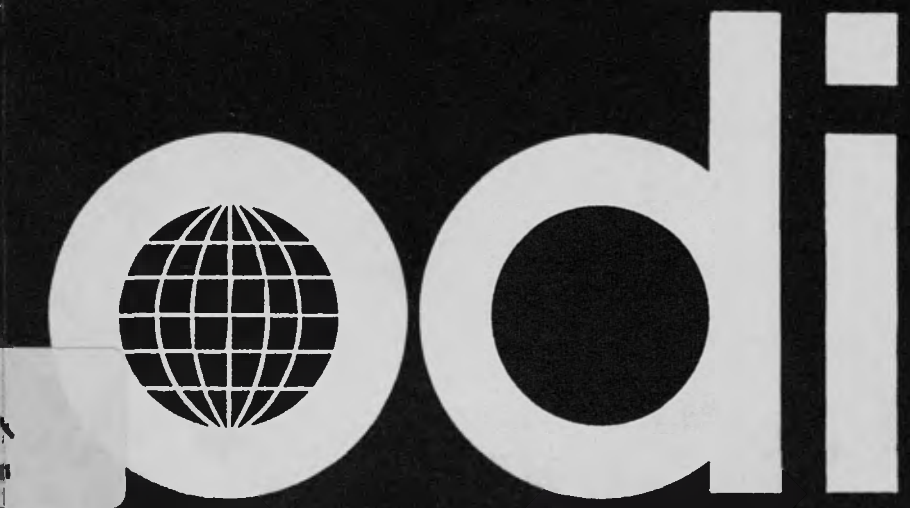
Overseas
Development
Institute

Food and Interdependence

The Effect of Food and Agricultural Policies of Developed Countries on the Food Problems of the Developing Countries

David Jones



The world food crisis is no longer headline news, but still continues, both in the form of a precarious balance between marketed needs and production and in the less dramatic but more deadly form of widespread malnutrition. The fact that the Third World suffers most has led to much heart-searching about the responsibilities of developed countries. This study sets out to provide straight thinking on the links between the food problems of the Third World and the food and agricultural policies of developed countries, paying particular attention to the policies of the UK and its partners in the European Community.

Price: £1.00

Food and Interdependence

The Effect of Food and Agricultural Policies of Developed Countries on the Food Problems of Developing Countries

David Jones

Overseas Development Institute
London

Contents

Foreword

In 1974, many people in developed countries became aware that there was a 'world food crisis'. They read about it in newspapers, watched people starve as a result of it on television, and even thought they were experiencing it themselves in the form of higher food prices and a sugar shortage. It was appreciated, however, that those who suffered most were the world's poorest people, and there was a considerable public bewilderment about the developed countries' responsibilities in the crisis. It was clear to many people that emotional responses like eating less hamburger were of dubious value in getting food to the starving, but, that being said, what were the priorities?

In early 1975, in order to clarify the issues involved in a practical way, the Overseas Development Institute, with generous support from the Nuffield Foundation, set up a study group of experts from industry, the civil service, the universities, and non-governmental organisations to consider the impact of EEC and UK policies in the field of food and agriculture on food consumption in poor countries, under the chairmanship of Professor Tim Josling of Reading University. The other members were: Anthony Bottrall, Overseas Development Institute; Dr. B. Cracknell, Ministry of Overseas Development; Professor J.L. Joy, Institute of Development Studies, University of Sussex; Dr. B. Persaud, Commonwealth Secretariat; J. Powell, National Farmers' Union; Robin Sharp, Oxfam; Professor H. Singer, Institute of Development Studies, University of Sussex; A. Vickery, Ministry of Agriculture, Fisheries and Food; A. Winegarten, National Farmers' Union; Robert Wood, Overseas Development Institute; and Maurice Zinkin, Unilever Limited. I acted as a rapporteur to the group.

This report arises from the group's work, but I must make it clear that it represents my personal conclusions and is not a group report. Indeed, we aimed at well-informed and stimulating debate rather than unanimous conclusions, and I know that some members of the group will disagree profoundly with some of the conclusions I have drawn. I am deeply grateful to them for all their work in meetings and in commenting on papers and drafts. My thanks are also due to the Nuffield Foundation, without whose financial support this report would have been impossible, and to my secretary Shamsi Assef, without whose patience it would never have seen the light of day.

David Jones

Summary

The 'food crisis' can best be seen as several linked crises: global limits to food production, growing dependence of less developed countries (ldcs) on food imports, fluctuations in physical demand and supply, localised famines, and persistent malnutrition. Of these, the last is by far the most important. It is primarily a question of the quantity consumed, not the quality. There is no world protein gap, though some of the malnourished do suffer from protein deficiencies or other specific nutritional deficiencies. Even so, the problem, locally and globally, is one of distribution rather than output. The quantity of food produced is far less important than its location or ownership. In fact, the world as a whole produces enough food to feed all its inhabitants, and can still produce much more. The main answer to the problem of malnutrition must be to give the malnourished the means to produce enough food, or the incomes to buy it.

The principal contribution of the developed countries (dcs) must be in the giving of more appropriate aid (which does not necessarily mean more food aid given in kind), reduction of trade barriers against developing countries (including barriers to food imports), provision of specific research and development aimed at ldc needs, and investment in developing countries.

So far as specific food and agricultural policies are concerned, the most important category of foods is cereals. Developed country measures to increase cereal production or decrease cereal consumption would, however, on their own be relatively poor instruments for relieving malnutrition. They would have most value in periods of supply/demand crisis, but even then they would be of less value than deliberate policies (with which they could beneficially be linked) to transfer resources to the malnourished. They could also be of value in increasing 'food security' if they were used to help build up stocks. Developed country patterns of food production are extremely wasteful of food, in a way which is, on balance, detrimental to ldcs, and probably even to dcs, though it should be pointed out that the wasteful use of food by dcs is no more immoral than the wasteful use of all sorts of other resources that could have been used to raise the level of life in ldcs.

Although the biggest problem is persistent malnutrition, temporary supply shortages like that of 1973/5 cause suffering and death in ldcs, and development of policies to deal with these are important. There are two possible solutions: delivery of food or money to those countries or people most affected, or creation of adequate stocks to smooth out fluctuations. Development of a system of linked nationally-held stocks, as advocated at the World Food Conference, still appears to hold out the best prospects, and negotiations are in progress in a desultory fashion, but progress is exceedingly slow; since the peak of the food crisis, many countries seem to have got used to living dangerously, and take an alarmingly relaxed attitude towards food problems.

These comments all apply particularly strongly to the European Community's agricultural system, of which the United Kingdom is a part. The EEC system has achieved self-sufficiency in meat and livestock products at the expense of self-sufficiency in cereals and high-protein feedstuffs. This pattern is politically convenient, given the small average size of farm in the EEC, but involves relatively high-cost and wasteful production. It excludes imports that ldcs can produce efficiently, and uses up as livestock feed commodities - particularly cereals - that they need for direct consumption. The apparently plausible prescription that the EEC should produce more food in order to help solve the world food crisis is, therefore, inadequate, if not plain wrong, because attempts to increase EEC production of meat and livestock products could not relieve the crisis and would almost certainly exacerbate it. This would also be the net effect of attempts to implement the UK White Paper, *Food From our Own Resources.*[1] On balance, however, and taking into account political factors, it is probably in the interests of ldcs for the EEC to increase cereal production, either for commercial export, creation of strategic stocks, or food aid. Suggestions that the EEC should set out to produce surpluses of milk products for food aid are irresponsible and should be emphatically rejected.

[1] HMSO, London, 1975, Cmnd. 6020.

Chapter 1

How Many Food Problems?

The 'food crisis' of 1973 and 1974 was extremely visible. Public concern in developing countries had already been primed by a number of studies on the theme of the world's limited resources. The food situation seemed to confirm the more alarmist scenarios. World stocks of basic foodstuffs - particularly cereals[1] but also high protein foodstuffs and oilseeds - fell alarmingly, and prices soared. Much publicity was (rightly) given to famines from the Sahel to Ethiopia, and across to Asia. World shortages and high prices even began to affect the lives of consumers in developed countries (dcs) like the UK, bringing home to their citizens the novel idea that they too were vulnerable. The World Food Conference of November 1974 came at an opportune time, and again concentrated public interest in global food problems.

These events led to considerable anxiety in dcs and stimulated a lot of sympathy for the plight of some less developed countries (ldcs). They also caused considerable public bewilderment as to what was the lot of ldcs in general, and what could best be done to help those who were short of food. Was excessive consumption in dcs the cause of the problem, and if so, would sacrifices by their populations help? Should dcs try and produce more food? If they did so, would they bid scarce resources like fertilisers away from the ldcs (for, to compound the situation, there was also a world shortage of chemical fertilisers)? There was a welcome awareness that the world was small and interrelated but considerable uncertainty about the nature of the interrelationship.

This study is an attempt to answer some of these questions, with particular reference to the UK and the European Community, limiting itself very largely to the relationships between food and agricultural policy in dcs and the food problems of the ldcs. It should not be taken to reflect a belief that this is the only, or even the major, way in which policies and decisions in dcs affect the food situation in ldcs. Nor should it be taken to imply that the whole responsibility for solving ldc (or world) food problems should be borne by the non-Communist dcs. It is quite clear that many of the most difficult decisions and actions must be taken by ldcs, and among the dcs the Communists have as great a moral obligation to help as any of the others. The reason for focusing the study on this small part of the problem is that this is an area where the well-meaning public tends to come to excessively *simpliste* conclusions about the effects of policies in dcs, while, on the other hand, governments tend to take important decisions without taking sufficient note of effects on ldcs. Moreover, the attentions of governments and the public are often directed at problems that are news, rather than problems that are big. A

---

[1] Cereals are here taken to include wheat, coarse grains, and rice.

famine or an earthquake gets a crisis response; the much larger daily death toll of malnutrition does not.

The first meeting of the World Food Council (see below p. 38) in June 1975 was held at a time of waning public and official interest in food. The Sahel famine was over, food prices were falling on world markets, and the re-emergence of food surpluses in the near future seemed not unlikely. In these circumstances, many observers judged the meeting to be at best unproductive, at worst a fiasco. The goodwill of the 1974 World Food Conference seemed to have evaporated and been replaced by national rivalries, empty verbiage, and bureaucratic wrangling. It happens that interest in food has since revived somewhat, because the overall supply position has turned out to be very much less comfortable than had originally been supposed. However, it is still very questionable whether the emphasis is being placed on the most important parts of the world food problem.

A multiple problem

A simple fallacy was to suppose that there was only one big crisis, which somehow included drought in the Sahel, malnutrition, the price of sugar in the UK, and the decline in world cereal stocks. While it is true that all these factors were connected in one way or another, the malady calls for a much more detailed diagnosis if it is to be treated correctly. One can distinguish at least five separate problems :

(i) The continual race between the world's need for food and its production.

(ii) The growing dependence of ldcs on food produced in dcs.

(iii) Unpredictable fluctuations in demand and supply.

(iv) Localised famines.

(v) The persistence of malnutrition even in those ldcs where real incomes are increasing.

The race between world production and consumption

The first of these has been widely assumed to be at the root of 'the' food crisis. It has been seen as the realisation of the Malthusian nightmare where demand, fed by population growth, outstrips productive capacity. As a long-term threat, this has to be taken seriously, but it is not imminent, nor was it the cause of the crisis in 1973 and 1974. World food production [2] rose on average 2.8% a year between 1954 and 1973, while world population rose only 2% (USDA Assessment Data).[3] In dcs as a group (including the USSR and Eastern Europe), food production grew at 2.7% compared

---

[2] Excluding the centrally-planned Asian countries.

[3] *The World Food Situation and Prospects to 1985,* US Department of Agriculture, Foreign Agricultural Economic Report No 98, Washington, December, 1974. (Henceforth referred to as "USDA Assessment").

with population growth of only one%; developing countries had 3% production growth and 2.5% population growth. Thus dcs have had a much faster rate of growth of food production per head than developing countries - 1.5% a year compared with 0.4% - but within the developing country group, the only major area that actually experienced a decline in *per capita* food production was Africa - the continent that one might have supposed had experienced the least pressure.[4]

Looking into the future is more difficult, but there is no reason to suppose that the world is running out of agricultural land or ways of raising agricultural yields. It has been estimated[5] that only half the land suitable for livestock or crops is being used. Agricultural technology continues to increase yields, and existing technology is far from being fully utilised, or fully adapted to all its possible users - particularly in ldcs. There is a degree of uncertainty about the possibility of long-run climatic changes. These have occurred before and might occur again - either for purely natural reasons, or through the changes man has caused in the environment. However, this is no more than a cloud on the horizon; and there is no consensus on the likely direction of change.[6] Barring this possibility, technical barriers to global food production are not the most immediate problem. It should be possible, for at least the next twenty years, to produce enough food for those who are now undernourished, and feed the remainder of the world's population at least as well as they (or their parents) are fed today. However, it is not enough simply to produce food; there has to be an efficient system to distribute it to those who need it. Throughout the 1960s, cereal producers were preoccupied with food surpluses, but there were still hundreds of millions of undernourished people. That is why technical barriers to production *in particular areas* are important, even though there is no global constraint.

The growing dependence of ldcs on food imports

A disturbing feature of the world food situation in the post-war period has been the fact that the food consumption of ldcs has grown slightly faster than population or food production, and excess requirements have been met by imports. This indicates rising average nutritional standards, though, as we shall see, with little impact on the absolute numbers of the malnourished. The seeming paradox is explained by inegalitarian growth in incomes and consumption. In the post-war period, the richer underdeveloped countries have tended to have the best growth rates, and the richer people in underdeveloped countries have benefited most.

---

4 I accept the objection that figures of food production in developing countries are so poor as to be almost useless. Nonetheless, the figures given here for overall trends appear to be consistent with population growth, incomes, changes in trade patterns, and simple observation, and I do not believe they present a misleading overall picture.

5 USDA Assessment, p. 58.

6 See, for example, *ibid*, p. 72 and Louis M. Thompson, 'Weather Variability, Climatic Change and Grain Production', *Science*, Vol 188. No 4188, 9 May 1975, pp 535-541.

