as a result of food aid is offered later in this chapter.

1. Luther G. Tweeten, 'A Proposed Allocative Mechanism for US Food Aid', *Journal of Farm Economics*, Vol. 48, No. 4, 1966, p. 810.

It is important in considering the impact of food aid to distinguish between aid for economic development and that which is provided in response to an emergency. Although both types involve a concessional transfer of food to the recipient, the focus of interest is different since they are provided to meet different needs; the impact will vary according to the need. The impact will also depend upon the form in which aid is made available. A further distinction is necessary, therefore, between food aid provided for specific projects and that which is distributed through commercial channels, called, for convenience, programme food aid.

Emergency aid is the most unambiguous form of food aid. It is provided in response to particular catastrophes such as droughts, floods, earthquakes, political upheavals, etc., and cost-effectiveness is of minor importance compared with speed and efficiency in distribution. Its impact can immediately be seen in the lives saved and the misery averted. It meets a short-term problem and there is no question of maintaining continuity. One would not have expected either that there would be any long-term disadvantages, although the following quotation referring to Tanganyika suggests that once it has been started it is not always easy to discontinue.

'Maize contributed by the US has played an important, partly helpful and partly dangerous role in settlement and self-help schemes. 90,000 tons of maize and 2,000 tons of powdered milk were supplied between 1961 and 1963. It began because of failing crops. In the beginning maize was supplied unconditionally to the needy. Later on, the distribution of maize was combined with emergency projects. . . .

'There is no doubt that US maize prevented starvation in certain areas. However, it seriously affected the willingness to work in others. In some places the peasants consider it more advantageous to participate in emergency schemes—where work is easy and supervision scarce—than to cultivate their own fields. Where maize has been distributed, cultivation has frequently been reduced.* It is noteworthy in this connection that much of the maize went into the Eastern Region, an area which is thinly populated and contains large tracts of comparatively fertile land. Local politicians were in a tight spot. People knew that maize was distributed and they exerted corresponding pressure on their political representatives.

'*A report from Same District, Tanga Region says about certain areas: "People have stopped farming and live on fishing and US maize. There is no doubt that where US maize has been distributed, less land is being cultivated. In some locations this is creating the conditions for another famine."'

Yet this particular operation, seen from the famine relief point of

1. Hans Ruthenberg, *Agricultural Development in Tanganyika*, Ifo-Institut Afrika-Studien Nr. 2, Springer-Verlag, Berlin, 1964, p. 129.

view, has been considered particularly successful;[1] food was distributed speedily and efficiently to those in need. In fact, it appears that the most serious difficulties with this type of aid are administrative.[2] The over-riding problem is that of getting food to those in need within a reasonable space of time, which often has to be accomplished by borrowing stocks of food which are near the area and replacing them in time from food aid stocks. A further difficulty is that of estimating in the early days of an emergency just how great the need is. There is a very natural tendency to overestimate requirements at the outset, leading to a surplus problem when the emergency is over and a consequent serious disruption of local markets.

The second category of food aid under consideration is that provided for projects. No doubt the motives behind and conditions attaching to food aid in this form include all those for any other project aid.[3] For food aid, however, there is an additional objective and that is to ensure that demand for food is created over and above what it would normally be. The reasons for this—to minimise any possible disincentive to food production in the recipient country and to avoid distortion of trade patterns—are discussed more fully below. A particular advantage of project food aid is that it can be directed towards a specific problem, such as the need to increase the food consumption or level of nutrition of some particular vulnerable group in the recipient country. Such projects as school and pre-school feeding are directed towards this end. They create additional demand because they provide the children with food they would not normally receive, and have the advantage that they require very little in the way of complementary resources. Another example of a project specifically intended to have a nutritional impact is one where feed grains are supplied to establish or develop local livestock industries, thus increasing the supply of animal protein.

A minor nutritional danger associated with project food aid appears to be that of replacing a local, fairly balanced diet with an imported one which is not so well balanced. This is likely to be more true of bilateral aid than of the World Food Program, which takes care to provide a balanced food basket (it finds this a useful argument for persuading contributor countries to supply non-surplus foods).[4] This is also, of course, a danger with programme food aid, but the effects are likely to be more thinly spread through the population. On the other hand, a new, more nutritious commodity might act as a 'market

1. G. B. Masefield, *Famine, its Prevention and Relief*, Oxford University Press, London, 1963.
2. See, for instance, A. H. Boerma, *Report on the World Food Program by the Executive Director*, UN/FAO, Rome, 1965, and also Masefield above.
3. For a discussion of these see A. Krassowski, *The Aid Relationship*, ODI, 1968, pp. 87-96.
4. The fact that a balanced diet is provided does not mean that it is consumed; certain items might be unacceptable to the local palate.

primer' and change consumption habits in the direction of better nutrition. The USDA Foreign Agricultural Service, in 'U.S. nonfat dry milk in Israel' (pp. 11–12), comments:

> 'It would not appear that the importation of American milk powder has been a retarding influence on Israel's milk production. In fact it is quite widely held that the increased availability of milk and milk products resulting from these imports—together with the emphasis placed on the nutritive value of milk . . .—has been useful in developing a taste for milk. Thus, U.S. nonfat dry milk has played a significant part in stimulating the demand for and the consumption of milk and milk products.'[1]

Most food aid has not been provided for projects. The bulk of PL 480, for instance, has been distributed through commercial channels. In view of the requirements in terms of technical and administrative personnel for special projects this is not surprising, given the amount of food aid. Also if the problem is one of trying to meet a demand for food which local production cannot meet, then this would seem to be the most appropriate form in which to provide food aid.

It was remarked at the beginning of this section that food aid might have the effect of causing a shift in consumption patterns. This could happen if the provision of food aid were to lead to a fall in the price of food and a decline in local production. Thus urban consumption could be higher, because of lower prices, but rural consumption could fall because of lower incomes. It might be remarked that in some countries —India, for instance, but not Africa—people in the rural areas are the worst-fed section of the population. On the other hand it could be argued that a fall in the price of food leads not so much to a fall in production as to a fall in the proportion which is put on the market. In this case the amount of food consumed by the farmer's own family could actually be greater, although at the expense of other consumer goods. These other consumer goods could even include more nutritive foods—thus, for example, the family could retain more grain for their own consumption, but eat less bought meat.

Development

The problem of world hunger cannot be divorced from the problem of world poverty. Freedom from hunger in the long run implies freedom from poverty, in other words development. What role then can food aid play in economic development?

The answer might be stated very simply as follows: Economic development involves a rise in incomes, which in turn leads to a rising demand for food. At low income levels the elasticity of demand for food tends to be high, i.e. a large proportion of any increase in income

1. Quoted in *Food Aid: Its Role in Economic Development*, OECD Publications, Paris, 1963, p. 47.

is spent on food. This increase in demand for food is, of course, in addition to any increase in demand due to population growth. If local production cannot be expanded sufficiently rapidly, food has to be imported if prices are to be kept reasonably stable. Food aid can then replace additional commercial imports which would have to be paid for with scarce foreign exchange at the expense of other developmental purchases.

In 1955 FAO undertook a pilot study[1] in India on the use of food aid to promote economic development.

> 'It led to the conclusion that where there was idle manpower in the recipient country, and if proper precautions were observed, surpluses could be used to offset part of the increased demand for food which would result from putting part of the idle manpower at work on new capital-formation projects. Since the surpluses would go into additional consumption they would not reduce domestic markets for domestically produced food, or reduce demand for food supplies previously or usually imported. One of the necessary conditions was that the increased expenditures on new employment would be concurrent with, or at the same rate as, the sale of the surplus food in the domestic market, and that distribution and sales would be so handled as to affect the same local market areas. Men do not live by food alone, and surpluses cannot cover the whole range of food requirements. The part of the increased consumption resulting from the increased employment not satisfied by surpluses would need to be met either by increased output from domestic industries previously operating below capacity, such as textile mills, or by increased imports financed by additional assistance made available to the recipient country.'[2]

Thus food can act as a 'producer good' either by putting unemployed people to work and creating new capital goods from their work or by increasing the energy and strength of malnourished people and hence their capacity for work, although the latter might not be an important economic objective where labour is relatively abundant. Even where food aid merely contributes to consumption it can lead to an alteration in the investment pattern by leading to an increase in real incomes and thus an increase in savings.

When food aid is sold for local currency the proceeds form a 'counterpart' fund which can be used in a number of ways. Counterpart funds are often given or loaned to the recipient government for development purposes[3]. It is important to note that the real impact of food aid

1. *Uses of Agricultural Surpluses to Finance Economic Development in Underdeveloped Countries; a Pilot Study in India*, Commodity Policy Studies No. 6, FAO, Rome, 1955.
2. Mordecai Ezekiel, 'Foreign Surplus Disposal—International Perspective', *Journal of Farm Economics*, Vol. 42, No. 5, December 1960, p. 1065.
3. That part which is retained for the donor's own use is not, of course, properly counted as aid.

occurs when the food enters the economy and not when the counterpart funds are spent. Aid of any sort is used for development by increasing the real resources available to producers and consumers in the recipient economy. In the case of food aid, the stock of real resources is added to when the food arrives. The significance of the counterpart funds, which might be spent at a much later date, is that they give their owners a claim on the existing stock of resources, but they do not represent a resource in themselves. The contribution of aid to economic development depends upon the extent to which the recipient takes advantage of the additional resources to create investment. Of course, the donor can influence the pattern of this investment by insisting that the counterpart funds be used in a particular way.

In a number of countries the United States owns large sums of counterpart funds and these are growing as loans in local currencies are repaid. It has been said, for instance, that the United States owns two-thirds of the rupees in circulation in India. These local currencies cannot, however, be turned into goods or services for repatriation to the United States for fear of the effect on the recipient's economy and would not represent an addition to resources if they were returned to the recipient. No doubt the unspent balances have been an important factor in the decision to drop sales for local currencies in the new PL 480 legislation. Except where they have been used for US purposes, counterpart funds have represented, in effect, a free gift to the recipient. Under the new legislation loans will have to be repaid in dollars.

The problem of complementary resources raised by the Indian pilot study is of crucial importance to the whole question of the use of food aid in development. For no matter how labour-intensive the additional projects made possible by food aid are, there will still be a need for other resources to be combined with it. Even special projects which are chosen because they require a lot of unskilled labour and comparatively little in the way of other resources, need *something* in the way of capital goods and—apart from a few exceptional cases, e.g. school-feeding—give rise to additional consumption of non-food items. They also tend to be rather expensive in terms of managerial skills. In general, the complementary resources will have a high import-content. Thus in order to be absorbed effectively food must be combined with other aid in some appropriate proportion. It is impossible to generalise about the optimum proportion of food aid to other aid, but it has been suggested, under assumptions which are admittedly shaky, but 'which do not appear *prima facie* to be unrealistic', that in India the need for food aid 'may amount to between one fifth and one seventh of total aid for economic development'.[1]

1. S. Chakravarty and P. N. Rosenstein-Rodan, *The Linking of Food Aid with Other Aid*, World Food Program Studies No. 3, Rome, 1965, p. 31.

Domestic production

Most of the discussion of the impact of food aid has been concerned with the possible effects on local agricultural production in the recipient country. One of the foremost critics of US food aid policy has been Theodore Schultz,[1] who argues that imports of PL 480 food are likely to have an adverse effect upon domestic production as a result of a failure of prices to reflect the demand situation truly. The discussion has tended to centre then on the likely responsiveness of local farmers to price incentives. If farmers are at all sensitive to price changes, agriculture will not expand as it would have done in the absence of food aid. Thus the argument has hinged on the likely sign and size of the elasticity of supply of domestic production.[2] The price elasticity of demand is also important. If demand for food is relatively inelastic, changes in supply will have a relatively large effect on the price.

There are some who argue that price has little—or even a negative—effect on agricultural production in developing countries. Where there is a large subsistence sector and a fixed requirement for cash, the farmer may respond 'perversely' to price changes by increasing his production after a season of comparatively low prices. On the other hand, it might be the marketed surplus which is responsive to price change—either positively or negatively—with more or less being retained for home consumption. An argument which favours lack of price response is that there are few alternative uses to which land and labour can be turned if there is a decline in agricultural prices. In particular, it has been maintained:

> 'The failure to increase yields is not due to lack of price incentive but to lack of knowledge, nonavailability of fertilizers, lack of credit, etc. Advances on this front depend less upon price incentives than upon government action. . . .To me, there seems no reason to believe that P.L. 480 imports should slacken governments' efforts along these lines unless they viewed our surplus program as a permanent phenomenon. I know of no country that could be accused of such shortsightedness.'[3]

Although most of the discussion about the effects of food aid on domestic production has focused on the responsiveness of farmers to price changes, it would appear that the willingness of recipient governments to initiate policies for agricultural development is of at least equal importance. The view expressed immediately above is certainly

1. T. W. Schultz, 'Value of US Farm Surpluses to Underdeveloped Countries', *Journal of Farm Economics*, Vol. 42, No. 5, December 1960, pp. 1019-1030.
2. If the supply elasticity were positive, rising prices would lead to an expansion in production; also the larger it is the larger will be the proportionate increase in production in response to a price rise.
3. R. O. Olsen, 'Impact and Implications of Foreign Surplus Disposal on Underdeveloped Economies', *Journal of Farm Economics*, Vol. 42, No. 5, December 1960, p. 1044.

not shared by all. Some economists believe that the availability of food aid has reduced the pressures on planning commissions and agricultural ministries to tackle their food problems, and that the 'factors which shift the supply function are not given enough emphasis'.[1]

Of course, given a reasonably long-term commitment on the part of the donor, and some of the US agreements have been for as long as four years, one might reason that the planners in the recipient country are making the best use of resources by concentrating on non-agricultural development and making use of food aid to satisfy increases in demand for food. The question that has to be asked then is what happens when food aid stops. Will there be a large rise in prices? Will the government be able to make the very rapid changes in the agricultural structure that will then be necessary? These are not easy questions to answer, but they certainly need to be taken into account in making a planning decision of this nature.

Inflation and foreign exchange

It can be argued that the points raised in the previous section are irrelevant to the real issue and that what matters is the 'prevalent situation—in India for example—of inflationary pressure on agricultural—particularly food—prices resulting from deficit financing and economic development in need of a countervailing force of additional imported supplies to keep the prices at a reasonable level'.

Food is, however, only a part of the additional demand created. There is a danger that governments may actually exacerbate the inflationary pressures by resorting to further deficit financing in order to absorb food aid which is not balanced by the provision of other real resources. What is probably more important is that, if it is food prices which are to bear the brunt of anti-inflationary measures, the result will be to turn the internal terms of trade against the rural sector; food producers—often already the poorest members of the community—will be able to buy less of the other goods they require in exchange for a given amount of food.

The problems of inflation and shortage of foreign exchange are closely related. In contributing to disinflationary tendencies in the economy, food aid can help to alleviate pressure on a recipient's foreign exchange reserves, but there is a danger that it will be seen as an excuse for importing further goods in order to utilise the food aid effectively. Possibly the most effective way for food aid to contribute foreign exchange for development would be for it to replace commercial imports. Donors of food aid might not acknowledge this, but what studies have been done suggest that where food aid has been most successful this is precisely what has happened.

1. Lawrence Witt, discussing Schultz's paper, *Journal of Farm Economics*, loc. cit.

There is one further aspect of the impact of food aid on the balance of payments of the recipient which needs to be considered. It is a problem for the long term rather than the short term. That is that food aid is likely to contribute to the shifting of public tastes away from locally grown foods to imported foods, for example away from millet to wheat. There is a tendency for this to happen anyway as the urban population grows, since urban tastes tend to be directed more to imported foods than are those of the countryside, but it is a tendency which food aid is likely to accelerate. Often there is no alternative to importing the new foods, since they are temperate crops which will not grow in a tropical climate. The long-run effect is thus to increase the demand for imports and put an additional strain on the balance of payments.