A very large share of these imports consists of cereals, which are the most important food items for many ldcs, and may be taken as an indicator of their overall food supply position. Before the second world war, ldcs as a group were net exporters of cereals; they have now become major net importers. The volume of their gross cereal imports rose from 12.4m. tons in 1949-51 to 36m. tons in 1972. The World Bank has suggested that such imports might reach 52m. tons by 1975.[7] The value rose from $1,000m. in 1955 to $3,000m. in 1967 (reflecting a fall in the real price of cereals) but shot up to $9-10,000m. in 1973/4. The number of ldc net exporters has dropped, and their contribution to world grain exports fell from 23 per cent in 1956/60 to 11 per cent in 1972.[8] Indeed, there are now very few ldcs that are consistent net exporters of cereals, and they do not include any of the very poor developing countries. These growing import requirements have been met by the US, Canada, and, to a much lesser extent, Argentina.

Attempts to predict future demand and production trends are open to detailed criticism but, although they differ in methodology, assumptions, and detailed findings, they show a degree of unanimity in forecasting that, up to at least 1985, growing market demand for cereals in ldcs will have to be met by increased imports from dcs,[9] unless ldcs receive very substantial assistance to help them increase their food output. For example, the UN Assessment[10] projections - largely based on extrapolation of trends - show the gross cereal deficit growing to about 100m. tons by 1985. This would be about 16 per cent of total ldc cereal consumption, compared with about 9 per cent in 1970. It must be emphasised that this gap relates only to likely market demands, not to nutritional needs. If it is filled, it will not eliminate malnutrition; but if it is not filled, there will be physical shortages and higher prices in ldcs, which will aggravate malnutrition.

There is little doubt that the dcs are technically capable of increasing their production to fill such a gap. The problem this raises is, however, twofold: first, the foreign-exchange costs of such imports on commercial terms would be formidable, and are liable to fall particularly heavily on some of the poorest ldcs like India, Bangladesh, and Sri Lanka. In allocating foreign exchange, such countries may have to make choices between adequate food supplies and development or - to be realistic - between food and defence. Second, high dependence on food imports makes countries extremely vulnerable to crises.

---

7 IBRD, *Additional External Capital Requirement of Developing Countries,* March 1974 Mimeo.

8 USDA Assessment, p. 20.

9 See *ibid,* pp 32-39, for a good summary of forecasts by the FAO, USDA, and the Iowa State University. These vary in sophistication, but do not go to the extent of complete modelling, or even feeding back the export gap into the model to see how it affects the demand and supply projections.

10 Data from *Assessment of the World Food Situation Present and Future.* UN Food Conference Document E/CONF 65/3 (henceforth referred to as the "UN Assessment"), p. 47. Figures exclude China.

This was well demonstrated by the food crisis of 1973/4. Cereal prices more than doubled at a time when a number of ldcs, themselves affected by famines and poor harvests, were faced with domestic cereal production shortfalls. The volume of food aid fell abruptly - supplies of cereal aid from multilateral organisations and OECD bilateral donors fell from 13m. tons in 1969 to 6m. tons in 1973. Moreover, there is a danger in such a situation that exporters, fearing domestic shortages or inflationary effects, will embargo exports. This cannot be regarded as an exaggerated fear. In 1973 the US restricted soyabean exports to safeguard domestic supplies, and fertiliser manufacturers were officially encouraged to impose voluntary restrictions on exports; and in 1975, there was considerable public opposition in the US to grain sales to the USSR, based on their likely effect on domestic US prices.

A number of very simple policy implications can be drawn :

(a) that it is necessary to step up food production in ldcs, particularly those with food deficits;

(b) that, however great an effort is made under (a), for some time to come dcs will need to produce food for export to ldcs;

(c) that a substantial part of the flow of food to ldcs will probably need to be on concessional terms, or supported by concessional finance;

(d) that a strong *prima facie* case can be made for stocks to act as a buffer and prevent random fluctuation in food supply and demand from turning into food crises, or creating serious foreign-exchange problems for ldcs.

Unpredictable supply-demand fluctuations

Fluctuations are normal in both supply and demand. On the demand side, they reflect business cycles and policy decisions. Even in highly developed market economies, the demand for food tends to follow fluctuations in overall prosperity. For, though basic nutritional requirements remain constant and constitute one of the first calls on incomes, they can be filled in a variety of ways. In prosperity there is a tendency to substitute meat and livestock products for cereals and other vegetable products, which, paradoxically, leads to a vastly greater demand for cereal and vegetable products as livestock feed. Moreover, in recent years fluctuations in world demand for cereals have been widened because the USSR and Eastern Europe have switched to a more expensive consumption pattern based, increasingly, on cereal-fed livestock.

On the supply side, there are the inevitable climatic variations, plus such quasi-random influencesas breakthroughs and setbacks in agricultural technology, and war. These deflect global demand and supply from an otherwise fairly steady rising trend. The crisis of 1973/5 was caused by an unusually severe supply fluctuation. 1972 was probably the first post-war calendar year

in which cereal production actually declined.[11] This happened because of widespread bad weather. Otherwise, world demand was buoyant. The USSR and China - both affected by bad harvests - imported unprecedentedly large volumes of cereals to maintain their domestic consumption. This itself was unusual; in previous bad harvests they had generally relied largely on consumption cuts. The US and Canada, the major free-market exporters, were already cutting back production and running down stocks which they believed had become an unjustifiable financial burden. The big purchases by the USSR and China depleted stocks still further. 1973 and 1974 saw some recovery in production but not enough to prevent further decline in stocks. Carry-over stocks have fallen from 201m. tons at the end of 1969/70, to 134m. at the end of 1972/3, and 116m. at end 1973/4,[12] and an estimated 102m. at end 1975/6.[13] Hopes for stock rebuilding were pinned on good harvests expected in 1975/6, but 1975 was another year of abnormal weather conditions. Grain crops were low all over Europe, and particularly in the USSR, which again had recourse to big purchases from the US. Three years of high cereal prices, and the general recession in the world economy, have reduced overall demand for grain, but the overall supply position will remain uncomfortably tight until at least the harvest of 1976.

The present fluctuation in supplies has, therefore, stretched out from one year to two, and then to three; yet we may still be fairly confident that it is only a fluctuation, not a new equilibrium of permanent shortage. The existence of such fluctuations reinforces all the policy implications spelled out above - but particularly the need to hold sufficient stocks to guard against unforeseen shortages.

Localised famines

Localised famines are, on balance, more likely to occur in periods of general world food shortage. The global weather conditions that make for a poor harvest on one continent do not usually compensate by producing bumper crops elsewhere.[14] And weather that gives poor harvests on the best crop land may give no harvest at all on marginal areas. This was the case for large parts of Africa, Asia, and Latin America in 1973-4. However, local famines do also occur in years when most of the world is enjoying good harvests, and they are not invariably caused by droughts; floods, pestilence, and wars are also potent causes.

---

[11] UN Assessment, p.1. In contrast to calendar years, there were a number of crop years when cereal production declined (USDA Assessment, p. 22). However, the only crop year decline comparable with that of 1972/3 was 1961/2, when the stock position was quite different.

[12] *FAO Monthly Bulletin of Agricultural Economics and Statistics,* No. 6, Vol. 24, June 1975. These figures exclude stocks of China and the USSR, and relate to stocks at the end of each country's respective crop year.

[13] FAO, *The State of Food and Agriculture, 1974,* Rome 1975, and *FAO Monthly Bulletin of Agricultural Economics and Statistics, op. cit.*

[14] See USDA Assessment, p. 73.

Long-term solutions to famine depend on the nature of the particular famine in question. Most, however, occur in marginal agricultural areas, and they rarely reach disaster level except in underdeveloped countries with weak administrations, and, within countries, in areas of poor communications (commonly the case in marginal areas). The main obstacles to effective famine relief are not usually obtaining the necessary food, but the identification of the famine, and the sheer logistics and administrative bottlenecks involved in getting food to hungry people in remote areas - basic problems of underdevelopment. Overall, it is difficult to say whether the famine problem is getting better or worse. Population pressures increase the number of people in marginal agricultural areas, which in turn may cause ecological breakdowns and more frequent famines, but famine relief and administration tends to improve, so that fewer people actually starve. 'Emergency' aid now makes up about 10% of the World Food Programme (see below p.17) expenditure. However, those saved from famine are likely to join the ranks of the permanently malnourished.

The existence of local famines tends to strengthen, rather than weaken, the policy conclusions already drawn, because famines can only effectively be tackled if food supplies for ldcs are secure and adequate. However, it would be misleading to suggest that general measures to improve food supplies or food security could prevent famines.

The persistence of malnutrition

Despite increases in average real incomes in ldcs since the second world war, the number of malnourished people has not fallen appreciably, and may well be increasing. In recent years, there has been a considerable change in generally accepted ideas about the nature of malnutrition. It now appears that past identification of malnutrition with the 'protein gap' was largely incorrect,[15] and that in most areas protein consumption would be adequate if existing diets were eaten in sufficient quantity to satisfy calorie requirements.[16] Ideas about minimum calorie requirements have also been revised downwards to quite a dramatic extent.[17] Nonetheless, the most common form of malnutrition is now believed to be simple undernutrition – protein-calorie malnutrition (PCM).[18] As a consciously conservative estimate, the UN Assessment put the number of people in ldcs with insufficient protein/energy food supply

---

[15] *British Aid and the Relief of Malnutrition,* Overseas Development Paper No. 2, London, HMSO, 1975.

[16] UN Assessment p. 56.

[17] *Energy and Protein Requirements,* WHO Technical Report Series No. 522, 1973.

[18] Also known as protein-energy malnutrition (PEM).

in 1970 at 434 million - about a quarter of ldc population[19] - distributed by region as shown in the table below.

*Estimated ldc population with insufficient protein/energy supply by region, 1970 (excluding centrally planned Asian ldcs)**

Region	Population (000,000,000)	% below lower limit	Number below limit (000,000)
Latin America	0.28	13	36
Far East	1.02	30	301
Near East	0.17	18	30
Africa	0.28	25	67
Total excluding centrally planned Asian ldcs	1.75	25	434

* The critical limit used here is 1.5 times the basic metabolic rate, and allows for very little activity beyond merely staying alive at constant weight.

These figures are of necessity extremely crude. However, they are more likely to be too low than too high. It should also be noted that they are intended to reflect the normal situation in a non-drought year. Within this total, about half are believed to be young children, which in turn implies that about half the young children in ldcs are suffering from inadequate nutrition.[20] This leads to marasmus and, in extreme cases, to kwashiorkor. Severe infant malnutrition appears to affect subsequent mental development and, occurring in the first year of life, may inhibit the development of the brain.[21] In one respect the problem is very small. If we accept the UN Assessment figures at face value, a mere 25 m. tons of cereals a year - about 2% of world cereal production - would be enough to eliminate basic protein-calorie malnutrition, if it were distributed to the right people. It is, however, the question of distribution that is the great problem.

To this total of undernourished, one must add a large but uncertain total of people suffering from specific dietary deficiencies.[22] Protein deficiencies are liable to occur in communities that depend almost wholly on starchy root crops, plantain bananas, bread-fruit and the like, and lead, like protein-calorie malnutrition, to marasmus and kwashiorkor. Vitamin A deficiency is a major cause of blindness; iron and folic acid deficiencies lead to anaemia which, in Latin American countries affects 5-15% of men, 10-35% of women

---

[19] Excluding centrally planned Asian countries.
[20] See USDA Assessment, p. 50.
[21] D.S. McLaren, *Nutrition and its Disorders*, Livingstone Medical Texts, 1972, p. 110.
[22] This draws largely on the UN Assessment, pp 67-69.

and, in some communities, up to half the children. Iodine deficiency leads to goitre (which may, however, also be caused by other dietary factors). This is still a widespread disease, leading in some cases to feeble-mindedness and stunted growth.

Who suffers from malnutrition? At the risk of oversimplification, the very poor. Where specific dietary deficiencies are concerned, it may be possible to correct them at relatively low cost by supplementing diets or adding corrective substances to commonly purchased foods (iodised salt for goitre, for example).

Some groups, like migrant workers, tend to be malnourished because they lack the knowledge to make use of available local foods, and, in some cases, customs and taboos cause avoidable malnutrition. But in general, traditional diets are reasonably balanced, and the main reason for malnourishment is sheer poverty.

The problem is often seen as one of rural poverty, because a very large proportion of the population in ldcs is rural, but it has its counterpart among the economically and socially deprived in ldc urban areas. Indeed, there is some evidence that the urban poor suffer more malnutrition than rural families with equal income.[23] In some countries like Brazil, there are probably more urban than rural malnourished.[24]

Children and pregnant and nursing mothers are particularly at risk, because of their extra food needs. Where food is not plentiful, they may lose out from traditional eating customs under which they are the last members to help themselves from the communal bowl. 'The evidence, though limited and usually qualitative, suggests that adult males frequently receive more than their needs out of the total family food (even allowing for their greater work requirements) while pregnant and lactating females and pre-school children receive much less'.[25] In areas where diets are bulky and starchy, children fed on a traditional two-meal-a-day diet may be physically unable to consume enough of the staple to provide their calorie or protein requirements, and weaning on to such foods may cause malnutrition. ('Kwashiorkor' comes from the Ga dialect of Ghana, and means 'the disease the first child gets when the next one is on the way').

The sick are another vulnerable group. Illness and clinical malnutrition are mutually reinforcing. The malnourished are more susceptible to other forms of illness, and many types of infectious and debilitating illness reduce the efficiency with which the body absorbs food, making a barely adequate diet inadequate and precipitating clinical malnutrition. One way of attacking

---

[23] UN Assessment, p. 62.

[24] See *Food Consumption in Brazil - Family Budget Surveys in the Early 1960s*, Getulio Vargas Foundation, (published for USDA, 1970). This concluded that out of a national total of 27m. people with calorie-deficient diets, 17m. were urban-dwellers. The calorie standards used in this study were, however, higher that those recommended by the FAO/WHO working party *Energy and Protein Requirements, op. cit.*

[25] Sue Schofield, 'Village Nutrition in Less Developed Countries', *Institute of Development Studies Bulletin*, Vol. V, No. 4. May 1974, p. 17.

malnutrition is, therefore, to cure or prevent disease. The old suffer because they are not able to provide for their own needs. Subsistence-farming households with low agricultural yields and inefficient food-storage systems very frequently suffer from seasonal malnutrition, and of course a very large proportion of third-world population is subject to malnutrition in periods of famine or drought, or after floods or hurricanes.

Malnutrition thus takes a wide variety of forms, has varying causes, and hits different sections of the population in different circumstances, so that, if measures to alleviate it are to be focussed as efficiently as possible on those in need, they need to be carefully tailored to the needs of specific areas. Notwithstanding this, malnutrition generally is a disease of economic and social deprivation.

> At-risk families have one, or (usually) several, of the following characteristics: low status or caste; landlessness; illiteracy; large (family) size, or small per capita income. Such families have few resources to meet the nutritional needs of working family members, let alone the special needs of vulnerable infants or pregnant women.[26]

The general solution is to give the poor and socially deprived the means of earning livelihoods and/or to transfer real incomes (which may include food) to them. The most disturbing aspect of this problem is its persistence. The UN Assessment suggests that in the post-war period there has probably been a decrease in the *proportion* of ldc population that is malnourished, but an increase in their absolute numbers. The fact is that we really do not know whether numbers of malnourished are going up or down - the statistics are simply not good enough. What is sufficiently clear is that the problem is still a massive one. The benefits of such economic development as has occurred have tended to be very unequally shared by ldc populations. Those who were already better off have often benefited most, and the poor - whom it is most difficult to reach even if the political will to do so exists - have tended to remain poor or even, in some cases, to get poorer.

Once again, the malnutrition problem reinforces the conclusions already spelled out, particularly the need to increase food production in ldcs, though it now becomes clear that the effort to increase production should be concentrated on those who are malnourished. Food aid from dcs to ldcs is not a necessary component of measures to relieve malnutrition, though it can be used in this way. What is important is resource transfers - whether or not in the form of food - (i) to increase the income-earning potential of the malnourished and (ii) to provide direct relief. Stockholding measures to prevent or alleviate food crises remain very important, as such crises swell the numbers of malnourished. Measures in the trade field to increase the incomes of developing countries become extremely important, because malnutrition is essentially a disease of poverty and underdevelopment.

---

[26] *ibid.* p. 15.

To sum up, of the five problem areas listed, the biggest, most immediate, and most intractable is malnutrition. Demand/supply fluctuations and localised famines are, in principle, more tractable, and attacks on these problems could make valuable inroads into the substratum of malnutrition. The growing dependence of ldcs on dc food production poses problems of food security as well as foreign exchange for ldcs. Solutions are difficult, depending largely on improved and transformed agriculture in ldcs, but it is important to seek solutions that also attack the roots of malnutrition. The Malthusian problem of the world running out of agricultural capacity must be taken seriously, but it is not immediate.

Chapter 2

Our Policies and their Food - the Links

In this chapter we shall take a brief look at the effects of dc policies in the general field of food and agriculture on the problems outlined in chapter one. Within this general framework, the main areas of interest are aid, trade, food and fertiliser production and consumption, stocks, research, investment, and, of course, the activities of dcs in such forums as the Food and Agricultural Organisation of the United Nations, the World Food Conference, and the World Food Council.

Aid

Aid (official development assistance) cannot generally be considered as an element in dc food and agriculture policy, except where food or fertiliser aid is concerned. From 1963 to 1972, food aid made up about 20% of official development assistance from OECD member states.[1] In terms of what aid is meant to do, however, it is quite difficult to distinguish the functions of food aid from those of financial aid, and it is worth commenting briefly on general aid priorities in the light of the food and malnutrition situation of developing countries.

Aid for malnutrition and famines

The UN Assessment estimates of the extent of malnutrition (quoted on p. 10) underline the magnitude of this problem. It is clear that malnutrition has not diminished greatly in the post-war period, despite the development of official aid programmes. There are a few notable exceptions, but the largest of these is China, where the achievements made in the field of nutrition have nothing to do with aid.

The need to direct more aid to the very poor (who are generally those who suffer malnutrition) is increasingly recognised by aid agencies - including the UK's Overseas Development Ministry,[2] the US Agency for International Development (USAID), and the World Bank. However, there is accumulating evidence that not only does general economic assistance fail to 'trickle down' to the very poor, but that even programmes and projects deliberately aimed at them tend to be 'captured' by the relatively well-off. Aid to the very poor is very difficult to administer successfully. Nor do aid agencies usually have a very clear idea how much of their aid is directed to, or reaching, the very poor. It is extremely difficult to make meaningful estimates of this. It is easier to measure the proportion of aid disbursements going to a partic-

[1] *Development Co-Operation, 1974 Review,* Development Assistance Committee of the Organisation for Economic Cooperation and Development, p. 86.

[2] See *The Changing Emphasis in British Aid Policies. More Help for the Poorest,* London, HMSO, October 1975, Cmnd. 6270.

ular sector. For example, in 1972/3, 5% of UK bilateral disbursements on projects went to the renewable natural resources sector, which is mainly agriculture.[3] However, such a breakdown is of dubious relevance in assessing the economic impact of aid, since it gives very little idea how much went to peasant and smallholder agriculture as opposed to large-scale irrigation, etc. It certainly cannot be regarded as a proxy measure for the amount of aid going to rural development, since it misses out rural roads, rural health, rural education, and so on, all of which are of comparable importance to agriculture. Unless donor agencies learn both to get results and to measure them, calls for more aid to rural development and to the poorest people in poor countries may get no further than the stage of good intentions.

Aid to combat malnutrition must have two main prongs: short-term relief, and long-term measures to raise the incomes of the very poor. In some cases, it is possible to combine the two, because the poor can be employed on works projects that have the eventual effect of raising incomes - for example, feeder roads, dams, soil conservation works. Opportunities for this appear particularly good in rural areas. However, such opportunities for killing two birds with one stone appear so beguiling that one should sound a note of caution. There are likely to be trade-offs between short-term relief and long-term improvements. Works projects normally help the able-bodied, but may fail to get food to children, nursing mothers, the sick or the old. On the other hand, labour-intensive works projects may feed a lot of people, but are often slower and more expensive than conventional mechanised projects, and require a lot of scarce administrative capacity. And just as there are some types of malnutrition relief that cannot be left to works projects, so one must accept that some of the necessary long-term measures to raise the incomes of the poor cannot be achieved through labour-intensive schemes.

Much the same can be said about aid for famine relief. Where a famine is a one-off affair, and is unlikely to be repeated, temporary relief measures may be enough. However, famines are not random, frequently striking the same area repeatedly, and call for very specific long-term corrective measures.

Aid for food production

The food-deficit position of many ldcs, and the problems this creates, are reasons for giving aid simply to increase ldc food production. However, I would argue that this should either be part of the attack on malnutrition, or take second place to it. Wherever possible, aid to food production should be given in such a way as to make the maximum impact on the incomes of the very poor, and hence on malnutrition. Where it is possible to increase the food production of the very poor, this ensures that the extra food goes to those who need it. This implies a small-farmer - or at least a labour-intensive -

---

[3] Ministry of Overseas Development, *British Aid Statistics* (calendar year series) 1974, p. 7.

approach,[4] and one must reiterate that this is very difficult to implement. If the aim were simply to increase agricultural output as quickly and cheaply as possible, the solution would probably be to rely on relatively large farm units, but this would not do much to relieve malnutrition. It should also be pointed out that since the food deficits that worry foreign-exchange planners are measured in terms of market demand, not nutritional need, a solution that directly provides extra income (or food) to the malnourished is likely to require a far larger increase in production than a solution that relies on increased production by large farmers, because when the malnourished have more income they eat more. I do not think this should be regarded as a disadvantage, though foreign-exchange planners might see it as such. These principles should not merely apply to direct aid for food production, but need to be carried through to aid in complementary fields, particularly agricultural research, but also transport, education, and industry.

Food stocks are another candidate for concessional aid. They do, however, raise some practical problems. The value of adequate world cereal stocks to ldcs can hardly be disputed (for the moment we shall skip the question how much is adequate), but if the stocks remain in the possession of the donor, they are not aid; if they are donated to an ldc, they are only stocks until they are used, and since there is always likely to be political pressure to use them, donors are likely either to demand some control over their use, or to lay down stringent conditions for their release. These are not insoluble problems, but they are potential causes of friction. If stocks are donated to an international intervention agency, much the same problems arise - indeed from the donor's point of view they may well be more intractable; and since non-ldc importers are likely to benefit, it becomes a moot point how much of the stocks donated should be counted as aid.

Food aid

Decisions on food aid are often closely tied up with food and agricultural policy. A cynical but probably reasonably accurate explanation is that, for a number of major food producers, food aid has, in the past, gone a long way to legitimise financial losses arising from the production of surpluses under protective agricultural policies. Consequently, policy makers in donor countries have tended to behave as if the real cost of providing food aid was considerably less than its market value.

One might suppose that food aid was a particularly appropriate way of responding to the food problems of developing countries. In fact, however, there are very few situations in which physical shipments of food are preferable to financial aid on similar grant or loan terms, given fairly flexible procurement conditions. Even in famine situations, the problem is often lack

[4] Big farms, or state farms, can employ large amounts of labour to produce such crops as sugar, sisal, cotton, but are subject to strong management, and even financial, pressures to be 'modern' - i.e. capital-intensive.

of money to buy food rather than lack of food to buy, and it may be cheaper, easier, and more effective to provide financial aid[5] than to organise dramatic lorry convoys. Food aid is normally tied to agricultural surpluses of the donor country, which are sometimes bizarrely inappropriate (e.g. butter, canned meat). Such surpluses are undependable, and supplies tend to be tightest at times of general world shortage. Food aid costs a lot to ship and to store, and these costs are often borne by the recipient country, or taken out of some other part of the donor's aid programme. Even where the recipient is necessarily dependent on food imports, the donor country may not be the nearest source of supply, so that transport costs are raised. The experience of receiving food aid in new types of food creates initial problems of acceptance that may, in time, be transformed into new and expensive consumer tastes (for example, bread in Ceylon). And lastly, there is the big question whether food aid has harmful disincentive effects on local agricultural development.[6] In most situations, the most important arguments in favour of food aid are that it is wholly or partly additional to other forms of aid that would have been supplied by the same donor (an argument examined in more detail below, p. 50), and that financial aid is hedged around with restrictions, and/or given on harder financial terms, thus cancelling out its theoretical virtues as the cheapest and most flexible form of aid to administer.

Recent international action on food aid

Total official food aid from OECD donors over the decade 1963-73 averaged $1.300m. a year - about 19 % of their total official development assistance. The amount, volume, and value of this aid has, however, declined over this period. In 1964, 16m. tons of cereals were disbursed, worth $1,500m. In 1973 6m. tons were disbursed, worth $1,100m. (at current prices). The main reason for this is the decline in commodity aid from the US as its grain surpluses were run down. Until 1968, over 90% of food aid by value was from the US; by 1973, its share had fallen to 55%. By contrast, the share of the EEC, Canada, and Japan has been rising steadily. In 1973, the EEC as a whole was the second largest single donor after the US, supplying 23% of the total, by value. There were no major non-OECD donors. Within the OECD total, only 37% of food aid was on grant terms in 1973; 25% flowed through multilateral channels (including the EEC); 80-90% of the food provided in 1972 and 1973 was cereals. The largest multilateral channel, which carries about 14% of food aid, is the *World Food Programme*, which was created in 1963 under the aegis of the FAO and the UN. WHO and UNRWA have smaller programmes.

The next important international initiative after the World Food Programme was the *Food Aid Convention.* This formed part of the International Grains

---

[5] Funds channelled through the World Food Programme may be used in this way.

[6] This argument may well have been overdone by writers in the past. See P. Isenman and H. Singer, *Food Aid: Disincentive Effects and the Policy Implications*, published as Institute of Development Studies Communications Series, 116, 1975, and US Agency for International Development (USAID) Discussion Paper 31, 1975.

Arrangement of 1967, and had three main goals: to spread the load of providing food aid; to reduce wheat surpluses by providing supplies to countries unable to afford commercial purchases; and to assist ldc wheat producers. The Convention, originally regarded as a negotiating concession to the US in the 'Kennedy Round' of the General Agreement on Tariffs and Trade (GATT) negotiations, proved to be the most solid part of the Arrangement, and persisted in a modified form when the latter was replaced by a more limited International Wheat Agreement in 1971. Under the Convention, donors undertake to make specified amounts of cereals, or equivalent cash payments, available each year for food aid. They can choose their own disbursement channels, and aid can be on concessional loan or grant terms. The UK and the EEC were donors in the initial scheme. The UK dropped out in 1971, but came back in as an EEC member in 1972. Total annual commitments of all donors are 4,226,000 tons (October 1975), and the three-year convention of 1971 has been extended by protocol, so that at present it runs until June 1976.

The most recent international action was the agreement of the World Food Conference, in November 1974, on a target of 10m. tons of food grains a year, plus 'adequate' supplies of other foods from 1975 onwards. No hard rules were laid down on the terms of this aid, the channels through which it was to be given, or the division of the food aid burden among donors; donors were, however, asked to pay particular attention to the needs of those countries most seriously affected by the current food problem. This agreement has apparently had some effect. In July 1975, food aid commitments totalled 8.6m. tons.[7] Canada, Australia, and the United States increased their commitments, though the European Community did not. However, it seems unlikely that the target will be reached in 1975/6, and even if it were, there would still be less food aid in volume terms than there was ten years ago. On the positive side, distribution is now more sophisticated, and there is at least a greater awareness that food aid should not be squandered on countries that do not really need it.

Trade

Trade policies of dcs are closely linked with the food and nutrition situation in ldcs, because they affect income levels and patterns of production and employment. Since the biggest food problem of all - malnutrition - arises from lack of adequate incomes and remunerative employment, any measure on the trade front that raises ldc incomes through trade stands a good chance of improving the nutritional status of ldcs, while protective measures applied by dcs that reduce the volume of ldc exports, or the prices received by the exporters,

---

[7] Report of the World Food Council on its first session - Note by the Secretary-General, E/5708, July 1975, p.9.

may be expected to worsen ldcs' nutritional position.[8] The effectiveness of such measures depends, however, on the economic and social structure of individual ldcs. Given the structural rigidity and economic inequality existing in many ldcs, it is conceivable that in some cases substantial increases in income from trade may have little impact on those who suffer malnutrition. It may even be conceded that in particular cases the resulting changes in the structure of production, employment, and prices in ldcs may have negative effects, though this seems unlikely to be a frequent, let alone a general, case.

What is the position with food and agricultural exports of ldcs? Many ldcs - particularly the poorer ones - are highly dependent upon exports of food and agricultural products (though not, usually, cereals) for their foreign-exchange earnings, while most dcs have fairly elaborate systems to protect their own agricultural industries from competing imports, and, to a lesser extent, to protect industries producing substitutes for imported agricultural products outside the food field. If the general case just argued holds for food and agricultural exports, it would appear that such dc protective policies tend to increase malnutrition in ldcs. It might, however, be argued that food and agricultural exports are a special case, and that, since people in ldcs are short of food, dcs should not import from them food or other agricultural crops that compete with food for land and labour.