World trade

The effect of food aid on international trade is as difficult to ascertain as is the impact on local agricultural production. The reason is the same; no one knows what would have happened in the absence of food aid.

FAO has recommended that in disposing of surpluses particular account be taken of the following:

'(a) The extent to which commodities supplied on special terms in aid of economic development are likely to be absorbed by *additional* consumption, which will depend, *inter alia*, on the net increase in purchasing power resulting from total new development expenditure, and on the extent to which such additional purchasing power will be directed to purchases of the commodities supplied on special terms.

'(b) To the extent that export of the commodities supplied on special terms in aid of development programmes may constitute some danger of displacement of commercial sales of identical or related products, that danger will have to be weighed against the advantages resulting from such programmes to the receiving country and to the world at large.'[1]

Until 1958 US legislation only required that usual marketings of the United States should be safeguarded, but in 1958 the law was changed to bring it more into line with the FAO principles. Since that date the US has submitted advance notice of agreements under Title I to FAO's Sub-Committee on Surplus Disposal. Canada requires an assurance from the recipient that food aid will not displace normal commercial trade.

Certainly there have been complaints that PL 480 has disrupted commercial markets, although these seem to have become less common since 1958. It could be argued, of course, from the point of view of the recipient country that the most effective food aid is that which displaces commercial imports and frees foreign exchange for other developmental

1. *Disposal of Agricultural Surpluses, and Principles Recommended by FAO*, FAO, Rome, 1954.

imports. To the extent that this happens one might say that the exporter whose commodities have been replaced is contributing to the development effort of the recipient, assuming that his total export revenue is less than it otherwise would have been. On the other hand, if one assumes that the alternative to food aid is the disposal of surpluses on world markets—not, it is admitted, a very realistic assumption—then it is possible to argue that other exporters have benefited through support for the world price by the restriction of supply.

Where competing exporters are developing countries, displacement of their normal commercial exports is a more serious matter since exports of any particular commodity will probably represent a larger proportion of total exports. The only developing country which is traditionally an important exporter of wheat is Argentina, although in the last year or two Mexico has exported significant quantities. There are a number of important exporters of rice in Asia, notably Burma and Thailand. Rice exports could be affected not only by concessional sales of rice, but also by substitution of food aid wheat for rice.[1] It might also be remarked that cotton and tobacco—both of considerable importance in the exports of developing countries—have been prominent in PL 480 agreements.

OECD, in its study of food aid in 1963, remarked:

'Brazil has been a steady importer [of wheat], gradually raising its imports from the prewar level: this increase has been met entirely by supplies from the U.S., in recent years largely under Public Law 480, while its imports from the Argentine are now no higher than they were before the war. . . . Argentina . . . has lost its near-monopoly of the Brazilian market and apparently failed to benefit from Brazil's rising requirements; but it seems that in recent years this has been due largely to limited availabilities following poor harvests in Argentina itself. . . . It does not seem however that the difficulties experienced by Asian rice exporters can be attributed in any large degree to U.S. special export programmes. It is true that U.S. assisted exports of rice (averaging 370,000 tons a year) and of wheat (averaging nearly 5,000,000 tons a year) are large in relation to Far Eastern rice imports (averaging about 3,500,000 tons a year). Under these circumstances some replacement of rice by wheat, and some replacement of Asian rice for U.S. rice, is likely to have taken place in certain areas and at certain times. But clearly the more important factor, both as regards qualities and prices, is to be found in the large increase in rice production (23 million tons) which has recently taken place in the main importing countries.'[2]

1. In some fair-price shops in India sale of rice has been conditional on the purchase of an equal amount of wheat.

2. *Food Aid: Its Role in Economic Development*, OECD Publications, Paris, 1963, pp. 76 and 79.

It might be added that the situation has subsequently been reversed; although rice prices drifted downwards in the 1950s, they have risen sharply in the 1960s. Reasons suggested are the war in Vietnam, a reduction in the Burmese surplus, and increased requirements on the part of deficit countries.[1]

Some recipient experiences

So far this chapter has been notable for a lack of evidence in support of the various arguments which have been put forward. This largely reflects the shortage of available information. However, a number of case studies of the impact of food aid have been made, particularly in the Indian sub-continent. An account of some of these is given below.[2] It is not intended as a comprehensive survey of the effects of food aid, but is a review of studies which have been made in three recipient countries—India, Pakistan, and Israel. These countries have been chosen because of their importance as recipients of food aid and also because they are countries in which its effects have been studied in a certain amount of detail. What stands out, as one might expect, is that the impact of food aid depends to a large extent on the domestic policies pursued by the recipient government.

India

India has been by far the largest recipient of food aid, in particular of commodities under Title I of PL 480. By the end of 1967 agreements had been signed allocating to India almost $3,800m in Title I commodities, some 30% of the world total of shipments under this title.

Four agreements for Title I imports were signed between 1956 and 1959 and covered 10m tons of wheat and 0·4m tons of rice, as well as commodities such as cotton and tobacco.[3] On this period S. R. Sen of the Indian Planning Commission has commented:

> 'PL 480 supplies have helped considerably to mitigate the shortages in the economy and give protection to a large vulnerable section of the population. For instance, prices of wheat, which comprise the bulk of PL 480 supplies, have been prevented from sky-rocketing,

1. See *Grain Crops No. 12*, Commonwealth Secretariat, London, 1967. It might also be noted that US commercial rice exports have been heavily subsidised throughout most of the past decade. The subsidy was withdrawn in mid-1967 as world prices rose, closing the gap between export prices and domestic prices in the United States.
2. For a more general survey see Lawrence W. Witt, 'Development through Food Grants and Concessional Sales', in Carl C. Eicher and Lawrence W. Witt, *Agriculture in Economic Development*, McGraw-Hill, New York, 1964.
3. Actual shipments of wheat and rice between 1956 and 1962 are shown in Table 21 on p. 68.

even in years of severe shortage. At the same time, there has not been any occasion since PL 480 supplies started in 1956 for prices to fall to such a low level as to discourage domestic production. The risk that large PL 480 supplies of wheat might adversely affect the country's food production was counteracted by the fact that India had a plan for economic development which tended to create additional demand for food. Moreover, purchases made by Government in the domestic market at fixed prices for maintaining fair-price shops provided some support to farm prices. India's production of wheat went up from 8·5 million tons to 9·7 million tons during the same period. The fact that these surpluses were available has not been allowed to slacken the efforts for agricultural development.'[1]

This quotation indicates the importance of examining the impact of PL 480 in India in the context of the Indian Government's overall food policy. This has been done in a very thorough study undertaken on behalf of the US Agency for International Development by the Gokhale Institute.[2] The period studied is 1956–62, hence the agreements covered are the four referred to above and a massive ($1,370m) four-year agreement signed in May 1960.

An important feature of Indian food policy has been the stabilisation of prices by sales of government stocks of wheat and rice at fixed prices to millers and through fair-price shops. In the period studied government supplies of wheat were provided almost entirely by commercial imports and PL 480, but in the case of rice, procurement in the domestic market played an important part. The stabilisation policy followed the decontrol of cereals marketing and two years of low prices in 1954–56 as a result of record crops, and coincided with the beginning of the PL 480 programme in India. Between 1956 and 1962 imported wheat provided on average almost one-quarter of total wheat consumption in India and PL 480 made up four-fifths of this. PL 480 rice, on the other hand, represented only half of 1% of India's production. The authors of the study comment that the stabilisation policy appears to have worked in only one direction—to check rises in prices but not falls. During the six years under consideration wheat prices were on average some 3% below their average for the three years 1951–54 and rice prices some 3% above. The prices of other grains fluctuated more violently and were generally much above their 1951–54 levels. Relative to an index of consumer prices, the retail price of wheat in 1961 and 1962 was only 90% of what it had been on average in 1954–56.

1. S. R. Sen, *The Strategy for Agricultural Development*, Asia Publishing House, London, 1962, p. 228.
2. Nilakanth Rath and V. S. Patvardhan, *Impact of Assistance under P.L. 480 on Indian Economy*, Gokhale Institute of Politics and Economics, Poona, Asia Publishing House, London, 1967.

Another policy objective, and one which was specifically set out in the agreement of May 1960, was to build up buffer stocks. The purpose of the stocks was twofold: to meet periodic shortages, and to give the Government flexibility in fighting inflationary pressure on food grain prices. Under the 1960 agreement one-quarter of the 16m metric tons of wheat programmed and the entire amount of the 1 million metric tons of rice were to be set aside for stock-building. At the end of 1956, the Government of India had about 300,000 tons of cereals in stock, half of it wheat and half rice. By 1960 this had increased to 1·7 million tons of wheat and 1 million tons of rice. However, by the end of 1962, more than halfway through the four-year period of the agreement, wheat stocks were no higher than they had been in 1960 and rice stocks were actually almost half a million tons less.

The most dramatic effect of PL 480 was on wheat consumption. There was little change in production per head of wheat during the six years covered by the study but availability per head increased by one-third. Wheat consumption per head rose two and a half times as quickly as incomes per head. There was a significant effect on internal wheat trade in India. Amongst wheat-growing states the only one to remain a net exporter was Madhya Pradesh, whilst the non-wheat-producing states came to depend almost entirely on PL 480 supplies. For consumers buying whole wheat, indigenous wheat was preferred to imported American wheat and therefore those buying the latter belonged normally to the low income groups. The larger increase, however, was in milled products and in urban rather than rural areas. The conclusion of the authors is that by and large increased consumption of wheat was a net addition to cereals consumption rather than a substitute for other cereals.

Statistical analysis of data for the years since 1951/52 failed to show any significant influence of relative price[1] on the acreage under wheat. It is pointed out, however, that it was not until 1960 that the impact of PL 480 on domestic production was likely to be felt, because of fluctuations in production and prices before that date and also because imports under PL 480 were relatively less than those since 1960. The reduction in income of the wheat farmer as a result of lower prices would be likely to reduce his ability to increase his production in future either of wheat or alternative crops.

Other studies[2] have indicated a positive relationship between acreage or production per head of cereals and their price in India. A recent analysis of the response of production per head of cereals during the

1. Harvest price of wheat related to weighted average harvest prices of certain substitute crops, e.g. for unirrigated land in Punjab, grams and barley.

2. For a summary of the results see Gary L. Seevers, 'An Evaluation of the Disincentive Effect Caused by PL 480 Shipments', *American Journal of Agricultural Economics*, Vol. 50, No. 3, August 1968.

period 1957–63 leads its author to conclude that it 'supports the belief that the import of cereals under P.L. 480 lowers the price of cereals and leads to a decline in the supply of cereals from domestic production. However, the decline in domestic supply is always less than the quantity imported and there is a net contribution to consumption. In a shortage economy, which is unable to feed its population from domestic production, this is a positive contribution to meeting the "food gap".'[1]

An estimate was made of the impact on prices and domestic supply of PL 480 imports of 1 lb per head, i.e. a unit shock which is not sustained. The study found that the demand for cereals is relatively price-inelastic[2] so that an increase in supply causes quite a large fall in price. It also found that local production responds positively to price incentives.[3] Thus the fall in price leads in time to a falling off in local production. The largest effect caused by the PL 480 import of 1 lb, according to the model used in the study, is after two years, when there is a fall in domestic production of 0·49 lb and an increase in consumption of 0·51 lb. The effects on price and production also work in the opposite direction. The falling off in local production leads to an increase in price and subsequently to a rise in production. The unit shock thus creates a series of fluctuations over a number of years. By adding the increases and subtracting the decreases over a number of years (fourteen) the conclusion reached is that the total effect is a fall of 0·31 lb in domestic production with a corresponding increase in consumption of 0·69 lb.

A further study[4] takes a rather different approach by considering the implications of a marginal change in PL 480 shipments rather than a unit shock. In this case PL 480 is considered as a phenomenon continuing into the indefinite future and the question asked as to what would be the price-output effects of a change of 1%—equal to a 20% change in actual shipments—in the contribution of PL 480 to cereals consumption. Hypothetical elasticities were based on those calculated by Mann and other researchers. The result obtained is that an increase in annual shipments of 560,000 metric tons—one-fifth of total PL 480 cereals shipments to India—would result in a fall in prices of 1·58% and in annual domestic production of 0·40%. A rather cruder estimate—because the 5% shift considered is less of a marginal one—is that prices and production in the absence of PL 480 would have been 6·7% and 1·7% higher, respectively.

Earlier in this chapter it was suggested that food aid might have a greater impact on local agricultural production through its effect on the willingness of the local government to make changes in the structure

1. Jitendar S. Mann, 'The Impact of Public Law 480 Imports on Prices and Domestic Supply of Cereals in India', *Journal of Farm Economics*, Vol. 49, No. 1, February 1967.
2. Price elasticity of demand (at average) = −0·342.
3. Price elasticity of supply (at average) = 0·275.
4. Seevers, op. cit.

of the agricultural economy than through its effect on prices. On the seriousness of India's intentions to increase agricultural productivity Professor Mason holds a different opinion from that of Dr Sen which was quoted above.

> 'It is not that the importance of agriculture lacks adequate verbal recognition. Even the Second Five Year Plan, which set India's course toward heavy industrial development and import substitution, recognized the need "to provide adequate food to support the increased population and the raw materials needed for a growing industrial economy". . . . There seems to have been, however, a rather lamentable hiatus between words and deeds. It is only very recently that a marked increase of agricultural output has moved into the front rank of India's objectives.'[1]

This question was also considered by Rath and Patvardhan, who draw attention to certain features which would indicate a relaxation on the part of the Government.

> 'There is the large-scale non-utilization of the irrigation facilities provided during the last decade. One of the reasons for this has been the lack of knowledge amongst farmers about the best use of this water. The State has lagged behind in instituting proper experiments in various areas, and bringing this knowledge to the farmers through appropriate extension agencies. A more direct evidence of what might appear as relaxation on the part of the government is to be found in the differential policies in regard to wheat and rice. As a matter of policy, rice has received greater attention than wheat. New varieties have been tried more in rice. The so-called Japanese method of cultivation has been for rice. More fertilizers and irrigation has gone into rice. In recent years the "package programme" for increasing foodgrains production in selected districts, has been concentrated mainly in rice-growing districts. Now, it is true that rice has certain advantage over wheat, in term of availability of irrigation, etc. But when all is said and done, the fact remains that India has a shortage of rice which cannot be made good by large imports under P.L. 480. Hence the special efforts. On the other hand, any amount of wheat has been made available from surplus stocks in the U.S.A. It would not be surprising if the easy supply of wheat under P.L. 480 has contributed in a large measure to the lack of a vigorous policy in regard to wheat production in this country.[2]

It is only fair to add that there has been a substantial breakthrough in wheat production in India since this was written.

1. Edward S. Mason, *Economic Development in India and Pakistan*, Occasional Papers in International Affairs No. 13, Harvard University Center for International Affairs, 1966, p. 57.
2. Rath and Patvardhan, op. cit., p. 166.

On the impact of concessional commodity sales on India's imports it has been said:

> 'Recent import figures certainly show the influence of PL 480 "sales". Cereal imports (commercial) were 20 per cent of total imports by value in 1951. They were down to 3 per cent of lower total value of imports in 1958. Textile yarn and raw materials fell from 20 per cent in 1952 to 9 per cent in 1958. Metals, machinery, vehicles, etc., rose from 19 per cent in 1951 to 53 per cent in 1958. All three movements reflect the influence of PL 480 disposals of wheat and cotton as well as other factors. In a very real sense, commercial wheat importers, in this case principally Australia, have contributed to Indian development through loss of market. It is not credible that, in the absence of PL 480 sales, either commercial wheat or commercial cotton sales would have been so low as they are in fact.'[1]

There are two comments which need to be made on this. The first is that the apparent effect is magnified by choosing for base a year in which cereals imports were particularly high, and secondly that after 1958 the US took more care to make concessional exports more acceptable to other exporters.