In general this argument appears fallacious. Food for export would not continue to be produced in the absence of export markets, and would not be available for consumption by the malnourished. The shortage of incomes is a far more important factor in malnutrition than the shortage of food, so that measures to cut food exports would probably cut food consumption by reducing incomes, while many of those involved in food production for export would swell the ranks of the malnourished (a displaced sugar worker cannot live on sugar cane). Nor would those who produce non-food crops for export generally be better nourished if they were forced to switch to food production for domestic consumption. Exports of certain foods provide incomes to buy other foods, and the exchange is normally advantageous to the ldc. For example, beef exports from semi-arid areas permit the exporters to import cereals, which improves their diet.

There must, of course, be cases where the exchange is less satisfactory, and in some cases the existence of export markets may have encouraged patterns of use that lead to more malnutrition. One can see that this is possible, particularly where good land is in short supply and ownership of land is very unequal. Landowners may, for financial, political, or managerial reasons, wish to minimise wage employment, and the existence of export markets for plantation crops may make this possible when the alternative would have been more

---

[8] There is a school of thought that argues that ldcs are already excessively dependent on export earnings, and hence that obstacles to increased export earnings are a blessing in disguise. While I subscribe to some extent to the premise, I do not accept the conclusion.

labour-intensive crops.[9] However, there is no reason to suppose that this is the general case; production for local consumption is not necessarily labour-intensive, and, even where the existence of profitable crops has led to a concentration of ownership, this process cannot be reversed simply by cutting off access to the export market. If the real problem is one of unequal land ownership, the only real answers lie in the hands of the local government. One should also point out that it is wrong to equate plantation crops with low job-creation. And in some cases land simply has no other use. Where agriculture is largely in the hands of peasant smallholders, one would expect adequate family nutrition to take priority over cash income.[10] Overall, the presumption must be that measures taken by dcs that reduce the value of ldc exports of food and agricultural products worsen the nutrition status of ldcs.

The other side of the trade picture is ldc imports from dcs. Less developed countries are so heavily dependent on imports from dcs that they are very vulnerable. The main point here is that there should be no restraint on exports of vital food supplies and agricultural inputs. The danger has already been outlined that, in times of international shortage, exporting countries will embargo exports to conserve domestic supplies or prevent domestic price increases. There have also been suggestions that the West (usually meaning the US) can exploit its position as the world's granary as a political weapon. The ethics of using this weapon against ldcs would, of course, be rather different from those of using it against the USSR. Refusal to supply grain to the USSR would merely cause an unwelcome reversal of the present trend towards a Western European/North American diet. If used successfully against ldcs in bad crop years it could achieve widespread famine and death. Fortunately, it must be doubted whether the US exercises sufficient control over grain supplies and trade to operate a successful export embargo against any individual ldc.

Food production and consumption

For most of the post-war period, the conventional wisdom of the third-world lobby has been that, in order to help ldcs, dcs should restrain their own agricultural output, and purchase as much as possible on world markets. Agricultural protectionism was seen as a selfish and short-sighted political

---

[9] This is often argued to be the typical situation among the 'latifundia' of Latin America - see Celso Furtado, *Economic Development of Latin America,* CUP, 1970, especially Chapter 7.

[10] There is some disturbing evidence that villages that cultivate cash crops tend to suffer more malnutrition than villages in the same general area that rely wholly on subsistence (see, for example, Sue Schofield, 'Village Nutrition in Less Developed Countries', p.15). This may be a transitional aspect of the move into the money economy, which involves an entirely new pattern of savings and consumption behaviour. In any case, if cash-crop villages and subsistence-crop villages are found in the same area, the former must have had some reason for making the change which did not apply to the latter. This could be a matter of transport or extension work, but it could equally be because the land cultivated for cash crops was relatively better suited for those crops.

concession to farming lobbies. Consumption hardly came into the argument, though, to be consistent, it was better to have high rather than low dc consumption.

Since the 1973/4 food crisis, the conventional wisdom seems to have turned through a hundred and eighty degrees. At the World Food Conference, ldc representatives were urging dcs to produce more and consume less. It is true that circumstances have changed, and it is possible that policies that were previously desirable are now undesirable. Yet if the former message was so over-simplified that it was still being propagated when it had clearly become incorrect, the same may be true of the new message. There is a danger of the third-world lobby simply piling off one bandwaggon and on to another.

If a dc increases production of foodgrains or other basic foodstuffs, without an equal increase in consumption, this tends to push down prices on international markets. All buyers of the product in question gain, and all sellers lose. So far as grains and pulses are concerned, this benefits more ldcs than it harms, for very few are net exporters of these crops and of those that are (Brazil, Argentina, Thailand, Burma), only the last is numbered among the very poor. And even in net exporting countries, the benefits to the poor from cheaper food partially cancel losses from lower incomes.[11] For oilseeds, the case is more difficult, because some oilseeds, like groundnuts, are important peasant crops, and a number of very poor ldcs are net exporters. It is still probable that increases in dc production would do more good than harm, even though it would be necessary to offset benefits to India, for example, against losses to Nigeria and Senegal.

The limitations of this approach *alone* must, however, be appreciated. First, it is unlikely that world prices can be made to fall very far. If, for example, the EEC decides to produce more wheat, it will, in the normal course of things, have to raise prices paid to farmers and by domestic consumers. When, as a result of this, the world price falls, it will face a politically embarrassing gap between world prices and consumer prices, and may have to export its surpluses at a loss. It will therefore come under pressure to decrease production once again but, even if it can put together a powerful enough coalition of pressure groups to resist this, other producers, faced by the same world prices. will reduce their production. World prices will not for long remain far below efficient production costs unless the whole market for wheat imports can be satisfied by those producers who, for whatever reason, are willing to subsidise exports. Measures to make production more efficient are a different matter, and can produce substantial declines in relative prices of food. For example, the real[12] price for wheat received by US farmers fell steadily for over twenty years, and was well under half the 1949 level by 1971.[13] This trend has been

[11] The benefit/loss situation depends a lot on the structure of production and consumption. If, for example, production for sale is in the hands of latifundists who minimise labour use, and purchases from the domestic market are made mainly by the poor from other sectors, gains may outweigh losses.

[12] i.e. adjusted for the effects of inflation.

[13] USDA Assessment, p.28.

interrupted by the shortages since 1972, but could well be resumed. Increasing the efficiency of production is, however, a process that cannot suddenly be achieved at will.

Second, the advantages of an increase in food production by one or more dcs will be reaped by all food importers. It is very likely that the main beneficiaries of any increase in production of foodgrains, pulses or oilseeds will be dcs that use them as livestock feeding in order to produce meat, eggs, and dairy products for their own populations. Because such use for livestock takes time to get going, a sudden rise in output of basic foodstuffs might cause a sudden fall in world prices, but there is every reason to suppose that much of this would eventually be soaked up by dcs, and very little would filter through to ldcs in the form of lower import prices.

Third, lower world prices have a very indeterminate effect on prices within ldcs. It is far from certain that any decrease would be passed on in absolute (let alone proportionate) terms to consumers. In many cases imported food comes onto ldc markets at institutionally fixed prices, including a variety of levies and mark-ups. In cases where there was a tight supply situation due to foreign-exchange constraints, however, low world prices might conceivably tip the balance between black-market pricing and viable administratively-controlled pricing, which could make a considerable difference to internal prices.

Fourth, increased dc food production normally implies increased dc use of fertilisers and agro-chemicals. If these are in short supply - as they were in 1973 - the costs to ldcs arising from decreased availability of fertilisers and agro-chemicals may well outweigh any benefits to ldcs from increased production of food. This point is discussed in more detail below.

Fifth, and most important, slightly lower prices are not of much help to the malnourished. Their main problem is lack of income. Those with small cash incomes could buy slightly more; but those with no cash incomes can buy nothing, whatever the price. Moreover, even in ldcs it is probable that, if lower world prices permitted higher imports or lower domestic prices, the wealthier classes would reap most of the benefits, and that much of any increase in imports would go to livestock-feeding.

In short, in normal circumstances, policies to increase production of basic foodstuffs in dcs are, other things being equal, more likely to reduce than to increase malnutrition, but they are about as unfocused as any policy could conceivably be. Since most of the benefits are likely to be reaped by those who are not malnourished, big inputs are needed to produce rather meagre results. If the malnourished are to benefit, it is necessary not merely to make the food available, but to give the malnourished the income to purchase it - or to give them the food. The big exception comes when circumstances are not normal - i.e. periods of food crisis when food shortages force prices up well above production costs. In these circumstances, deliberate efforts to increase production could help ldcs considerably, if there was no shortage of

fertilisers, by pushing prices down. This is the present situation (October 1975). However, cereal production can never be increased very much in less than twelve months, and policy measures to raise output would probably not bear full fruit for two years, by which time the present crisis of stocks and prices might well have solved itself anyway.

Consumption

Much the same is true of consumption. There is plenty of room nutritionally for big decreases in dc consumption of basic foodstuffs. Without any change in their dietary pattern, many people in dcs could eat less all round and only be healthier as a result. In the UK for example, average calorie intake is 3,190Kc per day, compared with average requirements of 2,530Kc.[14] However, much larger amounts of food would be released if dcs reduced their *indirect* consumption of food by cutting down on intensively-fed livestock products - meat, poultry, eggs, and milk.

In 1970, the populations of dcs (including Eastern Europe and the USSR) consumed on average 0.58 metric tons of food-grains per head, of which 0.35 m.t. was indirectly consumed through meat and livestock products. The populations of the less developed market economy countries consumed 0.22 m.t. per head, of which only 0.02 m.t. went for livestock feeding.[15] Comparisons look even more extreme if one takes individual countries. Thus, in the US, direct consumption in 1964-6 was about 200 lb. per head against indirect consumption of about 1,800 lb.; the corresponding figures for India were 290 lb. and 60 lb.[16] The UK and the EEC are in the middle range, with indirect consumption about half the US level. Livestock are also fed on high-protein foods such as fishmeal, soya bean flour, and other oilseed residues. The conversion of this into meat and livestock products is nutritionally very inefficient. Poultry is the most efficient feed converter, yet in terms of gross dietary energy 12 calories have to be put in, in the form of feeding-stuffs, to get back one calorie in the form of edible meat. The protein conversion rate is rather higher: about 4 units input for one unit of output. The picture is improved slightly if there is maximum recycling of inedible offals, but the net loss is still enormous. Gross dietary energy conversion ratios for pigmeat and beef are in the region of 20 : 1 and 30 : 1.[17]

It is thus difficult to rebut the argument that dcs are indulging in wasteful and excessive consumption of food as animal feedstuffs while much of the world goes hungry. A riposte that is only partially valid is that low-quality foodstuffs are being converted into food of higher quality. It is true that animal feeds contain a high proportion of carbohydrate, whereas the meat

---

[14] UN Assessment, p.51.
[15] From data in the UN Assessment.
[16] Lester R. Brown and Erik P. Eckholm, *By Bread Alone*, Praeger/OECD, 1974, p.40.
[17] See Kenneth Mellanby, *Can Britain Feed Itself?*, London, Merlin Press, 1975, p.19.

and livestock products produced from them contain a very high proportion of utilisable protein, and little carbohydrate. However, it is a mistake to equate high protein with high quality in a world where the poor are malnourished for lack of calories rather than proteins, and the rich eat so much protein that they use that, rather than carbohydrates, as a basic calorie source. Secondly, it is not as if the livestock make any proteins out of the carbohydrates in their feed. They simply use up most of that too. A rather more valid variant is that livestock make good use of products that humans do not eat. That is true, for example, of grain-milling residues and cottonseed cake, though, even in such cases, processing for use as human foods should not be ruled out. The argument is less true if applied to coarse grains (sorghums and millets), soft wheat, barley, oats, or soya bean flour that many West Europeans and North Americans do not like to eat, but which are highly acceptable foodstuffs in at least some of the areas where malnutrition is prevalent.[18] There is always a case for using animals as converters of foods that humans cannot use, whether these foods be grass, hay, or maize offals. However, there is no doubt that large quantities of food that might have been used to feed the malnourished are used in livestock production. This raises political and practical problems - how to transfer such food to ldcs with the consent of dcs.

One should, nonetheless, add a cautionary note that there is no reason why this apparently wasteful use of food should give rise to a unique degree of moral indignation. It is one of the commonplaces of an unequal world that the rich nations use up resources for strictly unnecessary consumption which they could, had they wished, have used to relieve the misery of the poor nations. This is just as true of the purchase of cars, washing machines, and dishwashers as it is of food.

The practical problem of transfers is almost exactly the same as with increased production. Merely refraining from consumption of food grains would glut markets and cause big temporary declines in prices, which would benefit all consumers. Production would rapidly be cut back in reaction to this. The difference between this situation and that caused by increasing production is that any permanent decrease in consumption would probably hit marginal producers hardest, and might hopefully lead to a permanent decrease in production costs. Thus lower world prices could be maintained without continual subsidies. However, once again, abstinence by limited groups of dc consumers or countries would be of more benefit to those who decided not to abstain than to the malnourished. A much more deliberate transfer of resources is called for if the malnourished really are to derive substantial benefits.

---

[18] A more difficult case is the export of such raw materials for animal feeding stuffs as maize and cassava from some rice-eating areas of South-East Asia. Given dc farming patterns, this makes good sense, and such countries would be harmed as *exporters of those products* if less food was fed to animals. It does not necessarily follow that they would have an overall net loss, or that such changes would not be beneficial to other ldcs.

Again, the big exception is periods when shortages are driving prices up well above production costs, because in these conditions a fairly small cut in global demand can have a big impact on prices, to the benefit of food-importing ldcs. Moreover, a cut in consumption, unlike an increase in production, can be effected fast. It should, however, be noted that what is important is consumption of cereals, not meat. Indeed, a cut in cereal supplies for livestock feeding is likely to lead to earlier slaughter of livestock, and hence a glut of meat. The likely political objections to an enforced cut in cereal supplies would clearly be enormous, and the creation and use of a security stock must be seen as a politically more feasible solution. Under present circumstances, however, security stocks could not be set up without first cutting consumption.

Politically, it is probably easier to increase production and subsidise exports than to decrease consumption, although the former requires a transfer of resources, whereas the latter actually leaves the dcs concerned with more resources for other uses, and a healthier balance of payments (not to mention a healthier population). In a political sense, however, either approach involves sacrifices, and there is not much going politically for sacrifices of any sort, let alone sacrifices that are likely to help the Russians or the Japanese more than the malnourished.

What general conclusions can be drawn from this? First, that dc policies to increase production or decrease consumption are, *on their own,* relatively poor instruments for relieving malnutrition. Their main virtue at present is that they could increase the 'food security' of the dcs concerned by permitting the building-up of food stocks. We shall deal with this in more detail below, but it is of some benefit to other countries including ldcs. In order to make a significant contribution to the reduction of malnutrition, policies to transfer resources to the malnourished are at least as important as policies to increase food production or decrease consumption of food in dcs. Nonetheless, prodigal use of basic foodstuffs by dcs is, on balance, detrimental to ldcs, and where dcs have a choice of paths to reach a given consumption goal it is clearly preferable to choose that which makes the lowest demands on cereals and high-protein feedingstuffs. This becomes particularly important in periods of food shortage and high world prices.

Production and consumption of fertilisers

Fertilisers raise issues similar to those for food. As in the case of food, ldcs are partially dependent on dc production. For example, in 1971/2 developing countries as a group (including Asian centrally planned states) produced 9m. tons, and consumed 15m., importing the balance from dcs. Dependence on dcs for more sophisticated agro-chemicals is even greater. Throughout the 1960s, there was no difficulty in supplying these needs. There was general over-capacity in dcs, and the US provided large quantities of fertiliser as

surplus commodity aid (3.4m. tons in 1967/8).[19] In 1973, however, serious shortages started to appear in both fertilisers and pesticides. This led to large price rises, only partly attributable to the rise in the price of fuel. The price of ammonia - the main input in nitrogenous fertilisers - went up from $100-120 a ton to $350-400. The main producers of phosphate rock - the US and Morocco - quadrupled their prices; and even at the new prices, ldcs had difficulty filling their import requirements.

Such absolute shortages could not be permanent. There is no shortage of the necessary raw materials for fertiliser production,[20] and the problems encountered were, basically, shortage of manufacturing and processing capacity - the sequel to a decade of low prices - combined with a high level of competing industrial demand arising from the buoyant state of the world economy. Indeed, much of the problem was accounted for by delays and teething troubles bringing new plants into operation. It was common for fertiliser plants in ldcs to run at less than half their rated capacity. The reversal of the shortage situation has, however, come more rapidly than many people expected.[21] Ammonia prices are down again to about $150 a ton, which in real terms is no higher than the $120 of 1972. The reasons for this are reduced demand rather than increased supply. Competing industrial demand has been hit by the world recession triggered by the rise in oil prices in 1973. Demand for fertilisers has been reduced by high prices passed on to farmers in both ldcs and dcs. And a number of importing countries, including ldcs, that built up stocks in the expectation of further shortages, are left with these on their hands at a time when internal demand has been reduced.

Prospects for the future are uncertain. New plants started in the period of high prices will not come on stream for about another two years. If, in the meantime, industrial production revives and fertiliser use recovers, it is possible for there to be another period of shortage, though at the moment this prospect appears rather distant.

Periods of fertiliser shortage raise important issues of interdependence, because dcs can often outbid ldcs in competition for scarce supplies, and a cut of 1 ton in plant nutrients supplies to ldcs can be expected to produce a reduction in food production equivalent to 8-15 tons of grain.[22] The cost of making up this loss with grain imports is several times higher than the fertiliser. It follows, of course, that in many cases the loss simply is not made up. The expected supply shortfall to ldcs both in 1973/4 and 1974/5 was about 1.5m. tons of plant nutrients, which, had it materialised, would have meant a loss of about 12m. tons of foodgrains each year.

---

[19] Brown and Eckholm, *op. cit.*, pp. 120-130.

[20] FAO. *The State of Food and Agriculture, 1974,* pp. 30-33.

[21] See G.R. Allen, 'Confusion in Fertilizers and the World Food Situation', *European Chemical News,* Large Plants Supplement, October 18, 1974. Professor Allen forecast shortages until 1978.

[22] Brown and Eckholm, *op. cit.*, p.119, and FAO, *op. cit.*, p.32 (lower estimate).

The shortage of fertilisers raised something of a red herring, namely the question whether marginal yields from fertiliser use were higher in ldcs or dcs. There is a very straightforward case for supposing the former to be true. The increase in yield per acre for every extra pound of fertiliser tends to fall, so that after a certain point, there is no further production response. Developed countries are very near to this point, but ldcs use on average only about a tenth as much fertiliser on each cultivated acre as dcs. One might, therefore, suppose that an extra pound of fertiliser would, on average, produce far more grain in an ldc than in a dc. It was estimated that the difference could be as much as 100-200%.[23] This became a weapon in the armoury of those who opposed restrictions on dc exports, who argued that diversion of scarce supplies to ldcs would maximise world food production. Then doubts started to creep in. The efficiency of fertiliser use is much lower in ldcs than in dcs; tropical rainfall leads to greater losses; the danger of complete crop failure (i.e. an almost complete waste of fertiliser) is higher in most ldcs. The overall picture is not nearly as clear as it had at first appeared. However, the argument is largely irrelevant, because maximising world food production is a nonsense goal. The quantity produced is far less important than its location or ownership. It may conceivably be the case that marginal yields are highest in dcs - though this still seems unlikely. But one extra ton of corn in the US will do less to solve the world's biggest food problem - malnutrition - than an extra hundredweight in Bangladesh.

If the fertiliser situation is tight, therefore, restraint in fertiliser use in dcs is beneficial to ldcs, even if it involves decreased food production in dcs. In these circumstances, it is certainly true that dc consumption of fertilisers reduces their availability for ldcs, and drives up the price in the short run. However, in the long run, when capacity gets back into balance with demand, dc restraint in fertiliser use has little to commend it, and may even be harmful to ldcs, by reducing food availability on world markets. Quite a lot of restraint is possible, however, without any reduction in food production. It is said that as much fertiliser is used on the lawns, golf-courses, and gardens of the US as is used by the whole of India.[24] Other methods replacing dc fertiliser needs without hitting dc food production appear to be possible. More use can be made of manure, sewage, and organic wastes; new techniques appear to be available for the use of nitrogen-fixing bacteria. Progress in these directions is probably wise irrespective of the short-term fertiliser situation, but they are not short-term steps.

As with food, voluntary restraint by some dcs helps all those who do *not* restrain consumption, including other dcs. The only way to get most of the potential benefits to ldcs is to give them the fertiliser released. But it is not enough simply to earmark supplies. Given the shortage, and an absence of controls on exports, prices are bound to rise until demand falls to a level

---

[23] Brown and Eckholm, *op. cit.*, p.119.
[24] *ibid, p.127.*

that can be met. It is probably already the case that ldcs can purchase as much fertiliser as they can afford at the going price. They need fertiliser at concessional rates.

The evolution of the situation for pesticides has been remarkably similar to that for fertilisers.[25]

Recent international action in fertilisers

Multilateral action on fertilisers has been largely confined to monitoring developments and providing information. In November 1973 the FAO's 17th Special Session set up the Commission on Fertilizers, which held its first session in July 1974. This is a useful forum for exchange of information. In May 1974, the UN Economic and Social Council, prompted by the alarming situation in the fertiliser market, called on FAO to draw up an emergency plan of operations for increasing the supply of fertilisers to developing countries, including the establishment of a fertiliser pool. In consequence, FAO set up the International Fertilizer Supply Scheme (IFS), which was officially brought into being at a special session of the FAO Council in July 1974. This is concerned mainly with monitoring the supply and demand situation for fertilisers, with particular reference to the MSA (the UN's list of countries 'most seriously affected' by the rise in oil and food prices). It is hardly a fertiliser pool, but the IFS does act as a channel for some funds and fertiliser aid in kind.

The net effect of this and the support given to fertiliser aid at the World Food Conference has been an increase in multilateral and bilateral aid in fertilisers, or for the purchase of fertilisers. Now that the crisis in fertiliser supplies is over, it must be doubted whether there is still the same need for aid to be tied to fertiliser supplies. Tying of this sort always inhibits flexible use of aid, and a strong case can only be made if the items procured are in scarce supply, or if it is thought that, without tying, the recipients would divert aid to less desirable uses.

Stocks

Developed country policy on food stocks is of immense importance to developing countries, because adequate national stocks add up to adequate world stocks, and adequate world stocks can avert crises caused by supply or demand fluctuations.

The supply fluctuation that triggered the latest food crises was unusually severe, but even so, world cereal production in 1972/3 was only 2% below that of the previous crop year, and 7% above the level two years earlier.[26] The fluctuation became a crisis only because stocks were already abnormally low. Available cereal stocks[27] had been falling since 1969/70. One of the main

[25] For more detail see FAO, *op. cit.*, p.32-33.
[26] USDA Assessment, p.22.
[27] i.e. excluding stocks in Eastern Europe, the USSR, and China.

reasons was the fact that the US government had got out of the stockholding business. In 1961, when US government programmes were at their peak, 109m. tons of wheat and coarse grains - 65% of available world carry-over[28] stocks - were held under US government loan and storage programmes. From about 1970, these programmes were intentionally run down with the aid of what appeared, at the time, to be highly profitable sales to the USSR and China, as part of a policy of decreasing agricultural support, and handing over stock-holding functions to the private sector - the so-called 'bare shelf' policy. Carry-over grain stocks in the US at the end of 1974/5 were only about 27m. tons and were almost wholly held by the private sector.

The absence of US stocks has clearly had unfortunate effects for the rest of the world. It would, however, be hypocritical to criticise the US for its change of policy; there is no obvious reason why a single country should shoulder the cost of providing world food security.[29] It is arguable that one of the reasons for the crisis was the fact that other stockholders - private and official - were slow to take account of the possible effects on prices of the US government's actions, and had not increased their stocks accordingly. Had they done so, they would have been accumulating stocks as the US government ran them down, to safeguard contracts and take profits from price rises which became more probable as a result of government de-stocking. World cereal prices would, as a result, have been higher in the crucial period from 1969/70 to 1972/3. This could have averted the crisis. However, on this interpretation, the crisis itself should have provided a salutory shock by demonstrating the need for higher reserve stocks.

This line of argument clearly has some truth in it, but it is naive to take it to the extreme of arguing that there is a purely market solution to the problem of security stocks, and hence that official intervention is unnecessary.[30] To say this is to overestimate the perfection of the market which was, after all, well aware of US government de-stocking. It should not be necessary to have a crisis each time there is a change in the institutional structure of stockholding. Private stockholding decisions may ideally be seen as the outcome of a combination of sophisticated forecasting and actuarial skills, but it is doubtful

---

[28] Carry-over stocks are stocks at the end of each country's crop year. These totals are lower than actual stocks at any time because (i) any new-crop production is excluded, (ii) it represents the lowest stock level in each country's crop year, and the crop years do not coincide. Hence panicky statements in 1973 that stocks represented no more than 3 weeks supply of grain were somewhat overdramatic.

[29] It seems likely that the US Secretary of Agriculture, Earl Butz, was very eager to empty his shelves outside the free market, in order to push up the international price of grains to levels that made farm support policies politically irrelevant. See Stephen K. Green, *United States Agriculture and World Food Production*, MIT Nutrition Planning Programme, Discussion Paper No. 3, MIT, 1975.

[30] See Willard Cochrane, *Feast or Famine: the Uncertain World of Food and Agriculture and its Policy Implications for the United States*, National Planning Association (US) Report No. 136, 1974. This takes the view that official stocks are needed, but includes an interesting dissenting view from W.E. Hamilton, Chief Economist of the American Farm Bureau.

whether many private or institutional stockholders make their decisions in this way; it seems likely that most decisions are based on short-term considerations. One might note, for example, that futures markets seldom quote prices for more than a year ahead. In any case, even the most sophisticated forecasters are notorious for their errors. Furthermore, the profit-maximising decisions of enterprises cannot be expected to put a social valuation on the effects of world food shortages. There is, therefore, every reason for continuing official involvement in maintaining adequate stocks of basic foodstuffs.

Like most other superficially simple prescriptions, this is in fact a very complicated one. Stocks could not have been increased in the 1970s unless production had been higher or consumption lower; this probably implies that prices would have had to have been higher, although some increase in production could probably have been achieved if the US had cut off payments to farmers for keeping land out of production before 1974 (the corollary of which would have been increased government support for stockholding in order to prevent prices from falling). A policy of maintaining minimum security reserves also implies that any depletion of stocks would have to be made up as rapidly as possible, from which it follows that extra incentives for production would have to be given in the period immediately after such depletion had occurred. From this point of view, therefore, it might be necessary for prices to rise during and after a period of stock depletion. At the moment (October 1975) the cereal supply position is so tight that measures to build up security stocks can only be contemplated if they are accompanied by increased production or decreased dc consumption.

Then there is the question of finance. Stocks are very expensive to hold. The main cost elements are interest charges on the finance used to purchase stocks, and storage charges, plus the price equivalent of quality and quantity losses in storage. Estimates range from $10-20 per ton per year.[31] And though, in principle, a stockholder should aim to buy in periods of relatively low prices in order to sell in periods of relatively high prices, capital losses are possible. Estimates of security reserves that need to be held over and above 'normal' working stocks range from 56 to 80m. tons, depending on the degree of substitution between grains and on the unlikely assumption that all countries would have access to the reserves.[32] At $15 a ton this implies an annual cost of $840-1,200m. for cereals alone. However, compared with the financial and human costs of shortages, this is a fairly modest bill. Such stocks would, however, have to be genuine reserves, available in a crisis; reserves that are always kept in reserve might just as well not exist.

This raises the question of who would own and control the stocks. From the world point of view, the ideal is a single internationally-controlled stock

---

[31] USDA Assessment p.45.

[32] *ibid*, p.12. This assumes stocks adequate to cover 95% of annual production shortfalls from trend on the basis of past experience. A high degree of security could be obtained with stocks of half this level.

for each major commodity, using a single central fund. This idea was discussed in the talks leading up to the World Food Conference in November 1974, but came up against a number of sizeable practical and political obstacles. Developed countries that would, of necessity, have been the major contributors to an effective international stock were unwilling to lose control to an international organisation. The biggest exporter - the US - was doing well out of high prices, and showed little interest in buffer stocks at the time, while the biggest importer - the USSR - had done well in buyer-to-seller bargains, and also showed little interest. The best that could be obtained was agreement in principle on the FAO's Draft International Undertaking on World Food Security.[33] This proposes a network of national stocks with some international co-ordination, and a more efficient information system on stocks and crop forecasts. It also proposes that, in times of shortage, countries with stocks in excess of requirements should give other countries access to their stocks. It is, however, most unlikely that, in a crisis, there would be anything like free access to other countries' stocks. This means that total national stocks need to be larger than a perfectly run international stock. It also means that there is still a need for a limited internationally-held stock and that creation and rebuilding of stocks in developing countries should be a major use of food aid.