An analysis of the effect of PL 480 imports on trade is made in the Gokhale Institute study. Wheat and rice were the only cereals imported in significant quantities and are the only commodities considered here, although cotton was also important. The Indian Government had sole responsibility for the import of food grains and the quantities involved are shown in Table 21. In addition to PL 480, imports of wheat from Canada between 1958 and 1961, either as aid or on a deferred payment basis under the Colombo Plan, accounted for 1·158m metric tons, almost the entire amount of wheat imports from Canada. There were also small amounts of wheat from the United States under PL 665 and from Australia under the Colombo Plan. The conclusion reached is that in the absence of food aid India would have imported some wheat commercially from other countries, but that the amount would have been considerably less than the amount imported on concessional terms. In view of comparative prices it seems probable that Australian exports of wheat to India would have been larger. As regards rice, the authors consider that it is fairly clear that imports under PL 480 since 1960/61 affected India's imports of rice from Burma to a certain extent, and also Burmese export trade.

1. J. G. Crawford, 'Using Surpluses for Economic Development', in *Proceedings of the International Conference of Agricultural Economists*, Oxford University Press, London, 1963, p. 387.

Table 21 Imports of wheat and rice on government account into India according to source

Thousand metric tons

	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962*
Wheat and wheat flour												
Canada	333	533	423	—	—	—	11	766	278	24	158	45
USA	1,839	1,791	586	—	131	430	2,704	1,928	3,167	4,030	2,536	2,846
Australia	240	227	453	200	311	618	164	15	98	322	396	358
Argentina	521	—	249	—	—	—	—	—	—	—	—	—
Other countries	131	—	—	—	—	55	—	—	—	—	—	—
Total	3,064	2,551	1,711	200	442	1,103	2,879	2,709	3,543	4,376	3,090	3,249
PL 480	—	—	—	—	—	147	2,514	1,898	3,167	4,030	2,122	2,699
PL 480 imports as percentage of total						13·3	87·3	70·1	89·4	92·1	68·7	83·1
Rice												
Burma	309	382	153	635	269	278	517	390	295	336	160	201
Thailand	220	187	2	—	—	—	—	—	—	—	—	—
Pakistan	160	14	23	—	—	5	12	—	—	—	—	—
China	67	150	—	—	—	47	14	—	—	—	—	—
USA	—	—	—	—	—	—	197	—	—	257	194	189
Other countries	5	—	—	—	—	—	7	7	—	106+	30+	—
Total	761	734	178	635	269	330	747	397	295	699	384	390
PL 480						—	197	—	—	257	194	189
PL 480 imports as percentage of total						—	26·4	—	—	36·8	50·5	48·2
Total cereal import	4,800	3,926	2,035	843	711	1,433	3,626	3,217	3,858	5,127	3,493	3,639
PL 480						147	2,711	2,009	3,187	4,340	2,335	2,888
PL 480 imports as percentage of total						10·2	74·7	62·4	82·6	84·6	66·8	79·3

Note: + From UAR.
*Provisional

Between 1958 and 1961 imports of wheat include 1,158,000 metric tons as aid or on deferred payment basis under the Colombo Plan from Canada, 15,000 metric tons from the United States under PL 665, and 9,600 metric tons from Australia under the Colombo Plan.

Source: Nilakanth Rath, V.S. Patvardhan, *Impact of Assistance under P.L.480 on Indian Economy*, Gokhale Institute of Politics and Economics, Poona, Asia Publishing House, London, 1967.

Pakistan

A study of food aid to Pakistan is of particular interest, since a shift in domestic policy and an improvement in economic performance after the advent of President Ayub Khan's Government allows a comparison of its impact under different circumstances. Pakistan has been the second largest recipient of concessional agricultural exports from the United States, just ahead of Yugoslavia, and by the middle of 1967 had received surplus commodities worth some $1,100m. In addition food aid has been received from the USSR and China as well as Canada and Australia.

The history of Pakistan's development during the 1950s was not a happy one; food production increased more slowly than population and Pakistan, which had been a net exporter of grains, became a net importer, a large part of the imports being on concessional terms. During this period the Pakistan Government followed a food policy involving rationing and controls. Both wheat and rice were procured and distributed at controlled—and, in the case of imports, subsidised—prices. 'Looking at the PL 480 programme in historical perspective, it has become apparent that particularly during the earlier period (1955-60) it helped greatly in checking a potentially dangerous trend in food prices which could have had undesirable effects on the general development effort.'[1]

On the other hand, as a result of the domestic terms of trade turning against agriculture, farm-incomes were reduced and local production deprived of an incentive to expand. In general, wheat production in Pakistan does not appear to be very price-responsive.[2] However, the marketed surplus would tend to respond more to price changes than would total production, since it is produced mainly by the larger farmers in areas where cash crops can be substituted for wheat. Because of the way that food aid has been distributed in Pakistan—both before 1960 and after—it was precisely in these areas that prices have been depressed most. The roller flour mills, located in the cities or traditionally surplus areas and supplying the urban areas, were permitted to mill only a proportion of domestically produced wheat, amounting to some 5% only of the marketable surplus in a good year. Since the urban market was virtually closed to them, excess supplies in a bumper year such as 1961/62

> 'had to be marketed either in areas where they were produced or in the areas where the nutritional gap is greatest. Since the latter had neither the necessary marketing facilities nor sufficient real demand to absorb appreciable quantities, most of the excess domestic

1. Christoph Beringer and Irshad Ahmad, *The Use of Agricultural Surplus Commodities for Economic Development in Pakistan*, Monographs in the Economics of Development No. 12, The Institute of Development Economics, Karachi, 1964.
2. A price elasticity of supply of +0·2 has been calculated for wheat on irrigated land; it would be less for non-irrigated land.

wheat had to be absorbed in the producing areas resulting in substantial decrease in prices received by West Pakistan farmers, particularly in those areas which have traditionally marketed the relatively largest percentage of their wheat output.'[1]

In the period between 1955 and 1961 agreements were signed for the import of Title I commodities amounting in value to $444m. Of the total, 50% was accounted for by wheat and 17% by rice. In view of the poor performance of Pakistan's agriculture during the 1950s it must be considered that the effect of food aid imports from the United States and elsewhere was 'diversionary', but that, if food aid had not been available, it would only in part have been replaced by commercial imports. In the three years 1959–61 commercial imports accounted for only 4% of total wheat imports into Pakistan. It is not possible to compare this with the pattern of trade before food aid began, because imports only started in 1952.

An FAO/ECAFE study of the use of agricultural surpluses in Pakistan states: 'It is maintained by the Pakistani authorities that the purchases on special terms did not affect the Government's desire or the intensity of its effort to increase agricultural production. . . .'[2] It is hardly likely that they would do otherwise. Professor Mason holds the view that there 'is evidence both in India and Pakistan that the ready availability of PL 480 food shipments postponed serious attention to the question of agricultural productivity'.[3] During the First Plan period in Pakistan (1955-60) it was argued, both inside and outside the Planning Commission, that, considering the availability of PL 480, it would be a waste of scarce material and human resources to give a higher priority to agriculture.

From 1959/60 production began to increase much more rapidly. During the Second Plan (1960-65) the annual growth rate was three times that of the previous five years. The growth of agricultural crop production was 3·5% a year and food output grew faster than total agricultural output.[4] In August 1961 an agreement was negotiated with the United States for the supply, over a four-year period, of $621m of surplus agricultural commodities. Amongst activities supported by counterpart rupees generated from the sale of these commodities was a programme of public works in East Pakistan which has been evaluated by Richard V. Gilbert, who remarks that there was considerable scepticism about the programme in both Pakistan and the

1. Beringer and Ahmad, op. cit., p. 45.
2. FAO, *A Note on the Utilisation of Agricultural Surpluses for Economic Development in Pakistan*, Economic Commission for Asia and the Far East, Bangkok, 1961, p. 49.
3. Mason, op. cit., p. 23.
4. The statistics should, however, be treated with caution. It has been remarked that 'the errors in Pakistan's production and population statistics are undoubtedly larger than similar data in many other countries . . .' (Beringer and Ahmad, op. cit., p. 36).

United States. It was feared that the programme would be 'make-work', that it would divert scarce resources of administrative and managerial manpower from more productive ventures, and that it would impair farm incentives by reducing farm prices or preventing their increase. Gilbert considers that all these doubts have proved without foundation.

In particular, on the last point he remarks:

'The programme did not impair farm incentives. There is no space to detail the machinery of the import, distribution and pricing of the surplus wheat provided in order to finance the programme. It need only be said that a disastrous flood had sharply reduced the rice crop and the import of a million tons of wheat did not prevent a substantial rise of rice prices. It did prevent famine conditions. More generally, the surplus food programme is designed to permit a large increase in employment, wages and spending, while preventing the rise in food prices this would produce in the absence of increased supply. The programme must be managed to protect farm incentives, which are a necessary, but not a sufficient, condition of development. The farmer needs fair and remunerative prices. He also needs the infrastructure which the works programme makes possible.'[1]

1960 saw a change in agricultural policy. Measures were taken to increase incentives to production, including the reduction of export taxes on jute and cotton. Rationing, price controls, and the compulsory purchase of cereals were abolished and a buffer stock scheme introduced. In this process of liberalisation the availability of PL 480 commodities played an important part.

'The availability of surplus agricultural commodities from the United States has certainly not been, in Pakistan and a number of other less developed countries, an unmixed blessing. During the 1950's, as we have seen, the terms of trade moved sharply against agriculture, and, partly for this reason, the output of food grains increased less rapidly than the growth of population. PL 480 shipments had something to do with reducing farm incentives and, to some unquantifiable degree, must share the blame for the relative stagnation of agricultural output. On the other hand, if no surpluses had been available, the result would probably have been, in the Pakistan of the 1950's, a chaotic food price situation in which attempts at rigid controls would have been accompanied by black markets, large price fluctuations, and great price differentials between markets. This, in fact, aptly describes the conditions in grain markets during the short period following the advent of the Ayub regime when controls were sharply tightened. PL 480 shipments *may* have had an adverse impact on agricultural output in the

1. Richard V. Gilbert, 'The Works Program in East Pakistan', *International Labour Review*, International Labour Office, Geneva, Vol. LXXXIX, No. 3, March 1964.

1950's, but their availability in the 1960's made possible a number of measures which taken together with other actions bearing on farm incentives set the stage for a very substantial increase in agricultural productivity.'[1]

Israel

Israel is far from being a typical case. In the context of food aid, however, its experience is relevant, because it has been well documented and also because on a per caput basis Israel has received the largest quantities of PL 480 supplies. By the middle of 1967 Israel had received concessional commodities to the value of $405m, or something like $190 per head of the population.

Nutritional standards in Israel when the programme began were reasonably adequate, but the country suffered from shortages, rationing, and controls. A study of the impact of PL 480 imports in Israel remarks that their effect was to stimulate rather than discourage agricultural production.[2] Decontrol and the removal of rationing allowed a small rise in legal prices—at which most local produce was sold—and caused a very large fall in black market prices. In addition the import of feed grains allowed a striking growth in the poultry industry—and also dairying—and the development of an export market in eggs.

The study estimated that the addition to net domestic product in 1960 accruing from investment financed by the import of PL 480 commodities was about 2% of the total. To some extent this was achieved at the expense of traditional exporters to Israel, including the United States itself. Only 31% of the Title I imports were estimated as being additional to usual commercial imports. This distortion of the pattern of imports, of course, freed foreign exchange for the importation of other raw materials and capital goods. By allowing a greater amount of capital formation than would otherwise have been possible, it also permitted the economy to sustain a permanently higher level of imports. The 'preponderantly important effect has been a significant contribution to the stabilization, growth and ultimate viability of the Israeli economy. In these fundamental respects, aid-in-kind has not been markedly different from aid-in-dollars.'[3]

1. Mason, op. cit., p. 52.
2. F. Ginor, *Analysis and Assessment of the Economic Effect of the US Public Law 480 Title I Programme in Israel*, Bank of Israel, Tel-Aviv, 1961, reviewed by Lawrence W. Witt in the article cited above.
3. A. E. Kahn, 'Agricultural Aid and Economic Development: The Case of Israel', *Quarterly Journal of Economics*, Vol. 76, November 1962, p. 591.

5 Summary—the Nature of the Problem

'There is not a separate "world food crisis" divorced from the general problem of world poverty. We are not faced simply with the problem of food supplies and population growth. We are faced with a chronic problem of poverty which needs to be solved by comprehensive development.'[1]

Food is an emotive topic. Man requires remarkably little to ensure his survival, but food is essential. No doubt it is the emotional significance which is largely responsible for the confusion which surrounds the problem of feeding the world's growing population. The Malthusian spectre constantly hauled before our eyes—the prospect of world population growth eating up all before it like a swarm of locusts—is not conducive to clarity of thought.

It is extremely important to try to resolve the confusions on this issue. If international action on a massive scale is required, it is essential that all should pull in the same direction. It is necessary to be clear what the problem is, because the objectives to be served will differ according to one's view of the nature of the problem. There is a positive danger in taking the more hysterical view. An over-pessimistic approach can lead us to throw up our hands in despair; to recommend that aid should be reserved for 'those whom it may save'. It has led, for instance,[2] to a suggestion that India should be jettisoned, because the situation there is already 'hopeless'; a proposal which horrifies as much by the inaccuracy of its analysis as by its callousness. On the other hand, the opposite view is almost as bad, since it leads to complacency. Food production, particularly of cereals, does not respond readily to demand, and positive decisions by governments have to be taken if supplies are to be made available to developing countries on terms they can afford.

One question which needs to be asked is whether the situation now—or the one which is developing—is materially different from what has gone before. It has been said, for instance, that: 'The emerging situation, in which demand is running ahead of production and efforts are being made to produce the needed supplies, differs fundamentally from the situation in which food aid was conceived and has evolved as a major form of resource transfer. Historically the problem was primarily one of constructively using supplies that were surplus to market demand; the emerging problem will be primarily to ensure that supplies are available to meet postulated demand.'[3] If the problem is

1. Speech by the Rt. Hon. Reg Prentice, JP, MP, Minister of Overseas Development, to the Fourteenth FAO Conference, Rome, 7 November 1967.
2. W. and P. Paddock, *Famine 1975!*, Weidenfeld and Nicolson, London, 1968, p. 222.
3. *Multilateral Food Aid*, Progress Report by the Secretary-General (E/4352), UN Economic and Social Council, New York, June 1967, p. 11.

different in nature, then attitudes of mind and policies which evolved when the rationale for food aid was different will need changing.

The purpose of this chapter is to make clear the nature of the problem before going on to an analysis of the policy implications in the final chapter. Most of the ground has already been covered and the chapter begins with a summary of each of the earlier chapters in order to refresh the reader's memory of their contents. It is concluded by a section drawing the various strands together and examining, in particular, what is new in the present situation.

Feeding the billions

The most influential analyses of the world food situation recently have come from three sources: the Food and Agriculture Organization of the UN; the United States, where both the President's Science Advisory Committee and the Department of Agriculture have published studies; and the Organisation for Economic Co-operation and Development. It is on the basis of projections made by these bodies that there has been a demand for increased efforts on the part of the international community in tackling the world food problem, and in particular for more widespread participation in food aid programmes.

The basic technique of the projections is to postulate a rate of growth of food or simply cereals production, to work out rates of growth of agricultural production and of national income which are consistent with this, and then to project demand on the basis of the assumed rate of growth of population and the rate of growth of incomes per head. Depending on the focus of interest, the process can be reversed and a rate of growth of production found to meet some nutritional target. Each set of projections—there are two each for food and cereals—has alternative assumptions of low and high rates of growth. On the high growth rate assumptions production of cereals is projected to increase faster than demand, but all the other projections—high and low assumptions for food and low assumptions for cereals—have demand outstripping production. This is a serious prospect and one which has been greeted with some alarm.

It is important, however, to understand what the projections mean. One has always to bear in mind the assumptions on which they are based, particularly assumptions about prices. Normally it is through the price mechanism that supply and demand are made equal to one another. Hence it is obvious that care must be exercised in interpreting deficits projected on the basis of a model which precludes price changes.

With these reservations in mind, the deficits associated with the different projections of demand and production can be worked out. Net cereals deficits for the developing countries as a group have been

calculated, but the aggregate deficit of the importing countries is of greater interest because it gives a better idea of the potential foreign exchange problem. Worked out in this way, the cereals gap of the deficit countries would be little changed from what it is now on the high growth rate assumption, but on the low assumption would be double its mid-sixties value by 1980, according to the USDA. The cereals gap on the high growth rate assumptions is projected to be considerably less than on the low ones, but for other, higher-quality foods the position is reversed. This apparent paradox is due to the fact that, although production of higher-quality foods is projected to increase faster on the high assumptions than on the low, because of higher rates of income growth demand would increase even faster. FAO's projection of the total gap in 1975—assuming some substitution of cereals and skim milk for meat—is $7,200m on both high and low growth rate assumptions, but with cereals accounting for a greater proportion on the low assumption than on the high. The distinction between cereals and other foods is an important one, because, in the event of imports not being available to meet a potential gap, cereals could be expected to be relatively more susceptible to price rises. In addition, it seems unlikely that the governments of deficit countries would give as high a priority to containing other food prices as to those of cereals. Thus it is highly improbable that the gap will materialise as projected.

The trends of imports and exports of foodstuffs by developing countries have not been encouraging in recent years. Both exports and imports have been growing rapidly, but imports have grown faster than exports. From being net exporters of cereals to the extent of 14m tons a year before World War II, the developing countries have become net importers and their imports now exceed their exports by some 14m tons. It is hazardous to extrapolate these trends, however: on the import side because food aid cereals have represented a very large part of the total in the past decade, and on the export side because the amount depends upon what happens in a very few exporting countries.

In this study the world food problem has been discussed in terms of demand rather than nutrition, because this is how the debate has mainly been conducted. There is an additional reason, though, and that is that it is through the growth of incomes that the major hope rests for providing an adequate diet for the majority of the world's population. Targets have been set by FAO for the calorie consumption of the average person in each country. Even if average consumption in each country came up to this level, there would still be many people underfed, because of maldistribution. The country targets have to be set some 15–20% above the aggregate of the individual targets if the number of those receiving insufficient food is to be reduced substantially. If the demand projections for 1985 were to be met by supplies,

then for most countries in the world the target would be reached, although there would still be some regions falling well below. As regards the balance of diet, there would be little change in the proportion of calories supplied by protein in 1985, a small increase in animal protein being offset by a corresponding decrease in vegetable protein.

Over the last year or two events have created a much greater optimism in certain influential quarters. It is relevant to ask whether these events have invalidated the projections and to what extent the new mood of optimism is justified. The principal cause of the greater optimism is the growing acreage in Asia which has been planted to new higher-yielding varieties of seeds. The existence of the new varieties was, of course, known before; what is new is knowledge of the speed with which farmers are prepared to adopt them. This in itself does not invalidate the projections of growth rates of production; the higher growth rates in the projections represent a *considerable* increase in yields over what has been achieved in the past. What it could do is to alter the share of agriculture in the growth of national income so that a given rate of increase in production would be accompanied by a rather slower rate of growth of demand than that in the projections.

As yet the new varieties have tended to be concentrated on the more prosperous farmers; spreading them to poorer farmers might well be more difficult. The new varieties require more careful cultivation and are also more sensitive to essential inputs without which they cannot produce the high yields which their genetic potential allows. To provide enough of these inputs for a substantial breakthrough will be very expensive, whether they be imported or the capital equipment created to produce them locally. There are grounds for cautious optimism, but improvement is as yet patchy both between and within countries. Some countries and areas within countries appear to be on the verge of an agricultural revolution, but for others there is still a long way to go.

A brief history of food aid

Food aid has been until recently overwhelmingly, and still is largely, an American affair. By the middle of 1967 the United States had transferred over $12,000m worth of agricultural commodities as aid to developing countries, whereas the total from all other countries was probably little more than $500m. Since the signing of the 1967 Food Aid Convention, the balance has shifted somewhat and other countries are to provide a greater proportion. The importance of this shift should not be exaggerated, however. The effect of the Food Aid Convention might be to increase food aid from countries other than the United States to something like $200m annually, but even this is less than 20% of what the US has been providing.

Over the period since 1954 only approximately three-quarters of US concessional exports, even when barter contracts are omitted, has gone to developing countries, but in recent years transfers to the richer countries have been phased out so that now only a tiny fraction of the total goes to other than developing countries. Special exports have included non-food items such as cotton and tobacco, but food has accounted in value for some 85% of PL 480 transfers. A large proportion of PL 480 shipments, two-thirds of the total, has been cereals and three-quarters of this has been wheat and flour.

The total amount of concessional exports has remained remarkably constant over the years, but since PL 480, the basic legislation for food aid, was amended in 1966 a number of significant changes have been made within the programme. One of these is that commodities to be shipped overseas under PL 480 are no longer required to be surplus, they need merely be 'available'; President Johnson announced that surpluses would be produced expressly for food aid. Another, and in the long run possibly more significant, change is that there is to be a shift from sales for local currency—which in the past have accounted for a very large proportion of PL 480 exports—to long-term dollar credit sales. The new law lays emphasis on self-help on the part of the recipient in agricultural production. It also stresses nutrition and makes provision for assistance to population control programmes as well as calling on the President to encourage other developed countries to increase their efforts in the world fight against hunger and malnutrition.

Other developed countries, such as France and Germany, have made occasional surpluses available as bilateral food aid, but only Canada and Australia have done so on a regular basis and the total amounts have been only relatively small, although there has been a sharp increase in the last two years in Canadian contributions. In addition the World Food Program provides a multilateral channel for food aid; there are some 70 contributor countries, but many of the contributions are only very tiny. The United States provides about half of the total. Apart from emergency aid, WFP directs all its resources to identifiable projects which usually involve either institutional feeding or have a high labour content. The current target for the World Food Program is $100m a year.

The most recent attempt to increase the amount of food aid provided by countries other than America is the Food Aid Convention, which was negotiated as part of the Kennedy Round in 1967. This is to run for a three-year period, during which contributors will provide an annual total of 4·5m metric tons of wheat or coarse grains as food aid in cash or kind. A proportion of the cash contribution is to be spent in buying grains from developing member countries, the only one at the moment being Argentina. Although Britain's contribution will be only small, it none the less involves a tenfold increase in the total amount of food aid which Britain provides.

What happened to the surpluses?

Food aid began because of the existence of large stocks of surplus commodities, particularly cereals. The United States has been the principal stock-holder and the largest provider of food aid. Until 1961 stocks of wheat and coarse grains continued to grow in spite of the increasing amounts which were shipped under concessional programmes. Since then, however, surplus production in the United States has declined and stocks have fallen to the point at which they are considered no more than adequate to cover seasonal fluctuations, given the increase in world trade. Surplus production of wheat in the United States—by far the most important item of food aid—in recent years has only been some two-thirds of the amount exported as food aid. The decline in surplus production reflects not only the success of the US Government in controlling the acreage sown, but also the expansion of the world market for cereals.

It is far from certain that a surplus problem no longer exists. Projections of present trends of production and demand suggest that there will be considerable surplus capacity—if not actual surplus production—in the developed countries over the next ten or twenty years. It seems unlikely that the United States—which now has considerable experience of managing its excess agricultural capacity—will allow very large surplus stocks to build up again, although it plans to produce deliberate 'surpluses'. Some other producers do not have this experience, however, and control policies for them may prove politically very difficult. Overall, though, it is probably more realistic to think in terms of excess capacity rather than of the production of very large unwanted surpluses.

The impact of food aid

There have been only few empirical studies of the impact of food aid and the evidence which is available is rather mixed. What it points to more than anything is that the effects of food aid depend very largely on the domestic policies of the recipient government and on the prevailing economic climate.

The immediate objective of food aid is normally to increase consumption in the recipient country. The various case studies suggest, however, that the amount by which consumption is increased is not as great as the quantity of food aid, because to some extent food aid substitutes for commercial imports, and also for domestic production. None the less, wheat consumption per head in India increased by one-third as a result of PL 480 imports during a period when production per head remained static.

In the long run the elimination of hunger and malnutrition depends upon the eradication of poverty. Food aid can contribute to economic development either by replacing commercial imports and thus freeing foreign exchange for the import of other developmental goods, or by increasing the amount of food which is available. This can then be used to create new capital by putting unemployed—or underemployed—people to work, or by increasing the energy and strength of those already in work. Demand for the additional food can either arise from the normal development process or be created by the organisation of special projects. In either case the increase in food consumption will be associated with an increased demand for other consumer goods, and also, of course, for the capital goods necessary for the development programme. In order, therefore, for food aid to be properly absorbed complementary resources must be provided.

Those who have been concerned that food aid might have less than beneficial effects have normally had in mind the adverse impact it could have on agricultural production in the recipient country. It is argued that this might come about in either or both of two ways: first, by increasing the availability of a commodity in the local market to such an extent that its price is lowered, and consequently the incentive to the farmer to produce it is reduced; and secondly, by relieving the recipient government of the immediate need to make necessary, but possibly politically difficult, changes in the institutional structure, and by generally affecting its willingness to give agricultural development an appropriately high priority.

Of the cases examined, it is only from India that there is adequate information on the behaviour of prices in response to food aid imports and on the way, in turn, that farmers respond. In the context of an Indian Government policy designed to keep the price of food grains down, prices of cereals, and particularly of wheat, rose less rapidly than the general price level. The indications are that this led farmers to increase wheat production less rapidly than would have been the case in the absence of PL 480 imports. On the question of whether or not food aid has led to a relative lack of willingness on the part of recipient governments to initiate agricultural development, it is much less easy to make positive assertions. It seems reasonable to assume, however, that in Pakistan, at least until 1960, and in India, until possibly very recently, agriculture has been given a lower priority than it would have received had it not been for the availability, virtually for the asking, of large amounts of food aid.

A further aspect of the impact of food aid that has caused concern is its effects on world trade. As far as developed countries are affected, it would appear that wheat exports, including commercial exports from the United States, have been reduced to some, although possibly not a very large, extent. Amongst developing countries, the only exporter of wheat on any scale in the past has been Argentina, which lost its

dominant position in the Brazilian market, although this has been attributed to a failure of supplies rather than competition from food aid. It is, however, not unreasonable to assume that Asian rice producers have suffered a reduction in their export trade; evidence from India suggests that in the early sixties Burmese rice exports were constricted. In more recent years there has been a falling-off in supplies of rice from Vietnam and Burma and increasing demand on the part of the deficit countries. Hence, as prices have risen food aid has been more easily absorbed.

The emerging situation

The world food problem can be looked at from three points of view: the needs of the developing countries; the ability of the developed countries to meet those needs; and the way the two are brought together. The first of these—the needs of the developing countries—was discussed in Chapter 1. The conclusion reached there is that developing countries, taken as a group, are not—in terms of food production per head—becoming less able to feed themselves; even the most pessimistic of the projections takes food production in developing countries as increasing no more slowly than population growth. The more alarmist projections of disaster on a world scale appear to be totally unfounded. This does not mean that there are not many people in the world who are underfed, nor does it mean that there are not many areas where trends are far from encouraging. It means simply that in world-wide perspective the situation is not getting worse.

The problem of keeping pace with demand as incomes rise is apparently more intractable; for many countries a food deficit is projected. This deficit is, however, a hypothetical one in the sense that it is projected only on the basis of carefully set out assumptions which are unlikely to hold simultaneously. If the government of a country with a deficit defined in this way allows demand to take effect, it can expect imports to rise, with a consequent strain on the balance of payments. If it does not wish this to happen, it must be prepared to see prices rise or to introduce rationing.

There is nothing intrinsically undesirable in a developing country being a net importer of food. No one would suggest, for instance, that Hong Kong should be self-sufficient in food production. Certainly in the very long run it would not seem unreasonable to expect densely populated countries, such as India or Indonesia, to become exporters of manufactures and to import a large proportion of their food supplies from countries better endowed for agricultural production. Whatever

strategy is devised for the long run, however, it cannot be denied that in the short run a food problem exists. Already some of the larger developing countries, India, UAR, Brazil, Indonesia, Pakistan, etc., are running large food deficits; they are also the countries which have been receiving large amounts of food aid. No doubt in the fairly near future some of them will achieve their goal of self-sufficiency in food grains, but it would be unrealistically optimistic not to assume that for some of them, at least, the deficit will continue to grow quite rapidly.

The second aspect under consideration is the ability of the developed countries to meet the requirements of the developing countries. This was examined in Chapter 3. There is little danger within the foreseeable future that the developed countries will be unable to meet the demand for cereals from developing countries; the problem is likely to be one of overproduction rather than underproduction. For higher-quality foods such as meat, FAO's projections suggest that there could be a shortage, but for these the assumptions on which the projections are based are particularly fragile.[1]

The fact that the developed countries should be able to produce enough food to meet any possible deficit in the developing countries does not mean, of course, that they will necessarily be willing to supply it on terms the deficit countries can afford. The readiness of particular donors to supply food on concessional terms will, no doubt, be very considerably affected by whether or not they are surplus producers.

Already surplus stocks in the United States have been run down to such a level that food has to be produced specifically for shipment overseas as food aid. There is nothing new in the provision of food aid from current production. One might even argue that there is nothing new in the deliberate production of surpluses for food aid, that in the absence of food aid surplus production in the United States would have been reduced much sooner. It becomes clear from examination of this last statement that 'deliberate' has a variety of shades of meaning depending on the degree of consciousness involved in a decision to produce deliberate surpluses. For the purpose of what is to come in the next chapter, the most useful definition to take will be that a surplus is deliberate if the producer declares it to be so before it is produced. The US Government's really radical innovation is in having made such a declaration.

The idea of producing surpluses deliberately is a dangerous one. There is always a risk that aid donors who are also surplus producers will see food aid as a soft option, that they will prefer to divert aid funds to providing food aid rather than coming to terms with their domestic agricultural problems In view of the running-down of stocks this might now be thought an irrelevant consideration, but the reader is reminded that it is only really in the United States that surpluses have been

1. See p. 75.

reduced. It is far from certain that stocks will not build up again, disguised possibly as 'deliberate surpluses'.[1]

The food needs of the developing countries, and also the ability of the developed countries to respond to these needs, having been examined, it remains now to consider the third aspect—how they relate to one another. The response of the developed countries can be on commercial or less than commercial terms. For cereals, in particular, food aid has represented over the last decade or so a large proportion of the imports of developing countries; during the nineteen-sixties it has consistently accounted for something like one-half of total imports.

An FAO calculation of the possible need for aid in developing countries in 1975 appears in Chapter 1. It was arrived at by subtracting projected commercial imports from the projected difference between demand and domestic production in each deficit country. The commercial import projections are based on the extrapolation forward of import propensities from a period during which food aid was large in proportion to commercial imports. Enough has already been said about the deficit projections to suggest that, taken together with the commercial import projections, they provide a very insecure base for making statements about the likely food aid needs of developing countries. If there were no food aid, commercial imports would be equal to the difference between domestic production and consumption, and it is only the assumptions on which they are based that prevents this from happening in the projections. Whether or not the assumptions prove realistic will depend, amongst other things, on the amount of food aid which is made available.