The idea of internationally-held cereal buffer stocks has been dropped from the UNCTAD Secretary General's proposals for an integrated programme for commodities,[34] but is not dead.

The running - such as it is - has been made by the United States, despite the fact that it has generally taken a very negative attitude towards commodity stabilisation schemes. The different attitude on grains no doubt has something to do with the fact that the US is the world's largest grain exporter, and is faced with constant uncertainty about the future of grain prices. The US position is, however, a complex one, for the Secretary of Agriculture, Earl Butz, has generally set his face against stockholding plans, and preferred to try and clear the market by special sales; the chief advocate of stocks is the Secretary of State, Dr Kissinger. At the World Food Conference in November 1974, he suggested a 60m. ton stock; in September 1975, at the UN's Seventh Special Session he revived the idea with a more modest proposal for a 30m. ton stock. This came at a time when the US appeared to be heading for a record grain crop, and before the world had realised just how bad that year's harvests were in the USSR. From the domestic political viewpoint, therefore, this was a favourable constellation of events for such an initiative.

Since then, negotiations have continued in a desultory fashion in three separate forums: the International Wheat Council (IWC), the grains preparat-

---

[33] The Draft International Undertaking was endorsed in principle by the FAO Council at its 63rd Session, July 1974. It is reproduced in full in UN World Food Conference document E/CONF. 65/4, p.177.

[34] *An Integrated Programme for Commodities: Report by the Secretary-General of UNCTAD.* TD/B/C. 1/166, and supporting papers.

ory sub-group for the Multilateral Trade Negotiations (MTN) of GATT, and, to a lesser extent, the World Food Council of the Food and Agriculture Organisation. However, the harvest failure in the USSR, massive grain sales to the USSR and Eastern Europe, and the 6m. ton five-year grain agreement between the US and the USSR have doubtless reduced domestic pressures in the US for an international stockholding. Of the three forums, the US prefers to work through the IWC, in order to reach agreement fast on a simple stock-piling arrangement, which leaves out issues of price and market stabilisation but shares the costs with other dcs. Failure to bring in a new agreement by mid-1976 may well mean that there is no prospect of reaching agreement for another two years, as a new negotiating mandate will have to be sought after the US presidential elections.

Other major dcs prefer to negotiate through GATT. The EEC negotiators do not want a stocks-only agreement that leaves them open to American charges of agricultural protectionism at subsequent MTN talks, and are not over-keen to participate in financing stocks that would otherwise be held by the US. However, if negotiations have to wait for the MTN talks, there is no hope of reaching agreement before 1977. In short, the dcs involved in these negotiations appear to have lost any sense of urgency, and are putting short-term and national interests before world food security. This is a common, but lamentable, situation. [35]

This paper thus takes a pessimistic view of the prospects for an international stockholding agreement, and would still maintain that the most promising and politically feasible approach was a commitment on nationally-held security stocks of the type proposed in the FAO's Draft International Undertaking on World Food Security. In essence, this would mean that each country would protect itself by building up its own stocks, though in principle it would allow other countries in difficulties access to such part of those stocks as it did not require. This may appear as a largely self-interested action. But if dcs like those of the EEC did this, they would be contributing to world food security by limiting the demands they make on commercially held and tradeable stocks in periods of world food crisis. This is certainly in the interests of food-importing ldcs. Ideally, the decision to release reserves would be taken internationally. Again, this seems politically unlikely, so that one might suppose there would be a danger that, in a crisis, food exporters would try and keep their security reserves intact by limiting exports. In practice, however, this danger should not be overestimated. Stocks are so expensive to hold that it would be necessary to be on guard against too precipitate a de-stocking on too slight a price signal. There would also be a great temptation - particularly in importing countries - to de-stock in order to control domestic inflation.

How important is this to ldcs? On average, from 1969 to 1971, market economy ldcs relied on imports for around 8% of their cereal requirements.

---

[35] I am indebted to Robin Sharp of the Oxfam Public Affairs Unit for the information on which this section is based.

The total value of ldcs' cereal exports was about half that of imports, and a quarter of ldc imports were from other ldcs, often in the same region. Overall, therefore, the extent of ldc dependence on imports is relatively low, but some are very much more dependent than others. Moreover, it is almost inevitable that the degree of dependence on imports will increase before it decreases. In 'normal' years, this is an expensive drain on foreign-exchange resources, but a sudden price rise caused by the depletion of world stocks can double or treble the cost of cereal imports. In 1972 the cereal imports of non-oil-producing ldcs cost $2,800m; the next year they went up to $7,000m., and still higher in 1974. In this case, the effect of the price rise was exacerbated by the fact that the bad harvests that precipitated the crises affected production in a large number of ldcs - for example, India, the Sahel, and eastern Africa. Yet to some extent this must be expected; the price goes up when the need is greatest. Higher import prices have three fairly direct effects: first, governments are reluctant to use scarce foreign exchange on food imports; second, the rise in import prices is transmitted - albeit imperfectly - to the ldc consumer; third, donors of food aid become reluctant to provide food from their depleted stocks (the volume of cereal food aid received from multilateral agencies and OECD bilateral donors was less than half as high in 1973 as in 1969).[36]

This, in turn, has a direct effect on the number of malnourished and on deaths from malnutrition. We do not know how many people died as a result of high cereal prices in 1973 and 1974, and it may well be protested that the question is not a 'meaningful' one, because it is not open to measurement. And yet the existence of millions is so precarious that anything that worsens their economic condition to this extent must lead to deaths - probably millions of deaths.[37]

It is, therefore, extremely important to the malnourished and nutritionally vulnerable that security stocks are constituted as soon as possible, and that, if this cannot be done fast on the international level, it should be done at the national level by dcs. If the world food supply situation remains tight after the 1974/5 harvest, there is a strong case for temporarily limiting dc consumption of cereals in order to permit the creation of stocks.

Research and development

Research and development (R and D) in food and agriculture is, in the long term, the most important issue of all. As such, it demands very comprehensive treatment, which is outside the scope of this study. All we shall seek to do is draw attention to the size of the problem and the sorts of issues involved.

The brief is very wide. Agricultural research is needed to raise yields, extend the geographical and climatic limits of particular species, develop new

[36] *Development Co-operation, 1974 Review, op. cit.*, p.87.

[37] It is not suggested that millions actually starved. Declining nutritional standards simply raise mortality rates from all illnesses at all ages.

crops/types of commercial livestock/fisheries, and develop varieties with improved characteristics of yield and resistance to diseases, pests, and climate. This has a purely technical 'laboratory' aspect, but it has to be complemented with field research, development of practical agricultural systems incorporating new developments, and dissemination of new methods.

Most dcs have programmes of agricultural research and development, split between academic institutions, public sector organisations, and commercial research. Yet it cannot be said that R and D in this field is accorded very high priority. This is hardly surprising; in the post-war period, few dcs have regarded their agricultural sectors as either strategically important, or binding constraints on their economic development. Moreover, for most dcs the agricultural sector is quite small - less than 3% of GDP for the UK, 4% for the US, and an exceptional 12% for Denmark. In the UK, for example, in 1970/71, a mere 2.7% of net government research and development expenditure had as its objectives 'promotion of agricultural production and technology' and 'exploration and exploitation of the earth and its atmosphere'. By contrast, 16.6% of government R and D expenditure went on promotion of industrial productivity and technology, and 41% on defence.[38] Nor would this appear to be balanced by high expenditure in or by industry. Because of the fragmented structure of agriculture, government probably accounts for an exceptionally high share of 'straight' agricultural R and D. Unfortunately, official breakdowns provide little information about the objectives of non-government research.[39]

Nonetheless, agricultural productivity (per man or per unit area) has grown quite rapidly in dcs. Some of this has been achieved simply by increased capitalisation and rationalisation of holdings; but R and D has produced some fairly spectacular results through advances in plant breeding and crop protection. This work has, however, been directed towards dc needs, and has concentrated on temperate-zone agriculture. There have been spin-off benefits for developing countries and tropical-zone crops, but relatively little that could simply be transferred to ldcs, because in order to make a technical achievement productive, it must be adapted to particular climates and soils, and, perhaps most important of all, it has to be fitted into practical farm systems. A breakthrough in plant protection which is applicable to corporate agricultural enterprises in the United States may need to be entirely remodelled to make it applicable to semi-subsistence farmers elsewhere. A comparable R and D effort must therefore be directed at the specific problems of ldcs, which, naturally, have far fewer funds to devote to it.

---

[38] *Research and Development Expenditure,* Government Statistical Service, Studies in Official Statistics No. 21, London, HMSO, 1973, p.47.

[39] Most non-government R and D in this field is probably done by chemical companies. The breakdowns that exist analyse by broad product groups, so that work on fertilisers, pesticides etc, tends to get hidden within larger groups. Agricultural machinery made up about 2.5% of R and D on mechanical engineering in 1970/71 (*ibid,* p.74).

A lot has been achieved already on quite slender resources. The Consultative Group on International Agricultural Research (CGIAR) was set up in 1971 with its headquarters at Washington, and financed by the World Bank, FAO, and other major donors, to support six important centres of research for ldc agriculture covering different crops and geographical conditions. These are, truly, 'centres of excellence'; it is, however, a sobering thought that the funds provided for the CGIAR by aid donors in 1974 were less than the cost of government-supported R and D for agriculture in the UK alone. There may be some further spectacular breakthroughs for small outlays, comparable to those of the 'green revolution' of the 1960s. So long as the field remains relatively unresearched - compared with temperate agriculture - great leaps in the technology are possible; but one cannot count on them, and they are more likely to come in the research field than in the essentially footslogging work of development.

In the food field too, dc research is rather limited. In the UK, for example, R and D in or by industry in the food, drink, and tobacco sector is about 3.2% of total industrial R and D. It is not clear how much of this is R and D on food, as opposed to drink and tobacco; and even within the food category, much of the research is promotional. It appears that firms based in dcs do very little work on food issues of fundamental importance to ldcs. It would, indeed, be surprising if they did. Their main problem is not dealing with food scarcity, but providing acceptable food products for affluent and competitive markets. Research on radically new sources or uses of food suitable for ldcs is very much a poor relation.

Where such R and D does take place in dcs, it tends to be directed first towards livestock foods rather than human food - the first priority for ldcs. This is, for example, the case with work on single-cell proteins (yeasts, algae). Work on vegetable-leaf-protein has been pursued largely as a result of the enthusiasm and energy of a single man, N.W. Pirie, supported by groups which are often considered to be on the 'crank' fringe of nutrition studies.[40] This research has tended to be ignored in established nutrition circles, on the grounds that it was not an answer to the main malnutrition problem - which is calories rather than protein - but it too may find a commercial outlet in dcs for animal feeding.

There appears to be a need for more work on the use of protein from oil-seed residues for direct human - rather than animal - nutrition, and the conversion of indigestible cellulose residues to protein or digestible carbohydrates. But there is little reason why such speculative and unprofitable ventures should be very attractive to dc food industry interests unless there appears to be a large and assured market. For this reason, there is a strong case for dc governments to take a more deliberate interest in this sort of work, and for a much greater international effort.

---

[40] See R.P. Devadas and G. Kamalanathan, 'Leaf Protein', *Yojana*, Vol. XVII, No. 23, January 1975, p.16.

Commercial investment

Developed country investment policy was one of the areas listed on p.1 as being relevant to ldc nutrition. The question of non-commercial investment by dcs in ldcs is covered by the section on aid. This leaves commercial investment. However, here we shall confine ourselves to drawing attention to the issues, rather than making prescriptions. There is a very elementary economic case why more of the world's investment should be in ldcs: they have a lot of underemployed people earning very little, the ratio of capital to labour is very low, and the returns on capital may be expected to be correspondingly high. There are also fairly straightforward reasons why dc businesses have taken little advantage of this situation. They dislike risk and are afraid of expropriation or political interference. They also face high initial costs, high transport costs to their traditional markets, and the very high costs arising from the lack of complementary industries and services. Developed country governments share the same fears, and are equally averse to charitable distribution of real resources outside the narrow confines of their aid programmes. In addition, they face domestic pressures not to support industries in ldcs which compete with their home industries.

If these obstacles could be overcome, greater investment in productive activities in ldcs would, in general, attack malnutrition at its root by producing new sources of livelihood. This applies not only to agriculture but to other areas as well. The qualifications to this statement must, however, be spelled out. Some industries in ldcs may sweep away more livelihoods than they create. As has already been mentioned, this might be the case if peasant farming was replaced by large-scale commercial farming. It is also true that, if investment is made on a commercial basis, the reverse flow of interest and dividends can become a burden that negates benefits.

At the moment, it is difficult to see a solution that is mutually acceptable to both the dcs and the ldcs involved. There does appear to be a growing, albeit reluctant, willingness on the part of ldcs and their supporters in dcs to concede that, with proper codes of behaviour, multinational companies can make a useful contribution to development in ldcs by providing investment, management, patents and licencing arrangements. Discussions on how to 'recycle' OPEC profits to non-oil-producing ldcs have tacitly accepted that, outside their limited aid programme, OPEC investors will want reasonable and secure profits. On the other hand, the present world recession makes this a particularly inopportune moment to try and persuade dcs to encourage commercial investment in ldcs.

The World Food Conference

A chapter on policies affecting food problems of ldcs could not be complete without some mention of the World Food Conference and its follow-up measures. The call for a major international conference on food problems came from the Conference of Non-Aligned Countries in Algiers in September

1973. It was taken up by Dr Kissinger, the US Secretary of State, at the UN General Assembly, and in December 1973 the General Assembly decided to hold a two-week conference at ministerial level in Rome in November 1974. A small secretariat was set up, and background documents were prepared with the help of such bodies as FAO and UNCTAD. The agenda included an assessment of the world situation, and proposals for programmes of action including :

(a) policies and programmes to improve consumption patterns and ensure that developing countries had enough food for all their populations, with particular reference paid to vulnerable groups;

(b) measures to strengthen world food security including a better early-warning and food-information system, more effective national and international stockholding policies, and improved arrangements for emergency relief and food aid;

(c) trade measures, including stabilisation and expansion of markets for ldc exports;

(d) arrangements for follow-up action, including new international machinery.