There is one aspect of food aid which is completely new, and that is the scale on which other donor countries than the United States are being involved. The World Food Program has provided a multilateral channel through which many donors could contribute, but it has only been small in size compared with Food for Peace. The new Food Aid Convention has changed this and, although the total amount involved is still nothing like the size of the American programme, none the less it represents a very large increase in the amount of food aid contributed by all other donors. It is this, combined with the decision to create deliberate surpluses, which makes for the novelty of the present situation.

This chapter has examined the nature of the world food problem, and has attempted to assess how the situation has changed in recent years. Someone has said that there is no single world food problem, but many different problems. The problems of the rich countries are different from the problems of the poorer countries. The problem of the deficit developing countries is not the same as that of countries with

1. See footnote 2 on p. 48.

emerging surpluses. For some developing countries the immediate problem is to provide enough cereals; for others the need to increase the availability of higher-quality foods is more pressing. For some there is a demand problem. For almost all there is a nutritional problem.

6 Food Aid Policy

'I am quite sure that it has a part to play but we ought to recognise that food aid can only be a palliative and may be a dangerous one. Britain is contributing to the new international Food Aid Scheme which will help with the situation in the next three years, but the aim should be to replace food aid as quickly as possible with more constructive aid for development.'[1]

Is food aid really necessary ?

Almost everything that has been written about the utilisation of food aid in economic development has been based on the assumption of surpluses already existing. The emphasis has tended to be on the negative aspect of how these surpluses could be used without discouraging local agricultural production, rather than on the more positive one of whether food aid is the most appropriate form of aid for promoting economic development in some particular situation. A question has been sought to suit a given answer, rather than an answer given to a particular question. Now that attention has shifted from the answer to the question, it is pertinent to ask whether food aid is, in fact, what is needed.

It is generally agreed that agricultural production in the developing countries themselves should have a very high priority.[2] Whether in the long run for any particular developing country a relative shift of emphasis towards agriculture is desirable is, of course, debatable, but one cannot quarrel with the following: 'Though there is no special virtue in self-sufficiency in respect of food, it is probable that most developing countries, when faced with the problem of filling a range of resource gaps, will find it easier (within the planning time horizon) to increase their domestic food production than to meet their needs for most other goods, particularly the more complex items required for development purposes, and in many cases it may be safer planning strategy to aim at reducing food imports than at expanding traditional exports.'[3] Statements of the desirability of greater attention to agriculture in developing countries have been accompanied by the more questionable assertion that, until the change of emphasis begins to bear fruit and population policies can be made effective, food aid will be necessary as an interim measure. Implied in this assertion are two notions. One is that food aid is undesirable; the other that in the short term, at least, it is inescapable. Both of these require further examination.

1. Speech by the Rt. Hon. Reg Prentice, JP, MP, Minister of Overseas Development, to the Fourteenth FAO Conference, Rome, 7 November 1967.
2. See, for instance, the UNCTAD Resolution in Appendix 1.
3. *Multilateral Food Aid*, Progress Report by the Secretary-General (E/4352), UN Economic and Social Council, New York, June 1967, p. 51.

In order to undertake such an examination it is necessary to establish the purpose of food aid, what the objectives are towards which it might be directed. There are three possible deficits which food aid might attempt to fill: first, emergency needs such as those caused by fluctuations in production or created suddenly by natural disasters such as earthquakes, typhoons, etc.; secondly, the nutritional gap between actual food consumption and some hypothetical, adequate level of nutrition; and thirdly, the demand deficit between domestic supply and demand.

It seems hardly decent to question the desirability of providing food aid in the case of an emergency. Humanitarian considerations are normally sufficiently important to outweigh all others, and to question the appropriateness of food aid appears to be an attack on the idea of providing any assistance at all. It is worth considering, however, whether some other form of assistance might not be more helpful than food aid, i.e. the direct transfer of food from donor to recipient. In doing this it is useful to distinguish between two types of emergency, one involving an unusually large food deficit as a result of a bad harvest due to adverse weather, and the other a sudden need created by a natural catastrophe. Although more warning is given of the former, the response of the aid donor may need to be on a far more massive scale than for the latter.

In the case of a sudden emergency, speed and flexibility of operation are the most important requirements. In some instances these might best be achieved by having stocks of food already available for shipment to the disaster area. On the other hand, shipment takes time and any aid agency is limited in the number of stockpiles it can have around the world. If an agency is to operate efficiently in emergencies, then it must have part of its resources, at least, provided in a sufficiently liquid form—and must be sufficiently flexible in the way it is allowed to operate—to enable it to respond to requests as speedily as possible by buying in the most convenient market.[1] Although it is true that even emergency aid can have a seriously disruptive effect on local production, this tends to be a result of bad timing and administrative deficiencies, rather than of the form in which the aid is made available.

Crop failures will normally give a longer warning that they are impending, but their effects may last longer. Timing is once again of the greatest importance. Food aid which arrives late not only fails to avert misery in the early days of a famine, but upsets the domestic market when conditions are returning to normal. Because of the large amounts of food aid which might be required in future for this type of emergency, it might be necessary to create special food stocks for the purpose. It

1. It also, of course, needs cash to cover the costs of transport and administration.

could be argued that the knowledge that someone is standing by with a large granary in the event of a crop failure will lead the governments of some developing countries to neglect taking adequate precautions themselves. This might be true, but it could surely never be advanced as a reason why the international community should also fail to plan appropriate action. What it does perhaps suggest is that the governments of possible recipient countries should be brought into the process along with possible donors, in order that the burden may be shared equitably by all.

The problems of undernourishment and malnutrition were discussed in Chapter 1. It was stressed there that, in countries where the calorie intake of large numbers of the population is insufficient, the problem is one of maldistribution as well as of inadequate overall levels. The problem of undernourishment is simply one aspect of the more general problem of poverty. The answer in the long term is to help the poorer groups to increase their incomes. In the short term the diets of the worst-fed members of the community could be improved by special feeding schemes or food subsidies, but these have serious drawbacks. Although increased food consumption can increase the energy and stamina of the work force, and schemes can be devised whereby increased food consumption is accompanied by the more effective use of under-utilised resources, none the less it is unlikely from the point of view of economic development that these will represent the most efficient use of scarce resources, particularly if food has to be imported at the expense of other developmental imports. In addition, the administrative difficulties involved will make it unlikely that the governments of developing countries will take this particular option. Many developing countries control food prices, but the extent to which they can keep them artificially low is severely limited by the cost, if a subsidy is involved, and the disincentive effects on local agriculture.

The problem of malnutrition is a somewhat different one. The amount of higher-quality foods consumed usually increases as incomes rise, but it is often ignorance of the value of a balanced diet and the ecological unsuitability of certain areas to produce proteinous foods that are the real problems. Other than exploring new or unconventional sources of protein, there is little to be done about the latter problem but to import higher-quality foods. The former, however, is more susceptible to local action and is something which governments can—and do—attempt to solve without a large expenditure of resources through programmes of education. The remarks made above about the difficulties of increasing the calorie intake of the worst-fed apply equally well to improving the quality of the diets of the most malnourished. There is, however, one group whose better nutrition will in the long run pay handsome dividends: it consists of children and expectant mothers for whom dietary deficiencies are particularly critical.

The third possible objective towards which food aid could be directed is that of helping to meet the potential gap between, on the one hand, rapidly growing demand for food as a result of population growth and increasing incomes per head and, on the other, lagging food production. This is a problem which in the opinion of many makes food aid essential. It is also a problem which has received a considerable amount of attention and has been discussed at great length in this study. The priority given to this objective by the government of a particular deficit country will depend, not only on the size of the projected deficits for cereals and other foods in that country, but on many other factors, such as the way that prices respond to changes in demand, the distribution of political influence amongst different groups of consumers and producers, and the country's foreign exchange position. It has been argued above that the governments of developing countries are unlikely to give a high priority to special schemes specifically directed towards improving the nutrition of their worst-fed citizens. They might, on the other hand, give a very high priority to ensuring that they do not become worse fed as a result of rising prices.

Assuming that the case for food aid for emergencies is established—given the proviso that a large part of the resources of any agency set up to provide food aid for agencies should be in liquid form—what of the other two objectives—the nutrition gap and the demand gap—towards which food aid might be directed? In relation to these objectives it is necessary to consider the two propositions already set out above: (a) that food aid is undesirable, but (b) that it is inescapable in the short run. The view that food aid is undesirable is based on the belief that it depresses prices in the recipient country and thus acts as a disincentive to domestic production; that it diverts the attention of the governments of deficit countries from the serious nature of their agricultural situation and causes them to give an insufficiently high priority to agriculture in their development plans; that it puts deficit countries in a vulnerable position due to lack of certainty about continuity; that it puts the recipient in a situation of dependency *vis à vis* the donor; and that it distorts the pattern of world trade, reducing in particular the export opportunities for potentially food-exporting developing countries. There is a certain force in all five of these criticisms.

Whether or not the depressant effect of food aid on prices will act as a disincentive to domestic production has been argued at great length. Even the most passionate defenders of food aid would probably admit that the two effects together—one working through the price mechanism and the other through the government's ordering of priorities—have *some* influence in reducing the rate of growth of domestic agricultural production. They will point out, though, that there is a net gain to the recipient economy, since consumption will be increased by more than the unrealised potential increase in domestic production.

This argument, however, takes food aid as given and does not ask whether the same amount of resources provided in some alternative form would not have commanded a higher return.

It might be as well to point out at this stage that, no matter how large a food deficit a food aid recipient might have, it does not necessarily render the arguments about disincentives invalid. The relevant question is not whether prices are low, but whether they are lower than they would have been in the absence of food aid. Prices would only be unaffected by food aid if it replaced an exactly equivalent amount of commercial imports. The argument, of course, about the government's willingness to effect change remains unaltered.

Special schemes for nutritional improvement can be devised to insulate the market from the effects of food aid, but their cost in terms of administrative skills is likely to be high. Whereas the cost might be acceptable to the recipient when food aid is virtually free, it becomes more important relative to the economic and social returns when food aid is a substitute for other forms of aid. In the case of higher-quality foods—which can serve the double purpose of helping to combat malnutrition and also making a contribution to meeting the demand gap —the danger of discouraging domestic production might be somewhat less. The disincentive effect will depend upon local possibilities of production and the extent of substitution—in this case not necessarily undesirable, since it is from lower-quality to higher-quality—between local and imported food. It can even be argued that aid in the form of higher-quality foods can act as a stimulus to local production by acting as a market primer.

The third and fourth reasons for considering food aid undesirable—vulnerability due to uncertainty about continuity and dependence on the donor—are related but distinct. The first depends as much on natural factors as it does upon political whim. The United States has in some cases signed agreements for as long as four years, but even then recipients are left with the worrying possibility that food aid might be cut off at the end of this period if—as has happened—the world supply situation changes.[1] Lack of continuity is, of course, a danger with any form of aid, but its effects are likely to be more disastrous for food aid than for other forms. The danger is one related primarily but not exclusively to programme aid—normally associated with the demand gap objective—since projects are usually designed to last for a limited period only.

1. The recent running-down of surplus stocks did not result in a reduction in food aid because of the US decision to produce deliberate surpluses. In 1959, however, US donations of skim milk were suspended for a while as a result of drought in Europe and an increase in commercial demand.

It is often assumed in developed countries that the governments of developing countries are merely neurotic when they complain that by accepting aid they compromise their independence. In the case of food aid there would appear to be good grounds for neurosis. It is precisely because of the recipient's dependence upon food aid that it lends itself to use as a tool for political leverage; and it does happen that political leverage is exerted. Probably the best-known instance is the suspension of food aid to India for a period following the war with Pakistan when the Indians were in disfavour in Washington. Food aid shipments were shortly resumed, but not before India had received a nasty shock.

The conclusion reached in Chapter 4 about the way in which food aid has distorted the pattern of world trade—the fifth criticism—was that there was some evidence of distortion, but that this appeared to be more at the expense of the developed than of the developing country exporters, although exporters of rice in Asia could be assumed to have suffered. Under the new arrangements food aid will be—in part at least—a co-operative venture in which all the major exporting countries will have a part to play; thus they tacitly agree to whatever distortions might take place. The developing countries, except Argentina, are not party to this agreement; the effects on their exports are not considered. It is true that there is a clause in the Food Aid Convention to the effect that special regard shall be had to facilitating grain exports of developing member countries and part of the cash contribution is set aside for this purpose, but it is a very small part of the total.[1] Possibly in view of the present capacity of the developing countries to export grains the amount is realistic, but it leaves little room for expansion.

The problem is not simply that the attempts of the (few) existing exporters amongst the developing countries to expand their markets are frustrated, but also that the efforts of a few more potential exporters to establish an export business are nipped in the bud. This might not be a problem for the immediate future, but it is one which will emerge soon enough. It does not seem unreasonable to suppose that the actual course of events over the next decade or so will lie somewhere between the two projections made by FAO. In some developing countries the growth of food production will lag behind population growth and even further behind the growth of demand for food, and huge deficits will arise. On the other hand, some developing countries—possibly only a few—will make spectacular advances in agricultural production. It is more than likely that the surpluses produced will be sporadic, making it even more difficult to dispose of them on the world market. If food

1. The clause is not well drafted (see p. 43) and its exact meaning is not clear. If one takes the possible cash contributors as the United Kingdom, Switzerland, Denmark, Norway, and Finland (Japan has a special dispensation to contribute other goods), the maximum cash contribution is the equivalent of 312,000 tons, and the 25% of this reserved for developing countries is 78,000 tons, or 1·7% of the total.

aid should rigidify world trading patterns, the situation can only be exacerbated.

The upshot of all this is that, apart from aid for emergencies, one must have serious reservations about food aid.[1] Tied aid has disadvantages and food aid is a particular form of tied aid with particular disadvantages. Recipients find it irksome and some—such as India, which hopes to be self-sufficient in three years' time—try to give it up. Does the fact that they are not, as yet, successful in this mean that food aid is inescapable, at least in the short term? This was the second of our two propositions.

The answer is short: food imports may be inescapable, but food aid is not. Any form of aid which freed foreign exchange for the purchase of food would be just as helpful in meeting the deficit as food aid. The mere existence of postulated food deficits is not sufficient evidence of the need for food aid; there is no necessary logical connection between the two. The developing countries could manage very well without food aid, provided that they received adequate amounts of other aid in a sufficiently flexible form. The ideal would obviously be the provision of free foreign exchange, but this is simply not how donors provide aid.

Flexibility has to be stressed because it is only if other aid frees foreign exchange that it is a suitable substitute for food aid. If other aid is not provided in a sufficiently flexible form, a problem arises which is analogous to the local cost problem: aid is available but not in a form that will meet the most pressing needs of the recipient. Hence, although it cannot be said that food aid is inescapable, a need for it is created by the lack of flexibility in donors' aid programmes.

Can food aid help?

A reader of the previous section might be forgiven for concluding that food aid is an unmitigated disaster. He might then go on to wonder if the United States has not thrown something over $16,000m down the drain over the last dozen or so years. Such a conclusion would obviously be unjustified. None the less there was a point to be made in dwelling on the undesirable features of food aid. It is this. Given that there is a world food problem, not only is food aid not the *only* solution, it is not even the *best* solution. It might, however, be the only *practical* one.

In the past the United States was able to make such large amounts of food aid available because of its surplus position. Food aid was both cheap and popular. It was cheap because the decisions which governed

1. Throughout most of what follows 'food aid' is to be taken to mean 'food aid other than that for emergencies'. Where this is not intended the context should make the meaning clear.

production were taken independently of the decision to use the surplus production for food aid. Thus, once the surpluses were in existence, the cost of using them in terms of other opportunities which had to be forgone was very low. It was popular because it was such a tangible way to help the needy, and also because there were vested interests who stood to gain by it. Not only were the farmers interested in maintaining production, but others, such as grain merchants and exporters, stood to profit as well. It is impossible to prove that food aid has been additional to other aid, but the very fact of its cheapness and popularity suggests that it is unlikely that if there had been no food aid there would have been a corresponding rise in other aid. A study of the trends of food aid and non-food aid over the years lends support to this view.

In the future too it may well be that governments will more willingly provide food aid than other forms of aid. There will certainly be surplus capacity available and possibly also surplus production. The farm lobbies in the United States[1] and other major producing countries are very powerful and can be expected to favour food aid, whether or not there are surpluses. If food aid were to be provided at the expense of other aid it would be a matter for regret. But in the United States, at least, food aid[2] is voted separately from other aid and hence, although the two are obviously not entirely independent of one another, it is hard to believe that a reduction in food aid would not result in a reduction in the total amount of aid provided.

The popularity of food aid is attested by William and Paul Paddock:

> 'Thus, while the reasons for which P.L. 480 was written no longer exist, no one that I know about argued at the congressional hearing to let the law die. In 1966 the new Food for Peace passed with a resounding voice vote in the House and a 72-to-2 vote in the Senate. Congress authorized a $7·4 billion food aid bill—the largest in the country's history!
>
> 'There is too large a head of steam built up ever to see this program die in our generation. Too many people favour its continuation to allow political Washington to ignore politics and the lobbyists and their constituencies.'[3]

If food aid can be reduced only at a cost to overall aid levels, the question arises as to whether or not the quality of food aid as an instrument of development can be improved by offsetting some of the undesirable features. This is, in fact, what some of the changes in the new Food for Freedom legislation are aimed at. Over the years the Americans have acquired considerable experience of food aid operations,

1. The US farm lobby is less powerful than it was, hence the conclusion in Chapter 3 that the United States has its surplus problem under control now.
2. It is significant that US food aid is administered by the Department of Agriculture and not by the State Department.
3. W. and P. Paddock, *Famine 1975!*, Weidenfeld and Nicolson, London, 1968.

experience which no doubt newer food aid donors can put to their benefit.

The criticism that US food aid has a disincentive effect on domestic agricultural production is met in the new legislation by demonstrating attempts to stimulate greater productivity in the recipient country. Sales agreements are only to be made after careful consideration has been given to the measures taken by the recipient country to improve its own capacity to provide food for its people. Each Title I agreement will describe the programme being followed by the recipient to improve its production, storage, and distribution of agricultural commodities. It will also provide for termination of the agreement if the programme is not being adequately carried out. A certain proportion of counterpart funds will be set aside for agricultural and related projects. Recipients of food grants will also be required to demonstrate that they are taking adequate steps to increase their agricultural production. In addition, the US Agency for International Development is putting greater emphasis on agriculture in its programmes. Behind all this lies a serious attempt to lessen the dependence of recipients on US food aid.

Another feature of the new legislation is the switch from sales for local currency to dollar credit sales. By hardening the terms on which a large part of US food aid is offered, it brings them closer to those for commercial transactions. This, together with the trend to greater multilateralisation of food aid, which is commented on later in this chapter, should go some way to stilling criticism by other major exporters that US food aid distorts the pattern of world trade, though for potential surplus producers amongst developing countries the situation is rather different. For them greater multilateralisation—if it leads to an increase in the total amount of food aid—simply increases the difficulty of trying to establish an export trade, and the hardening of terms is of little help. Even dollar credit sales offer competition too fierce for a developing country making its first tentative attempts to establish an export market.

Thus it can be seen that *some* of the disadvantages of food aid can be mitigated by appropriate policies, but the question still remains whether food aid is an efficient way of transferring resources from rich to poor countries.

The efficiency of food aid

The successful use of food aid in economic development depends on the ease with which it can be absorbed by the recipient economy. Food, although very important, is only one of a whole range of necessary

resources which have to be carefully balanced one with another to achieve optimum results. There is only a very limited degree to which food can be used in place of other goods. By replacing commercial imports, however, food aid can release foreign exchange for the purchase of any of the other necessary goods. The problem of distorting trade patterns thus presents something of a dilemma. On the one hand, it is obviously desirable to avoid frustrating the efforts of developing countries to develop export markets for food. On the other hand, to ensure that food aid nowhere replaces commercial imports is merely to block the principal channel through which it can make itself effective.

The question of balance is of crucial importance to the efficient use of food aid; it must be accompanied by other goods if it is to be used to optimum effect. It might appear that this consideration applied only during the period of surplus disposal, when attempts to create *additional* demand for food resulted in the creation of other needs for capital and consumer goods which require imports to satisfy them, and that it is no longer relevant in a period when the aim is to meet demand rather than create it. This, however, is only partially true; it misunderstands the nature of the projected deficits. They are demand deficits which to a certain extent themselves arise out of the development process. The emergence of the deficits—in so far as it is caused by increasing incomes—depends itself on the rate of economic growth and implies the effective absorption of a whole range of resources other than food. Deficit projections similar to those in Chapter 1 could have been made for any one of these other resources. Thus even in countries with a projected deficit the efficient use of food aid is vitally dependent on the capacity of the recipient economy to absorb it.

Why, one might ask, if food aid is so difficult to absorb, have so many recipients accepted it so gladly in the past? One answer is that they have, in fact, received other resources as well. Another is that to many the acceptability of food aid depended on the fact that it was additional to other aid. They were generally not offered a choice between food aid and other aid and, when they were, as under the old Mutual Security Act, food was normally given only a low priority. To the recipient, food aid had a lower opportunity cost when it was available more or less for the asking in addition to other aid, than when it was offered as an alternative. In the past there was a certain logic to this because the opportunity cost to the donor was also lower than for other aid.

Now that deliberate surpluses are being produced specifically for food aid,[1] some radical rethinking is necessary; otherwise there is a risk of serious misuse of the world's aid resources. In an extreme case[2] the recipient accepts food aid as a gift and uses it—perfectly rationally—

1. The reader is reminded of the definition of 'deliberate surplus' on p. 81.
2. For instance, non-surplus contributions to the World Food Program.

as though it were virtually a free good, whilst its cost to the donor is the full market price plus the cost of ocean transport; there might well have been a whole range of other goods, at a fraction of the cost, which would have made a greater impact on development if they had been available instead. In general, it is through the market mechanism that the allocation of scarce resources is accomplished, the balance between supply and demand for each good being reflected by its price. The function of aid is to give developing countries command over a greater proportion of the world's resources, but the pricing system still operates to distribute these resources according to their relative scarcity, although aid-tying, of course, introduces some distortion. In the case of almost all aid, other than food aid, even when it is procurement-tied, the recipient is offered a choice of goods. In order for it to be efficient the same option should be open to food aid. This would involve the 'liberalisation' of food aid; food aid would only be offered as a *substitutable* part of a complete aid package.

In its recent legislation the United States has taken almost the final step in this direction by making the terms on which Title I food aid is offered the same as those for development loans. The Food Aid Convention is, on the other hand, a step in the opposite direction. By specifying the contractual food aid obligation of each donor country, it rigidifies rather than liberalises. The global total for food aid is arrived at, not by any process of economic reasoning based on the needs of deficit countries, but by a system of horse-trading between the participating countries. A redeeming feature is that, since it amounts to less than one-third of what the United States has been providing in the way of grains in recent years, it seems highly unlikely that there will not continue to be a large Food for Freedom programme, over and above the US contribution to the Convention, through which adjustments at the margin can be made. None the less the Food Aid Convention is still likely to lead to gross inefficiencies in distribution. Member countries, who have an obligation to provide a specified amount of food aid each year, will give a higher priority to meeting their quota than to seeing that it is met efficiently. They are likely to offer food more or less to the first bidder in order to get rid of it.

There are two further advantages to be gained by liberalising food aid. One of these has already been hinted at above: that it relieves the international community of the need to agree an optimum figure for the amount of food aid which should be provided.[1] It is obviously valuable to be able to forecast as accurately as possible where the trends are taking us, but the difficulties of arriving at an optimum global figure for food aid are illustrated only too well in Chapter 1 and in the calculation on page 103 below. The second additional advantage

1. It still leaves donors with the problem of deciding how much to hold back for emergencies; in this case there is no alternative to working out a global figure.

of liberalisation is that it frees donors from the invidious task of deciding on the eligibility of recipients to receive food aid. The allocation of food aid simply fits into the general scheme for allocating aid according to the well established criteria already in use. The choice of whether or not he is a recipient of food aid is made, in fact, by each recipient himself. There is no need for the donor to work out a separate set of criteria for this part of his aid programme.

In spite of its advantages one can anticipate objections to the idea of liberalising food aid. It might be argued, for instance, that, if all the signatories of the Food Aid Convention were to offer their food contributions as simply one of the options in their general aid programmes, there would be a danger of neglecting countries with a real need for food aid. The reasoning behind this is that, if the donors were to restrict themselves to their present pattern of aid giving, it might be found that traditional recipients of one were all large consumers of food aid, whilst those of another had no use for it. If the logic of the earlier parts of this chapter is followed, this points to the inadequacy of present patterns of aid allocation, the inappropriateness of the terms on which it is provided, and deficiencies in the Food Aid Convention; it does not necessarily fault the notion of liberalising. The solution is to be sought through greater co-operation between donors, particularly through bodies such as consortia, with a view to harmonising their programmes.

Another possible objection is that donors will be unable to forecast the amount which they need to produce if recipients are given the option between food aid or non-food aid. Because production does not respond readily to demand, donors—it is argued—need to know well in advance what their commitments are going to be in order to ensure that the right amount is produced. This problem could be avoided by the donor making advance commitments and getting the recipient to estimate beforehand the proportion he wishes to take in food, but this is likely to lead to even worse misallocation, since the recipient does not know what his import needs are until his own harvest is reaped. The problem of uncertain demand does not differ from that associated with commercial sales, although for some crops—wheat in particular—the commercial market is regulated. By seeking to avoid uncertainty the donor is simply passing on its disadvantages to the recipient, although he can far better afford to bear them himself.

A third possible objection to the liberalisation of food aid has more substance. It has already been remarked that the governments of developed countries might be more willing to provide food aid than other forms. If this were to be the case, then once again food and non-food aid would not be substitutes from the point of view of the donor. The number of donors, however, who fell into this category would only be very few, and even for them the case for liberalisation is not invalidated. What is needed is a pricing system for their aid which will reflect the relative scarcity of aid in the various forms in

which it is provided. Thus if the relative prices were chosen correctly—and this is something which would come with experience—the donor would achieve a global balance of ordinary aid against the more popular (at home) food aid. What 'price' means in this context is the trade-off, or rate of exchange, between food aid and non-food aid.[1] Even if food aid were provided as a completely free gift, it would have a 'price'—apart from transport and administrative costs, etc.—in the sense that it could only be received in place of a certain amount of other aid.

Even where the question of popularity of food aid is not an issue, the relative cost of food aid might differ from its relative value to the recipient as a result of agricultural support policies in the donor country. A pricing system for food aid would lead to a more rational distribution of resources by reflecting the true cost to the donor in providing it. In fact, it is perhaps worth while exploring whether there might not be advantages in extending such a system to other forms of aid. An attempt to establish a system of trade-offs between grants and loans of varying degrees of hardness, for instance, would no doubt throw some interesting light on the way these are at present distributed. Even more interesting would be the problem of establishing a trade-off between tied and untied aid!

Burden-sharing

The United States believes that it has been carrying more than its fair share of the burden of food aid. There is a suspicion—which is probably legitimate—that other rich countries would be perfectly content to allow the United States, which has been supplying almost all the food aid to date, to continue to do so. Whilst this might have been a reasonable attitude when the US was a surplus producer, it is felt to be inappropriate now that surpluses have to be produced deliberately for food aid.

The first attempt at burden-sharing was the World Food Program. The United States' enthusiasm for food aid was not, however, shared by the others. Contributions to the Program are on a voluntary basis and have never been large. The new US Food for Freedom legislation in 1966 referred specifically to the problem of sharing the burden with other advanced countries, and it led in 1967 to the Kennedy Round Food Aid Convention. Contributions under the Convention were negotiated instead of voluntary, and the total arrived at was five times as great as the World Food Program total.

1. Thus a recipient might be offered, say, one million dollars in non-food aid or two million dollars in food aid, each dollar's worth of non-food aid being exchangeable for two dollars' worth of food aid.

It is understandable that grain importers are not too keen on the Food Aid Convention. It has been described in Britain as 'aid to the wheat producers masquerading as aid to developing countries'. Tying aid to another country's goods is not an attractive proposition for any donor; at least with untied aid a small proportion comes back in orders. The reason that countries who are normally grain importers agreed to the Food Aid Convention was that they saw it as part of the Kennedy Round package;[1] this was one of the concessions they had to make in bargaining. That this is the attitude of the British Government can be seen from the fact that the British Food Aid Convention contribution is always shown as additional to the normal aid programme. There is also a habit of referring to it as the *Kennedy Round* Food Aid Agreement. It has, in addition, been suggested that food importers might be hostile to food aid because it moves import prices against them, by taking supplies off the market. This argument has more validity in the context of an international agreement than it had when the United States was the only major provider of food aid, since it is doubtful if the alternative to US food aid has ever been to unload food on to the world market.

It is only reasonable that the burden of aid should be spread as fairly as possible. Figures published by the Development Assistance Committee of OECD show, however, that relative to its wealth the United States is no more generous than the average Western aid donor. It is ridiculous to attempt to share the burden within each category of aid. If aid is to be made maximally effective, each donor must provide what he is best equipped for. Why, it might be asked, can the burden not be shared by grain producers providing food aid and importers of grain other types of aid? If the amount of food aid required were greater than the total aid budget of the exporting countries, then it might make sense for the importers to provide food aid too, but this is plainly not the case. US food aid has only ever been about 30% of its total aid budget, i.e. about 15% of the aid of the Western world. The amount provided under the Food Aid Convention is very much less than this, only about $300m. Of course if one were to accept the more alarmist projections of the food needs of developing countries, one might argue that the proportion of food aid to other aid can be expected to increase. Even so the proportion would have to increase very considerably—even at present aid levels—before the United States needed to devote its aid programme entirely to food.

The whole operation to multilateralise[2] food aid might perhaps be seen as an exercise in public relations, both abroad and at home in the United States. The rest of the world is now far more aware—although

1. See the quotation on p. 42.
2. 'Multilateral' is used here to mean 'involving a number of donors', rather than in its more usual meaning of 'involving a number of donors *through a single organisation*'.

perhaps still not aware enough—of the seriousness of the food problems of developing countries. Because of this, more attention is focused on the more general problems of poverty and underdevelopment. The propaganda effect of burden-sharing is probably even more important at home. After all, why should the United States continue PL 480 when it is no longer a surplus producer? If PL 480 had been allowed to die in 1966, there can be little doubt that the total of US aid would now be less. Multilateralisation can be interpreted, then, as an attempt by the aid lobby to persuade Congress to do more by demonstrating that other countries are joining in a joint effort. It could, however, backfire if it created a hostility amongst other donors to the whole idea of food aid.

If the hostility of the grain-importing members of the Food Aid Convention were to cause a retreat from a multilateral approach to food aid, there is a serious danger that the result would be a diminishing enthusiasm for it in the United States as well, in spite of what has been said about its popularity there. If this happened, and aid policies were not sufficiently flexible to allow the substitution of other aid for food aid, the loss would be serious. Even more important, it would mean a reduction in aid in general. Aid is having a difficult enough time in Congress as it is, and the rest of us should attempt to see the political difficulties of the Administration and demonstrate that we are prepared to play our part too. The exporting countries for their part, though, must appreciate that the importers have political problems too; the Convention has defects which do not make it easy to find support for it and which do not help towards creating a spirit of co-operation. They must appreciate the objections of the importing countries, but objections must be put in such a way that there is no doubt about our willingness to co-operate.