The general consensus was that, as conferences go, this one was a success. By the time it took place, the food crisis had become much worse, and the conference attracted an unusual amount of public attention, which may have helped concentrate delegates' minds. Procedural argument was kept to a minimum, and there was far less empty rhetoric than, for example, at the preceding World Population Conference. However, the real results were rather meagre. The results in the areas of food aid and fertilisers have already been summarised. In addition, it was resolved to set up an International Fund for Agricultural Development, and it was generally hoped that this would draw on funds from the newly-rich OPEC countries, as well as traditional aid donors. However, the conference did not get much further than approving the idea. The traditional Western donors were not forthcoming with cash, and the fund remains (January 1976) at the planning stage. It will be brought into operation when the UN Secretary General decides that sufficient funds are available to give the operation 'a reasonable prospect of continuity'.

The other major initiative agreed was the 'International Undertaking on World Food Security' outlined on p.31. Again, agreement did not go much further than the most basic general principles. On the stocks side, no country was committed to do anything, and the details of the scheme were left to be worked out later by the World Food Council (see below) and in other forums. Talks continued to take place in GATT and the IWC, but there appears to be little sense of urgency or direction. The other part of the International Undertaking concerned the Global Information and Early Warning System on Food and Agriculture. Here again, discussions are still going on but implementation has not yet started.

However, a new Consultative Group on Food Production and Investment in Developing Countries (CGFPI) has been set up on a similar basis to the existing Consultative Group on International Agricultural Research (CGIAR - see p.35). Like the CGIAR it will be sponsored by the FAO, UNDP, and the World Bank, will include representatives of developing countries and bilateral and multilateral donors, and have its headquarters at the World Bank. As for the CGIAR, the Conference recommended an expansion of its present activities.

The permanent co-ordinating body set up to deal with these matters was the World Food Council. A 'World Food Authority' had been proposed by the UN Secretary General as a major extension of international machinery, but there was a widespread feeling that there was no justification for setting up a new international agency. However, the World Food Council is very limited. It consists of ministerial-level representatives from 36 countries, selected to provide a fair political and geographical balance. FAO provides a secretariat, and the full council is intended to meet only occasionally. Its first meeting in June 1975 was judged by many observers to be something of a fiasco. More time was spent on rules of procedure and disputes over the composition of the secretariat than on matters of substance. There is a danger that the Council will fall between several stools. Of the existing international bodies, a few (like GATT) operate as real negotiating forums. Others, like UNDP and WHO, are mainly operational, while the remainder, for example UNCTAD, exist largely by virtue of their secretariats, which are able to work up ideas to the stage where they can become operational. The World Food Council has no immediate prospect of becoming operational; even if the International Fund is set up, it will not necessarily be run through the Council; it has not yet carved out a role for itself as a serious high-level negotiating forum; and it does not have a big enough secretariat to be able to work up ideas to a negotiable stage.

Chapter 3

Policies of the UK and the the European Community

The European Community

The Common Agricultural Policy (CAP) of the European Community has never been as monolithic and coherent as is often supposed because, like all other actions in the Community sphere, it has needed the consent of all member states. The task of the EEC Commission has been to reconcile national interests, rather than to pursue its vision of the European interest. Decisions at Community level have, nonetheless, been the main influence on agricultural prices and protection, and a major influence on other policies affecting agriculture.

The Treaty of Rome set a number of objectives for the CAP, including security of supplies, market stabilisation, reasonable (undefined) prices for consumers, and a fair (undefined) standard of living for those involved in agriculture. There was nothing in the Treaty about relieving malnutrition outside the EEC, or behaving responsibly towards the rest of the world. In effect, the production policy followed has been one of qualified EEC self-sufficiency in temperate-zone products. There is an annual price-fixing exercise at which the EEC Council (ministerial representatives of all member states) sets price targets for most major commodities. A mixture of protective and market intervention policies is used to keep prices around target levels. Until about 1972, the EEC's prices were normally well above free-market levels, and the costs of this policy were borne largely by the consumer.[1]

This last point was probably a major factor influencing the crop policy followed: to encourage output of all products up to the point of self-sufficiency, but not beyond. Production for domestic consumption led to no budgetary expenditure. This suited the Commission for, like many national governments before, it has tended to treat budgetary expenditures as if they were the only costs that mattered, and has felt able largely to ignore costs to consumers. In some ways, agricultural imports might have been thought to suit the Commission's book even better, because they normally raised budgetary revenue for the Commission - the difference between the internal and external price of the product imported. Yet a policy of free imports would have raised no revenue, and a liberal policy on agricultural imports would, naturally, have been opposed by agricultural lobbies who could, with some justice, have invoked the relevant clause of the Treaty of Rome on providing a fair standard of living to those involved in agriculture. Agricultural exports were particularly to be avoided, because, even where the EEC was most competitive, these usually involved budgetary losses. The EEC has often had to face the politically embarrassing choice, whether to go on financing 'mountains' or 'lakes'

[1] This is a simplification of a very complex system. For a more detailed treatment see F. Ellis, J. Marsh and C. Ritson, *Farmers and Foreigners*, ODI, 1973, pp.22-25.

of deteriorating agricultural produce, or to subsidise their export at prices below those charged to their own consumers.

The EEC's efforts to avoid both these alternatives without nullifying its price-support policies have produced schemes which range from the ingenious to the bizarre. Cut-price meat and butter for pensioners and other underprivileged groups can be objected to only on the grounds that they are an expensive second-best way of giving the recipients adequate incomes. 'Denaturing' of sugar and wheat for industrial fodder use is a great waste of real resources. Perhaps the most bizarre proposal - fortunately not accepted - was that the Community should use legislation to force exclusive use of butter (rather than vegetable or other fats) in all dairy products and ice-cream throughout the EEC[2], though the proposals that have been accepted for using dried skim milk instead of soya bean meal in animal feed must also be seen as a symptom of a nonsensical system.

Some agricultural imports are, however, necessary. With present diets, attempts to reach a higher level of self-sufficiency are like trying to plug a leaky boat with so little tar that the only way to stop a new hole is to unplug an old one. More meat requires more cereals, cereals displace pasture and hence pasture-fed beef and dairying; sugar-beet displaces cereals; colza (to fill a vegetable-oil and protein-feed gap) displaces cereals and sugar-beet. But should the EEC import meat and livestock products, or should it import cereals and animal feeding-stuffs? In effect, the EEC has taken the latter course. Probably this is the cumulative effect of little decisions, rather than the result of a grand strategy. However, one can see two important reasons why this course appears attractive.

First, it is import-saving. Instead of importing meat, for example, the EEC only imports the feeding-stuffs necessary for local production; and even if the meat costs more to the consumer as a result, it costs less in foreign exchange. As an economic strategy, however, import saving is at best a dubious policy for, if pursued beyond a theoretical but quite invisible optimum level, it yields increasingly negative returns.[3]

Second, this approach creates agricultural livelihoods and incomes in the EEC. This is very important. Average agricultural incomes in the EEC have remained well below those in other economic sectors.[4] One of the apparent reasons for this is the large number of small farms, and one way of dealing with this problem is to encourage agricultural activities that reduce dependence on farm acreage. Certain activities have virtually moved off the farm (egg and poultry production are the extremes), but all over Europe farmers have

---

[2] *Proposal from the Commission to the Council concerning the fixing of prices for certain agricultural products . . .* (COM (74) 30 final).

[3] This is tedious to prove precisely; however, it is easy to see that in most circumstances import-saving production will use resources of labour and capital that would otherwise have been employed in other forms of production. The alternatives may also involve import saving, or may be export-creating, and may yield higher levels of output from labour and/or capital.

[4] See EEC Commission, *The State of Agriculture in the Community*, 1974 Report, (COM (74) 2000 FIN, Brussels 1974, Part II), pp.200-201.

been able to pad out their livestock capacity by increasing use of bought-in rations. This allows small farmers to survive, and big farmers to make very competitive incomes.

As a result of this policy, the EEC has reached a high degree of self-sufficiency in meat and livestock products (85% for beef and veal, 100% for pigmeat, poultry, milk, eggs, and butter), at the expense of self-sufficiency in cereals and animal feedstuffs. The EEC depends on other countries - primarily the US – for 80% of protein-rich concentrates and 50% of maize requirements. In order to keep down costs and prices for meat and livestock products, some of the feed components - including soya beans and other oilseeds - are allowed in duty free.

In the past, the accepted wisdom has been that Western European agriculture was most competitive in dairying and livestock raising, not in cereals. This makes intuitive sense; Western Europe has much of the world's best pasture-land. However, the pattern of agricultural development followed has meant that livestock-raising and dairying have become less dependent on pasture and more on bought-in feeds. There are signs that Europe's competitive bias in favour of livestock and dairying has changed.

The figures below show EEC threshold prices (the price at which imports enter the EEC, after protective levies) as a percentage of world prices for selected products in 1971/2 and 1973/4, and illustrate the dramatic effects of the rise in world prices.

EEC threshold price as % of comparable world market prices

	1972/2	1973/4	Export/import status*
Soft wheat	209	79	e
Durum wheat	254	116	m
Husked rice	205	60	m
Barley	185	96	x
Maize	176	98	m
Beef and veal	133	111	m
Pigmeat	131	131	e
Butter	172	320	x

*x=significant net exporter in 1973/4; m=significant net importer; e=EEC supply and demand roughly in balance.

Source: EEC Commission, *The Agricultural Situation in the Community*, 1974 Report, (COM (74) 2000 final, Brussels 1974), Vol. II, p.39.

At face value, these appear to show both a dramatic change in the EEC's overall competitive position, and a reversal of the relative competitiveness of cereals and livestock. In 1971/2 soft wheat cost more than twice as much in the EEC as outside, whereas beef/veal cost only a third more. By 1973/4 soft

wheat cost 20% more outside the EEC than inside, whereas beef/veal were still significantly cheaper outside.

It would be wrong to read too much into such figures. Many of the changes reflect temporary shortages and panics rather than long-term trends. It seems unlikely that the EEC will maintain its overall competitive position for very long. World prices are more likely to go down than up, and EEC prices are certain to go up rather than down. However, it seems more likely that the new relative competitive relationship of livestock products and cereals will be maintained.

UK policies

It may seem odd that the UK has agricultural policies of its own while coming under the CAP. However, all member states still have national agricultural policies.Second, the EEC is as far as ever from monetary union. Exchange rates within the EEC have varied wildly, and while countries like West Germany, whose currencies have appreciated, have been unwilling to accept lower farm prices, those like the UK, whose currencies have depreciated, have been unwilling to accept the inflationary consequences of automatic increases. Apart from this, since governments are elected on a national basis, it is hardly surprising that they insist on intervening in their national constituencies and are not prepared to face the social and political disruption that would be likely to accompany Community-wide policies aimed at rationalising the location of agricultural activities. The UK, in addition, benefits from the 'transitory' provisions for moving from the old UK prices to the EEC's over a six-year period, though it remains to be seen how transitory these provisions will really be.

The UK's policy before joining the EEC was to allow almost free entry of agricultural products, which meant that domestic prices were determined by world price levels. Farmers' incomes were protected by 'deficiency payments' to make up receipts to levels set at the annual farm price reviews. This was not incompatible with a self-sufficiency approach, though it was certainly influenced by the fact that the UK was further from agricultural self-sufficiency than the original EEC members. Nonetheless, a normal response to balance-of-payments difficulties was to raise agricultural support prices, and aids to increased productivity, in order to encourage higher domestic production. In this sense, therefore, the principle of free entry for imports was somewhat empty, though the system of agricultural support through exchequer subsidies rather than import control was effective in holding down food prices at a time of world food abundance, and was probably an instrument of income distribution towards the poor (the poor pay less taxes, but spend a higher proportion of their incomes on food). The system, as it was operated, had the incidental virtue of permitting a large proportion of the meat and livestock products consumed in the UK to be imported from grazing areas, rather than reared domestically using grains and concentrates; this was not, however, an automatic feature of the system, and Britain, like other dcs, tended to use an in-

creasing quantity of grains and concentrates for livestock feeding. The remaining divergences of UK agricultural rules from those of the original EEC members are very wide. For example, the UK's target price for beef is 13% below theirs, at current exchange rates.[5]

In April 1975, the government published an important white paper *Food From our Own Resources.*[6] This responds to a rather similar paper by the National Farmers Union.[7] It is, in effect, a proposal to increase the degree of UK self-sufficiency in temperate foodstuffs. The main projected increases are shown below :

Crop	% change in output 1974/5 - 1979/80	Value of increase at 1974/5 EEC farmgate prices £m
Cereals	9	90
Sugar*	31	33
Horticulture	5	26
Milk	21	220
Pigmeat	11	53
Beef	9	102
Mutton/Lamb	19	35
Poultrymeat	12	34
Other	–	27
Total	–	621
less domestic animal feed		–100
less imported animal feed		– 50
less imported fertilisers and other imported inputs		– 35
Total import saving		436

* 1974/5 basis is notional production given 'normal' crop conditions.

The paper emphasises the need for efficient use of grassland, and for increased cereal production. However, the projected increase in meat and livestock products is such that practically the whole increase in cereal production (1.4m. tons out of 1.5m.) will be used up as animal feed, and on top of this another £50m. of feedstuffs will have to be imported to feed

---

[5] As of October 1975.

[6] Cmnd 6020, *op. cit.*

[7] 'Farm and Food Policy for the Next Five Years', *NFU Insight* Special issue 22 March, 1975.

the increased livestock population.[8] Thus the UK is, itself, planning to displace pasture-fed competing meat and livestock products. If it did not do so, however, and if EEC policies remained unchanged, the same displacement would probably occur through imports from other EEC countries.

One of the oddities of these projections is that the UK is trying to increase its milk supply while the EEC is trying to reduce it. At present (October 1975) this proposal remains something of a dead letter; milk production in the UK is declining because of the shortage of fodder and the high cost of feeding stuffs. There may well, however, be some merit in the claim that the UK deserves a larger share in the EEC's dairy sector, because - within the EEC - it is a relatively efficient producer.

The gap in these plans is the lack of implementation measures. There are no new price proposals, because the UK is still observing the letter of the CAP, and obtaining EEC permission before diverging from the CAP.