There are advantages in increasing the number of donors of food aid. One of these is that every donor with food aid to dispose of will be more conscious of the food problems of the countries to which his aid is given. He is likely, therefore, to pay more attention to agriculture in his other aid programmes and to seek ways to make aid to agriculture more effective. Another advantage is that it gives the recipient a choice of donor and thus reduces his sense of dependence. None the less, if food aid is an inefficient way to transfer resources, it would appear to be mistaken to extend it. How then can the burden be shared most efficiently?

An attempt has been made in the last section to show that food aid can be made more efficient by liberalising it, i.e. by offering it only as an option for other aid within an overall aid programme. A start could be made with the contributions of the grain-importing members of the Food Aid Convention. In order to meet their objection to tying their aid to another country's products, grain importers could always be given the option of offering their contribution as an alternative for other aid. To avoid allegations that the importers were simply trying to

escape their obligations, it could be agreed that the contributions of all participants should be in either grain or freely convertible currency. This would be a step in the right direction for the liberalisation of aid in general, and would be painless to the importers because it would represent a relative balance of payments gain over the present arrangements.[1] It is too late now to include this proposal in the present agreement, but it would be worth considering when the Food Aid Convention comes up for renewal in the middle of 1971. To demonstrate their willingness to bear their fair share of the burden, the importing countries could take the initiative in proposing a new agreement and possibly even offer to increase their contributions as earnest of their good intentions. A new agreement would give developing countries an assurance of the continuity of food aid: they would know that if they plan their development on the assumption of the availability of food aid *if they want it* they will not be let down.

In order that the freely convertible currency contributions should be directed towards helping to solve the world food problem, they could be put in a special fund, either national or international, for aid to agriculture. It is appropriate to provide a fund such as this for agriculture because one of the difficulties of providing aid to agriculture is the local cost problem. Stated briefly,[2] the local cost problem is one which arises from the preference of aid donors, in general, for aid tied to projects, of which only the cost of capital imports is borne by the donor. This then leaves the recipient with the problem of finding the local costs of the project, including foreign exchange to cover secondary imports arising from the project. Because of the relatively high proportion of local costs in agricultural development projects, the local cost problem for them is particularly acute. Aid in the form of free foreign exchange gets round the problem by financing the secondary imports.

Against the above proposal it might be argued that there would be no assurance that the free foreign exchange contributions of the importing countries would be additional to their normal aid programme. This is perfectly true, but it is also true of the present arrangements and does not represent a new problem. A more serious objection arises from the commercial origins of the Food Aid Convention. The Kennedy Round negotiations resulted in only the merest skeleton of a food aid agreement, and it was left to an International Wheat Conference—most of the delegates to which were 'hardheaded spokesmen for

1. Since a small proportion of aid in the form of freely convertible currency could be expected to be spent on purchases from the donor country, whereas if it were tied to grain the whole amount would be spent elsewhere.

2. For a fuller discussion see Juliet Clifford, 'The tying of Aid and the Problem of Local Costs', *The Journal of Development Studies*, January 1966, and for its relevance to agriculture see the present author's *Aid in Uganda—Agriculture*, ODI, London, 1967.

commercial trade who had little or no interest in the development purposes of food aid'[1]—to put flesh on the bones. It is argued that the importers have 'created a precedent which will make it difficult for them to resist making further contributions when the agreement expires',[2] and it might be thought naive to expect other than commercial considerations to govern a new agreement. The answer is that the importers must take the initiative and make sure that the discussions are conducted in an *aid* context. By putting forward positive, liberal proposals rather than assuming a defensive posture, they can expose and outflank the commercial interests.

The first priority for food aid should be emergency aid. To provide aid for catastrophes needs stocks actually in store, although much of the reserve for crop failures can be carried in the form of reserve acreage rather than of stored production. In the past, the United States has been the world stockpile for emergencies, but with the reduction in US surpluses stocks are now more evenly distributed. The responsibility for ensuring that they are at an adequate level to meet emergencies should be an international one. The cost of carrying stocks is high and, since it does not show up in international compilations of aid statistics, it would seem reasonable to share the burden.

There is a very strong case for channelling *all* emergency food aid, whether for sudden catastrophes or crop failure, through the World Food Program. First, whatever the merits of making the terms of deficit-directed food aid comparable with those of other aid, the desirability of providing emergency aid in grant form is obvious, since its object is to replace resources which have been destroyed rather than to provide wealth-producing capital goods. Contributions to WFP are, in fact, in grant form. Secondly, it should be possible—and would be essential—to establish clear criteria of what constitutes an emergency, based on need and nothing else. Thus, the oft-repeated claim that multilateral aid is politically neutral would, in this case, have more basis in fact,[3] because allocative decisions would be virtually automatic. Recipients could be assured that, if they had a need, they would receive help without being subjected to political pressure. A multilateral organisation would be able to avoid the dilemma of having to weigh humanitarian against political considerations: the dilemma, for instance, which the United States would find itself in if Cuba were to suffer some terrible natural disaster. Thirdly, the spasmodic surpluses, particularly of high-quality foods such as dairy

1. David R. Wightman, *Food Aid and Economic Development*, International Conciliation No. 567, Carnegie Endowment for International Peace, New York, March 1968, p. 61.
2. Ibid., p. 60.
3. One should not be too starry-eyed about this; the United States, for instance, refuses to ship its WFP contributions to any country which it considers unfriendly.

products, which are likely to arise from time to time, can be put to best use through such a programme. In a disaster area the need is usually for a complete diet rather than for one or two commodities. Occasional surpluses can be used most efficiently by being pooled.

A single international organisation for emergency aid would need to be able to operate with greater speed and flexibility than the present World Food Program. It would require, therefore, a much larger proportion of its resources untied, a use, possibly, to which the convertible currency contributions of the importing members of a more liberal Food Aid Convention could be put. It would also need a large increase in its available resources—at least in reserve—over what WFP can muster at present; in future some of the crop failure needs could be massive. If the bulk of the standby were to be in the form of reserve acreage in the United States rather than in stockpiles, a sensitive early warning system would be necessary to ensure that production was forthcoming when necessary. An agreement with the United States would also be needed on procedures for putting the reserve acreage into use, although this might mean no more than entering into a forward contract.

The arguments for and against multilateral aid have been well aired in the past. In addition to the advantages listed above of channelling emergency food aid through the World Food Program, others have been suggested which are more relevant to food aid for economic development. First, by channelling food aid through a multilateral agency there are economies of scale in administration and transportation to be gained. The full economies would only be achieved if WFP were responsible for *all* food aid, and there seems to be little chance of this happening. None the less it does mean that effective use can be made of contributions too small to warrant a programme of their own. Secondly, by encouraging contributions from developing countries WFP engenders a sense of mutual responsibility. Thirdly, a multilateral programme can educate people and governments to an awareness of the food problems of developing countries. Fourthly, a multilateral agency which provides relief aid can probably do this more efficiently if it also provides aid for economic development. By its nature, demand for relief aid will be irregular, and yet in order to ensure that supplies are available it will be necessary to persuade donors to make a regular commitment. If relief aid is only a small part of a much larger operation, the management of supply and demand becomes much easier.

There are, on the other hand, certain disadvantages attached to the World Food Program which could only be overcome by a radical change in policy. WFP has always been very conscious of the need to create additional consumption and has concentrated on providing food aid for projects with this end in view. If food aid is now to be provided to meet a demand problem, then the need to create additional con-

sumption disappears. It is true that project aid can be directed towards improving the nutrition of selected groups of people in a recipient country, but it is unlikely that its government will give high priority to this particular policy goal, if it is faced by a food deficit. A recipient government might be prepared to give a high priority to improving the diet of particularly vulnerable groups, such as small children, but there is no necessary logical connection between a project designed to do this and the provision of food aid. By tying his aid to such a project, the donor abrogates to himself the decision about priorities. An attractive feature of projects for the World Food Program and other international agencies is that they can be judged on their merits and thus apparently absolve the donor from decisions as to which countries shall receive aid and how much to allocate to each, decisions which would be politically extremely difficult. Yet, should the world move into a phase of food shortages, allocative decisions would be essential.

As it is presently constituted the World Food Program suffers, however, from an even graver disability. If one accepts the view put forward in this chapter—that to be efficient food aid must be offered as an optional part of a complete aid package—then it can be seen that WFP is seriously handicapped by having only food to offer. A suggestion has been made that the Program be allowed to accept donations of agricultural inputs, such as fertiliser and machinery, in addition to food. But, unless such donations were large and covered a wide range of goods, this would do little to resolve the difficulty, since recipients would still not be offered the mix of resources most appropriate to their particular development plan.[1] Another possibility is that WFP food could be offered in conjunction with aid from *other sources* through consortia of aid donors. This would be useful in demonstrating to donors the relative value which recipients place on food aid, but it would not provide an adequate mechanism for relating this to the relative cost of providing food aid, nor for allowing the information to be translated into appropriate decisions about the form in which aid is to be provided.

The present shape of international food aid policies has been influenced in no small measure by the run-down of American surplus stocks and the consequent increase in US bargaining power when discussing international grain arrangements. Disquiet in certain other quarters about the course of these policies stems from—amongst other things—a belief that the era of surpluses is far from over and that large surpluses are likely to be produced not only in the United States, but also in Canada, the EEC, the USSR, and possibly Australia. This chapter is based on the view that, as far as food aid is concerned, the crucial

1. It might, indeed, compound the difficulty by increasing the proportion of total aid which is tied to particular imports. There is, however, no objection to restricting the alternative to aid for agriculture, since presumably a recipient in need of food aid must also need to stimulate agricultural development.

determinant on the supply side will be what happens in the United States, and that the American surplus situation is so well under control that, in spite of excess capacity, any 'surpluses' which are produced will be 'deliberate'. But the possibility of the production of vast surpluses, combined with a large food aid programme, is a disturbing one for developing country food exporters or potential exporters. It is instructive to consider possible surplus production in the light of the FAO high and low projections of cereals production in developing countries.

On the low assumption the importing developing countries would have a deficit in 1975 of 42m tons and the exporting developing countries a surplus of 18m tons. On the other hand, on the high assumption the importers would have a deficit of 22m tons and the exporters a surplus of 27m tons. The low projection suggests the need for a large food aid programme. What happens, however, if food aid is made available on the basis of this assumption, and supply and demand materialise according to the high assumption? Let us suppose that the entire deficit of the deficit countries—22m tons—is provided from food aid. According to OECD projections (Table 20), this would still leave the Western developed countries with a possible net surplus of 70m tons, not a very likely market for the developing exporting countries with a surplus of 27m tons to dispose of.

What emerges incontestably from the contradiction of these two projections is the need for flexibility. Rigid policies designed to meet the deficit situation could explode disastrously if the developing countries were to be as successful in their agricultural development as some of the more optimistic projections suggest they might be. This is a problem which concerns the developed importing countries as much as the major exporters, since the agricultural support policies which they follow restrict the markets of the exporting countries and contribute to the surplus situation. There would appear to be no infallible way to safeguard the situation, although liberalisation of food aid and appropriate pricing policies can have some influence. What is needed is a body which can keep the situation under constant review, with a competent secretariat capable of making an authoritative and continuing analysis of the world food situation. The Food Aid Committee established by the Food Aid Convention might seem to fill the bill, but it is handicapped by having no place in it for grain-producing countries which are too poor to become aid donors. It also has the disadvantage, of course, of having its purview restricted to grains.

Food aid policies cannot be considered in isolation; they need to be related to domestic production policies in the donor countries and the recipients' overall economic development policies. A particularly pressing need is to help developing countries to develop their export trade in agricultural commodities. A proposal has been made that an agreement similar to the Food Aid Convention be concluded for rice. This would have the advantage of stimulating the exports of

developing rather than developed countries, but apart from this would suffer from the same defects as the Food Aid Convention. However, if it were agreed that each donor would simply add a certain quantity of rice to the list of goods which his aid could be used for, and if, in addition, the terms for it were made the same as for the other items, then the defects could be overcome.

What is needed is not so much a world food aid policy as a world food policy, within which food aid can play its part. The Indicative World Plan which is being prepared by FAO could provide a basic framework for this, and FAO has itself made such a proposal: 'The extensive ramifications of the world food problem, and its close link with the problem of economic development as a whole, imply the need for a world food policy as a major part of the overall strategy in the second Development Decade for which preparations are beginning within the United Nations family of agencies.'[1]

Britain's contribution

The previous section discussed the possible influence which Britain might have on international food aid policies; this one is concerned with the direct British contribution. It should be remembered, however, that the size of this contribution is relatively only tiny; even the increased amount resulting from the Food Aid Convention is the equivalent of only approximately a quarter of a million tons of grain, which compares with Indian food aid imports in a *normal* year in the early nineteen-sixties of some 3m tons.

The first question which might be considered is whether Britain—in view of the dismal prognostications which have been made—should not be prepared to provide food aid over and above her obligations under the Food Aid Convention and her contributions to the World Food Program. In general, this would mean buying food from abroad for shipment to recipient countries. Apart from exceptional circumstances—which are discussed below—there would only be a case for doing this if there were *overwhelming* evidence of a need for food aid on the part of developing countries. Such a need has yet to be demonstrated. For one or two commodities—given present British agricultural policy—the production of surpluses by Britain for food aid is not a total absurdity. This idea has a certain superficial attraction because the commodities concerned—dried milk for example—are high-quality foods which the world is so short of. However, in spite of the

1. 'The World Food Problem in Relation to Trade and Development', Document TD/22 prepared by FAO for the second session of UNCTAD, published in the *Monthly Bulletin of Agricultural Economics and Statistics*, No. 5, Vol. 17, May 1968.

nutritional value of such aid, it has been argued in the previous chapter that it is unlikely to be given very high priority by recipient governments. Nor is it likely that 'surplus' commodity aid in Britain would be additional to other aid. Thus to produce 'surpluses' for export as food aid would simply result in a reduction in the value of aid.

How can the British quota under the Food Aid Convention best be used? A decision has already been taken to offer part of this—in the first year at least—to the World Food Program. The advantages and disadvantages of channelling food aid through the WFP were discussed in the previous section. There is, however, an additional consideration; the part which does not go through the World Food Program offers an excellent opportunity for gaining experience which could be invaluable when the Convention is renegotiated.

The Food Aid Convention puts Britain in the position of having a 'surplus' to dispose of, whether there is a world surplus or not. Its existence depends upon a particular analysis of the world food situation, an analysis in which the quotation at the head of this chapter suggests that the British Government does not concur. This faces the Government with a dilemma. If the British do not agree that a serious demand situation is arising, then to use this 'surplus' responsibly they must make sure that additional demand is created so that their food aid can be absorbed without damage to agricultural production in the recipient country. However, by using food aid in this way they actually contribute to the emergence of the deficits which are denied.

Whatever the demand projections show, we know very little about the importance which deficit countries attach to their demand problem. How much do they really want food aid? The question is not whether they are prepared to accept it or not—almost every developing country could absorb a certain amount of food aid if it were offered perfectly free—but on what terms. How highly do recipients value food aid relative to other forms of aid? Would it be possible to use the British contribution in a way which would throw some light on this question?

In the first instance food aid could be offered within the aid ceiling of each recipient country. It would be an alternative to other aid and not an addition. If it were all taken up on these terms, that would be evidence that a strong demand for food aid exists and that schemes designed to create additional demand for food are inappropriate. If—as seems likely—requests were not forthcoming, the 'price' of food aid could be lowered by offering relatively more of it compared with other aid. At some rate of exchange between food aid and non-food aid a crude equilibrium should exist at which demand for food aid roughly equals its supply. Of course, it might be argued that our contribution is far too tiny for British experience to be relevant in a wider context, and that it would be only reasonable to expect recipients to take non-food aid from Britain in preference to food aid, since the latter would be available virtually for the asking from other donors. No doubt it is true

that Britain is unlikely to be able to develop procedures relevant to other aid programmes, but useful information would be provided about demand for food aid *at the margin*. This would have particular relevance to the proposal to liberalise the contributions of the importing members of the Food Aid Convention. If a very low value were established for the trade-off between food aid and non-food aid, it would strengthen Britain's hand in renegotiating the Convention.

At a minimum, food aid should be channelled so that it is not damaging to domestic agriculture in the recipient country. If possible, it should be directed so that it can be used in conjunction with aid specifically for agricultural development. It lends itself to this because the local cost problem[1] is of particular significance for aid to agriculture and is one which food aid can help to alleviate. By generating counterpart funds—in effect, free foreign exchange if food aid replaces commercial imports—food aid can contribute to a solution of the problem.

It has already been suggested that the highest priority should be given to emergency food aid, and that this might be provided through an international agency, such as the World Food Program. Failing international agreement to make adequate provisions for emergency needs, the British Government could consider using part of its contribution for this purpose. The amount set aside for relief operations need only be small and this could be channelled through voluntary agencies such as OXFAM who have considerable experience of responding promptly and efficiently when catastrophes occur. A larger part of the total could be used to help developing countries build up reserve stocks. Stock-piling is an expensive business, yet one to which many developing countries would give a high priority were it not for the foreign exchange cost. This is a particularly appropriate form of aid for Britain to provide, because she has in the Stored Products Research Centre unique expertise in the storage of foods in tropical countries. A package deal consisting of grains for stockpiling and technical assistance in the best means of storing them, possibly plus financial assistance for the provision of storage space, can combine the various components so as to enhance the contribution of each.

What has been said above concerns the disposal of food aid, and no reference has yet been made to its procurement. If this were to be done in an imaginative fashion, a further contribution could be made to the economic development of poorer countries. Much has been said about the need to stimulate agricultural production in the deficit countries, but very little about encouraging potential food exporters amongst developing countries. It makes more sense to promote the exports of developing countries with a natural advantage in agricultural production than to strain after self-sufficiency in those deficit countries

1. See footnote 2 on p. 99.

which can only hope to reach this goal by massive and expensive investment in such items as irrigation and land reclamation.

Britain could enter into long-term contracts with developing countries to provide grains for use as food aid somewhere else. East Africa and India come to mind; they are natural trading partners. Whilst India struggles to achieve self-sufficiency, East Africa is already having difficulty in finding markets for its grains. Production has had to be cut back. One of the problems, of course, is that grain production in developing countries is often not competitive and cannot meet world market prices. However, the spread of new seeds and other technological improvements are already bringing costs of production down; this trend could be helped along by special agricultural assistance. In addition, the establishment of a stable market over a number of years as a result of the contract should help to provide a climate for investment in improved techniques. A further help would be technical assistance in marketing.

An objection to this proposal is that, if Britain were to obtain her Food Aid Convention in this way, it would necessitate the suppliers becoming members of the Convention. Since they would then have to make a (small) food aid contribution themselves, they might feel that the gain did not justify the cost. If we felt that this was a really worth-while way of helping their development, we could consider undertaking to reimburse the supplier for this contribution, or making a food aid contribution additional to our obligation under the Convention. If this were a method of economic assistance which proved successful, we might give thought to contracting with developing countries to supply part of our very large import requirement for coarse grains. This takes us, however, out of the field of food aid.

Once again we are reminded that food aid is only one aspect of aid in general, and that this, in turn, is only a part of Britain's overall economic relations with the developing countries. The essential problem of the poorer countries is one of endemic poverty, and whatever assistance—in the aid or the trade field—we can provide towards alleviating this poverty will also be a contribution to solution of the food problem. Ideally the division of effort amongst the richer countries would be such that each country contributed what it was best equipped for. In the real world, however, political factors have to be taken into account. Our hope must be that the political accommodations are made at the least cost to the developing countries.

Appendix 1

UNCTAD Declaration on the World Food Problem

Resolution adopted by the Conference on the report of Working Group I (TD/81)

The United Nations Conference on Trade and Development

STATES THAT

1 Half of mankind is undernourished or badly fed, because the world production of energy-giving and protective foods is insufficient to satisfy nutritional requirements. The millions of people suffering from hunger and malnutrition live in developing countries;

2 In nearly all the developing countries, a backward agricultural sector has in recent years been unable to increase food output fast enough to match the increase in the demand for food resulting from population growth and rising incomes. For this reason, these countries are obliged, even for maintaining present low levels of nutrition, to import food in ever-increasing amounts, to the detriment of their capacity to import capital goods essential for accelerating their economic development;

3 The food surpluses in developed countries which have hitherto been used to cover emergency world shortages have been substantially reduced, and the surplus of cereals has practically disappeared;

4 In most developing countries there exists at the same time a deep social and human problem which arises, like the world food problem, from the insufficient dynamism of the agricultural sector—namely, the chronic underemployment and the low incomes of the rural population. The level of living of the rural population which constitutes the vast majority of the total population in these countries is incompatible with human dignity and the rural population is unable to participate actively enough in the common endeavour to overcome underdevelopment.

5 Some favourable developments have taken place recently with regard to these problems. Some developing countries are making promising progress in increasing their agricultural production and improving the productivity of the agricultural sector, through substantial national efforts in matters of investment, improved technology and structural reforms, supported in some cases by more active

international co-operation. Moreover, in recent years the conscience of the world has been alerted to the dangers and urgency of the world food problem, particularly through the FAO Freedom From Hunger Campaign.

RECOGNISES THAT

1 The persistence of these problems constitutes one of the major obstacles to social and economic development. Hence the solution to these problems is the joint responsibility of the whole international community. The primary responsibility rests with the developing countries themselves, which must increase their food production as the basic and permanent means of satisfying their needs. They must also raise the level of living of the rural populations. The developed countries should co-operate fully in these efforts of the developing countries;

2 The rapid development of agriculture, which is indispensable not only for producing food, producing raw materials for some industries and providing employment but also, in the case of exporting countries, as a means of earning foreign exchange, is an essential part of general economic and social development. Agricultural and industrial development are interdependent. This interdependence calls for the balanced and integrated growth of the various sectors of the economy, coupled with a dynamic policy of social justice and betterment of the living conditions of humanity;

3 Effective action to overcome the world food problem and to modernise rural life in developing countries should consequently be conceived in the framework of a universal endeavour dedicated to the fullest and most effective use of all human, scientific and natural resources to ensure a faster rate of economic growth and parallel social progress;

4 The ultimate solution of the world food problem requires a series of convergent measures some of which would have immediate effects and others long-term results. Over-all measures should be directed to increasing food production through actions of institutional, technical, social and economic character; to the improvement of marketing at both national and international levels; to the development of agro-industries and to the consideration of the dynamics of population. The adoption of measures to increase supplies, including food aid, to meet shortages and the application of improved techniques will continue to be required to alleviate the situation in the short-term. Action should be taken urgently on measures having both immediate and long-term effects.

AFFIRMS THAT

1 The United Nations, with its subsidiary organs, the specialised agencies, the World Food Program and the international financial

institutions have important responsibilities in the solution of the world food problem;

2 The Food and Agriculture Organization has a crucial role as the international agency entrusted with the task of raising levels of nutrition and the standards of living of rural people and securing improvements in the efficiency of production and distribution of all food and agricultural products. Present trends in FAO and the regional and international banks toward the planning and execution of practical programme and integrated projects leading to international and national investment should be supported and encouraged by member states;

3 The integrated approach to the world food problem calls for the fullest co-operation and co-ordination among the international organisations concerned, and for the utilisation, as appropriate, of the opportunities provided by bilateral programmes and those of certain private foundations.

NOTES WITH APPROVAL the assistance already extended by the international organisations concerned and certain major undertakings, including *inter alia*:

(a) the elaboration of plans for the Second Development Decade 1970–1980;
(b) the FAO Indicative World Plan for Agricultural Development;
(c) the Inter-Agency Study on Multilateral Food Aid initiated under General Assembly resolution 2096 (XX) of 20 December 1965;
(d) efforts to expand multilateral food aid under the World Food Program;
(e) the Convention on food aid of the International Grains Arrangement, 1967, and similar possibilities of mobilising through international arrangements for other commodities the capacity of both developing and developed countries to produce supplies for food aid purposes;
(f) the Agricultural Development Fund of the Asian Development Bank.

THEREFORE URGES

Developing Countries

1 To pay special attention, in the formulation of balanced and integrated plans, to the requirements of the agricultural sector, taking account of the food situation and of the important role of this sector in

over-all development, and to remove such impediments to increases in agricultural production as arise from agrarian and credit structure inherited from the past, to carry out, wherever appropriate, the reforms in the systems of land tenure, land and water use and credit and to modernise administrative institutions;

2 To plan agricultural production in the interest of balanced economic development taking into account current and potential requirements;

3 To lay emphasis on the development of human resources and to this effect, among other measures, to adopt programmes of mass education in the rural areas, technical training and community development, to ensure an active participation by the farmers in the common tasks to increase their income and their standard of living and to ensure the enjoyment of their political, social, economic and cultural rights;

4 To promote the establishment and expansion of co-operative organisations to be effective instruments for a better development of production and marketing of foodstuffs;

5 Strengthen measures for improving the availability of key agricultural requisites, including fertilisers, improved seeds, pesticides, improved agricultural machinery and implements, and to provide adequate advisory and extension services and institutions for training and research with due attention to the adaptation of methods and techniques to local conditions;

6 Promote the establishment of agro-industries, specially those supplying the agricultural sector with fertilisers, pesticides and agricultural machinery and equipment;

7 Improve transport, marketing, storage and distribution facilities;

8 Pay special attention, where necessary, to increased water supply including ground-water exploitation;

9 Intensify their efforts to make better use of the resources of the sea and of the fishery resources of both sea and river for human foodstuffs, through, among other measures, the application of modern technology in small fishery industries and the technical training of fishermen;

10 Promote adequate pricing policies which take into account the need to attain the maximum degree of production as well as appropriate level of efficiency;

11 Promote national reserves of food grains for stabilisation of consumer prices and meeting emergencies;

12 Increase their efforts to conclude agreements on complementary food production within the existing regional and sub-regional integration schemes and other regional and sub-regional agreements in conformity with national development programmes;

13 Consider the effects of the problems created by the dynamics of population on food requirements and take appropriate measures;

14 Encourage foreign private investments and the inflow of private capital for the above-mentioned purposes, if it is in accordance with their national development plans.

Developed Countries

1 Within the framework of their respective global aid programmes and in the light of the targets set by the Conference with regard to the volume of aid,

(a) to continue and to strengthen their aid to developing countries making efforts to increase food production and modernise the agricultural sector and for this purpose to give more emphasis, in response to requests of these developing countries, to increasing the assistance by providing agricultural requisites, especially fertilisers, pesticides, improved seeds, agricultural machinery and implements;

(b) to lay also equal emphasis on aid intended for the establishment of agro-industries for the manufacture of fertilisers, pesticides, agricultural machinery and water development equipment and to promote, for the same purpose, private investment if it is in accordance with national development plans of developing countries;

(c) to continue and to strengthen the necessary technical assistance through bilateral and multilateral channels including such assistance as would improve the quality of human resources which are crucial to economic growth;

(d) to provide food aid on a fair and just basis among developed countries as an interim measure of assistance to food-deficit countries, in such a way as not to affect the productive capacity of the recipient countries and, to the greatest practicable extent, in accordance with the FAO Principles of Surplus Disposal. This food aid should also assist the food-deficit countries in building up emergency reserves replenishable from time to time for short-term needs. In the case of food-importing donor countries, however, due account should be taken of their special circumstances.

—Food aid should be given on a grant basis or a loan basis on as generous terms as circumstances permit.

—Food aid should not provide undue incentives for increased production in developed countries.

—Food aid should mobilise where appropriate through international arrangements the capacity of developing countries to produce food supplies for food aid purposes.

—Any increase in cash contributions to multilateral food aid programmes should be used, where practicable, for the purchase on economic terms of food from the developing countries.

2 To carry out, to the extent practicable, measures providing more favourable conditions of access to their markets for primary products exporting countries, particularly bearing in mind the interests of developing countries, and permitting primary products exporting countries to participate in the growth of the markets of industrial nations.

The international organisations concerned

1 To intensify their co-operation with the developing and developed countries in their joint efforts to solve the world food problem, support and, within the limits of their resources and constitutional responsibilities, carry out an effective assistance to developing countries;

2 To take into account in so doing, among other considerations, the need for a co-ordinated global approach to action on the world food problem, including development on the agricultural sector and trade in agricultural products, as a guide to developing and developed countries and international agencies in the formulation and implementation of their plans, policies and programmes;

3 In adapting their structure, strategy and programmes to the changing situation and global efforts, to concentrate their activities and, in so far as their particular character permits, place greater emphasis on operational aspects, decentralise their services and strengthen their work in the field;

4 In financing agricultural development programmes and projects by international agencies, to give appropriate emphasis to the importance of providing, in response to requests, a sizable amount of agricultural requisites as an essential element in their assistance.

70th plenary meeting, 22nd March 1968

Appendix 2

Table 1 FAO indices of total and per caput food production
Indices, average 1952-56 = 100

	Total Food Production						Per Caput Food Production					
	Latin America	Far East[1]	Near East	Africa	Developing areas	World[1]	Latin America	Far East[1]	Near East	Africa	Developing areas	World[1]
1948-52 (average)	88	87	84	87	87	87	98	94	93	95	94	93
1953	95	98	100	98	98	98	98	100	103	100	100	100
1954	100	100	98	102	100	99	100	100	98	102	100	99
1955	102	104	100	101	103	103	100	102	98	99	101	101
1956	109	107	110	106	108	107	103	103	105	101	104	103
1957	112	108	115	106	109	108	103	102	107	99	102	102
1958	117	113	119	108	114	115	105	104	108	98	104	106
1959	116	118	122	113	117	117	101	107	108	100	105	106
1960	118	123	123	120	121	121	100	108	105	103	106	108
1961	125	127	124	117	124	122	103	109	104	99	106	107
1962	126	129	134	124	128	126	101	109	109	102	107	108
1963	132	132	138	128	132	129	102	109	110	103	107	108
1964	137	136	139	130	136	133	103	110	107	102	108	109
1965	140	134	141	130	136	134	103	105	106	100	105	108
1966	141	135	145	130	137	140	101	104	107	97	103	111
1967 (preliminary)	148	144	151	138	145	144	103	108	108	100	106	112

Note: 1 Excluding China (Mainland).
Source: *State of Food and Agriculture 1968*, FAO, Rome, 1968.

Table 2 Gross Domestic Product: past trends and FAO assumptions

Per cent per year compound

	1950-63	1958-63	1965-1975		1975-1985	
			L	H	L	H
Developing Countries	4·6	4·3	3·6	5·5	3·9	6·0
Latin America	5·2	4·7	3·9	5·8	4·0	6·0
Africa	3·5	3·8	3·2	5·2	3·8	5·6
Near East	4·8	4·9	4·1	5·9	4·7	6·4
Asia and Far East	4·2	4·0	3·4	5·1	3·5	5·9
India	3·4	3·9	3·4	5·0	3·4	6·0
World Total	5·4	4·9	3·7	5·1	3·6	5·3

Note: L = Low growth of GDP assumption.
H = High growth of GDP assumption.
Source: *Agricultural Commodities–Projections for 1975 and 1985*, Vol. 1, p. 9.

Glossary

AID	Agency for International Development
CCC	Commodity Credit Corporation
CCP	Committee on Commodity Problems (FAO)
ECAFE	Economic Commission for Asia and the Far East
ECOSOC	Economic and Social Council of the United Nations
EEC	European Economic Community
FAO	Food and Agriculture Organization
GDP	Gross Domestic Product
IGC	Inter-Governmental Committee (of WFP)
OECD	Organisation for Economic Cooperation and Development
PL 480	Public Law 480
UNCTAD	United Nations Conference on Trade and Development
UNICEF	United Nations Children's Fund
USDA	United States Department of Agriculture
WFP	World Food Program

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