Food aid

The UK's involvement in food aid comes almost wholly through its membership of the EEC. Before this, the Ministry of Overseas Development appeared to take the view that food aid was, in most cases, inferior to financial aid; and since the UK had no agricultural surpluses to dispose of, there was very little internal pressure for this form of aid. Since joining the EEC, the UK has taken a much more favourable line towards food aid, and has even, at times, appeared to be one of its main advocates within the EEC.[9] This may well reflect a reaction to short-term problems rather than a long-term change in official UK attitudes. However, another probable factor in this new-found UK enthusiasm for food aid is the UK's commitment to extending 'communitised' EEC aid beyond the narrow circle of states associated with the EEC under the Lomé Convention. Since food aid is the only substantial element of EEC aid not tied to the associated states, increasing food aid is an indirect means of widening the EEC's aid net.

The background to Community food aid is that, as a participant in the International Grains Arrangement, 1967, the EEC also became a signatory of the Food Aid Convention within that agreement. Its commitment under this was to supply 1,035,000 tons of cereals a year as food aid. With the enlargement of the Community this increased to 1,278,000 tons in 1973/4. This included bilateral commitments of individual member states, but the 'communitised' proportion has risen gradually to about 50% of the total. In 1974 deliveries of communitised food aid amounted to 740,000 tons, worth

---

[8] Cmnd 6020, p.15, table 2. This does not make it clear whether the £50m. extra feedingstuffs imports is included in the £100m. extra animal feed 'included in above production'. I have assumed that it is not.

[9] See 'UK Attacks EEC on Food Aid', *Financial Times*, 27 June, 1975.

140m. units of account[10] on external markets. Other surplus commodities[11] - principally dried skim milk (dsm) and butter-oil - are provided on a purely communitised basis. They account for a rising share of the total, and their value in 1974 was 77m. u.a. All of this aid is given on grant terms. There are three main categories: emergency assistance, where the Community pays for transport to those affected; nutritional programmes - mainly through UNRWA to Palestinian refugees; and 'development operations' - i.e. open-market sales in developing countries which provide local currency counterpart funds used, in principle, for development projects agreed with the Commission.[12] Most Community food aid is in this category, and in these cases the recipient country pays the freight costs.

The Commission, dissatisfied with these *ad hoc* arrangements and the unpredictability of surpluses, has pressed for a three - or a five-year production programme that would allow a considerable expansion in the amounts offered, and an increase in the communitised share.[13] Up to the present, this proposal has been rejected by member states led, reportedly, by Germany, Italy, and France.[14] The Commission has based its case on the continuing food deficit of ldcs and their lack of foreign exchange to buy food. It may be suspected of a certain amount of special pleading. It certainly had a freer hand with food aid than with any other part of Community development assistance, and this was the only 'global' communitised part of this assistance - i.e. it was not tied to Lomé or other associates.

Stocks

Neither the UK nor the EEC has a policy of holding official security stocks of basic foodstuffs. The EEC has studiously tried to avoid accumulating stocks, though it has sometimes done so by accident as a result of its price policies. A recent exception to this is a provision that sugar-producing enterprises in the EEC should hold minimum stocks equal to 10% of the enterprise's basic quota, or 10% of its production if the latter is smaller than its basic quota.[15] Although this particular regulation may not be beneficial to ldcs, it shows that stockholding policies can quite easily be accommodated within the CAP. The Commission now appears to take a positive view on the need for stocks and to be held back by the failure of the member states to agree on a policy.[16]

---

[10] European Commission, *Evaluation de l'aide alimentaire de la communauté*, Brussels, 30 April, 1975. 1 unit of account = £0.42 (approximately).

[11] There is now no official recognition of a link between surplus disposal and food aid; nonetheless, the commodities provided are usually those in which the EEC is in surplus.

[12] *Food Aid*, European Community Information Document(X/607/74), Brussels, November, 1974.

[13] European Commission, *Food Crisis and the Community's Responsibilities towards the developing countries* and *Memorandum on Food Aid Policy of the EEC*, (COM (74) 300, final), Brussels, 6 March, 1974.

[14] 'UK attacks EEC on food aid', *loc. cit.*

[15] Community regulation No. 3330/74.

[16] *Stocktaking of the Common Agricultural Policy* (COM (75) 100), Brussels, 1975, , para 108.

Impact on ldcs

In both the UK and the wider European Community, food and agricultural policies are explicable in terms of domestic needs and pressures. This should neither shock nor surprise; policies are unlikely to be the outcome of pure caprice, and, in the absence of a conscious effort, they cannot be expected to reflect the needs of ldcs. Nor does the pattern of food consumption, with its ever-increasing emphasis on meat and livestock products, seem to have been seriously questioned. The effects of UK and EEC policies on ldcs are mixed. Those ldcs that export products which the EEC imports gain. Those that import the same products as the EEC lose. Those that import products that the EEC is willing to export on concessional or subsidised terms also normally gain. Those that export products in which the EEC can compete only through protective policies lose as a result of such policies.

What is immediately obvious is that EEC policies result in the import of products - cereals - that very few ldcs export, and that many need to import. And, of course, the EEC uses these mainly to feed animals, whereas ldcs need them mainly for human consumption, and could export beef. The humane objections to this are particularly strong at the present time, because the world continues to teeter on the brink of an absolute shortage of cereals; prices, as a result, are high, and it is impossible to create any stocks against an emergency, or even reconstitute normal commercial stocks. The same is true to a lesser extent of oilseeds. The EEC could, without any nutritional damage, reduce its appetite for oilseeds and cereals, by switching consumption away from meat and livestock products. Yet, even if the EEC wishes to maintain present consumption patterns, it does not also have to maintain its present structure of production and trade. The EEC could import a substantial part of its meat and livestock-product requirements from countries that use pasture or rangeland rather than cereals or concentrates. Some of the beneficiaries of this would be dcs: New Zealand and Australia, for example. But there are quite a lot of developing countries that could hope to benefit immediately, and even more that have the potential to benefit, given a profitable market and sympathetic assistance in gaining entry to it.

It happens to be the case that a number of the 'ACP' states associated with the EEC under the Lomé Convention are actual or potential exporters of beef: Botswana, Lesotho, Swaziland, Kenya, Tanzania, Malagasy, and the Sahelian zone countries. Few of these at present export significant quantities, because of marketing weaknesses and EEC sanitary regulations, but those that do are faced with the EEC's levy system, and unpredictable quantitative restrictions on imports. Small concessions have been made to ACP countries. They do not have to pay the normal 20% import duty on beef, which is additional to the variable levy; and Botswana has had 90% of the variable levy lifted for a year, on condition that it raises an equivalent export tax on beef. However, this merely nibbles at the edges of the existing policy. What is really needed is a sizeable erosion of domestic EEC

beef/veal production by - preferably - ldcs producing from pasture and rangeland. This would require the removal of levies, and positive assistance in overcoming marketing problems and other obstacles like the need to satisfy sanitary requirements. Preferably, such encouragement would not be limited to those ldcs that are associated with the EEC and would be extended to Latin America. It would, however, be reasonable for the EEC to demand long-term supply guarantees and price limits in return for such concessions. The benefit to ldcs would be two-fold: the EEC would provide new incomes through increased trade in meat and it would reduce its demands on world supplies of scarce basic foodstuffs.

The problems arising from such a change of policy should not be underestimated. It would hit at the incomes of EEC farmers, and might well hurt small farmers most. Indeed, even with adjustment assistance, it might well be argued that such changes were politically impossible - or, at best, that they could be achieved only through a gradual process of erosion and farm rationalisation. However, it should be pointed out that the survival of beef or dairy production in the EEC is not in question. The EEC has excellent pasture-land which has no competitive alternative use to beef, dairying, or lamb/mutton. It is, however, necessary to dispose of one argument against reducing beef production, which is that beef is a by-product of dairying. Of course, cows do not give milk without producing calves, but having done that there is room for great flexibility in the feeding regime and slaughter date; nor is it axiomatic that the EEC should continue to produce as much milk as it does at present.

The situation for milk is, in fact, similar to that for beef. There is no reason why the EEC should aim to be self-sufficient in dairy products other than liquid milk (which is difficult to store and transport). Certainly it should not try to be more than self-sufficient at the cost of increased feed consumption. So far as butter is concerned the EEC appears to be inherently a high-cost producer, because of low herd- and farm-size. As for dried-skim-milk (dsm), it is produced in such quantities that it cannot be disposed of. The argument that the EEC has a responsibility to try and produce surpluses of dsm and butter (exportable end-products of surplus milk production) as a contribution to nutrition in ldcs has been put forward in all seriousness by the EEC Commission[17] but does not stand up to the slightest scrutiny. Commercial sales of butter-oil and dsm would benefit the rich rather than the poor. As food aid commodities they have drawbacks. Butter-oil is difficult to transport; dsm poses health problems if not carefully used and is simply indigestible to a large proportion of adults in ldcs.[18] More fundamentally, if a donor country wishes to give away food, it should not waste three-quarters of it first by passing it through a cow. It

---

[17] *Food Crisis and the Community's Responsibilities towards the Developing Countries* - (COM (74) 300 final, Brussels, 1974).

[18] This is because of lactose intolerance. See D.S. McLaren, *op. cit.*, p. 198.

would, in most circumstances, be preferable to provide as aid the cereals and high-protein foods that go into dairy production, rather than the milk that comes out.

In the case of dairy products, however, ldcs are not major exporters, so that the immediate beneficiaries would be dcs - New Zealand, for example. Even so, ldcs would gain from decreased EEC production because of decreased EEC consumption of cereals and high-protein feeds. A similar argument can be made for allowing in mutton and lamb from New Zealand and Australia to displace EEC production of beef and pigmeat.

On the other side of the picture, the EEC is considering producing cereals for commercial export. It has, in fact, already started to do this by negotiating a three-year contract to sell 1m. tons of wheat a year to Egypt. This may well turn out to be a loss-making operation if cereal prices fall again. However, as a means of raising farm incomes in the EEC, subsidised cereal sales must be regarded as vastly superior to self-sufficiency in meat and livestock products. Their net effect on ldcs is beneficial and, if the rest of the EEC's economy is willing to subsidise uncompetitive agricultural activity (for protection is a form of subsidy), it can nevertheless reduce the real resource sacrifice by subsidising production in areas where it is more, rather than less, competitive.

It should not, however, be supposed that it is always in the interests of ldcs for the EEC to produce according to its agricultural comparative advantage. For example, the EEC may well be a lower-cost producer of sugar than some of its traditional suppliers - particularly those in the Caribbean[19] - but an expansion of sugar production in the EEC at the expense of imports would certainly be damaging to ldcs as a group, and disastrous to some individual ldcs. Fortunately, their position is safeguarded to some extent by agreements reached with the Community.[20] However, one must reiterate that, in this as in other cases, there is no easy formula for deciding which policies are beneficial to ldcs. The only common factors are that, if possible gains to ldcs are not to be reaped by dcs, an element of discrimination in favour of ldcs is usually required, and that policy changes to benefit ldcs almost invariably involve dcs in policy changes that they would much rather avoid.

Security stocks and Community production

We can now widen the picture to take in stocks. It follows from what has already been said that it is in the interests of ldcs for the Community to establish non-commercial security stocks of cereals and, possibly, of other basic foodstuffs. It seems clear, for economic reasons, that these should be

[19] See F.G. Sturrock and M.C. Thompson, *Sugar Beet - a Study of Sugar Production in the UK and the Feasibility of Expansion*, University of Cambridge, Agricultural Economics Unit, 1972.

[20] S. Harris and G.B. Hagelberg, 'Effects of the Lomé Convention on the World's Cane-Sugar Producers', *ODI Review*, 2, 1975.

held at the Community rather than the national level. The ideal size of such stocks is difficult to determine, because their adequacy or inadequacy depends very much on the stockholding policies of other countries. However, it is possible to work out some rough orders of magnitude. One can take as the extreme upper limit the case where the Community holds enough non-commercial cereal stocks to insulate itself entirely from world markets for a whole year. These stocks would then have to cover its normal annual shortfall in production of all types of cereals, plus an element to cover possible fluctuations in its own output. If this latter element is taken as 10% of normal production, the whole stock would be about 21m. tons. Setting annual financing costs at about $15 a ton,[21] the total annual cost would be in the region of $315m. a year. This appears a modest amount, compared with other Community expenditure, although this annual financing basis ignores the fact that the necessary storage capacity probably does not exist in the Community, so that the capital cost might be 10-15 times this amount, spread over a number of years.

It must be emphasised, however, that this is a maximum figure for security stocks. The Community would not necessarily wish to insulate itself entirely from world markets, even in a bad year; it might make some allowance for drawing from normal trade stocks or accept a lower stock margin for domestic supply fluctuations. If other dcs also held security stocks, it might be enough for the Community to hold stocks of less than half this level. It would be possible to devise automatic price and production 'triggers' for the release of such stocks. However, in practice, this would probably be an important policy issue to be decided by the member states on a case-by-case basis.

At the present, a very valid objection to proposals to set up Community security stocks is that there is no spare grain to go in them. Any attempt to take grain off the commercial market for stocks would merely make the situation worse for importing ldcs. This situation could be eased by the EEC. On the one hand, it could try to raise cereal production, in order to provide surpluses for stocks; on the other, it could reduce cereal consumption either through deliberate measures to switch consumption patterns away from meat and livestock products, or through changes in the pattern of trade and production along the lines already outlined. All three alternatives would be beneficial to ldcs; the most rapid - and yet the most difficult politically - would be deliberate measures to change consumption patterns. In any event, however, it is clear that, until the supply situation has eased, consumption in ldcs should take precedence over stockpiling in the EEC. The immediate need, therefore, is for the EEC to take measures to ease the supply situation, and smooth the ground institutionally for building up stocks when the world supply position permits.

---

[21] A very rough estimate taken from the USDA Assessment, p.45.

Impact of food aid

Present arrangements for EEC food aid appear to leave much to be desired. Most of the aid is provided for open-market sale, which is probably the least effective way of using food aid to combat malnutrition, and the logic and wisdom of providing dried-skim-milk and butter-oil is questionable. It is, however, clear that the aid provided represents a substantial transfer of real resources.

What is less clear is whether it is additional to the aid that would otherwise have been provided. Food aid from the Community's own resources may appear to have low balance-of-payments costs, but so does all other procurement-tied aid and, in any case, this argument is somewhat illusory when the products supplied - like wheat - are easily saleable on export markets. It could be argued that communitised food aid is 'additional' to the extent that it does not draw on the member states' own budgets, but, though this may be true for a short period, the argument almost certainly under-estimates the perceptiveness of member states. The UK, at least, meets the cost of its EEC budgetary contributions relating to Community food aid from its limited aid funds. Food aid is a resource flow, and member states are likely to take it into account if, for example, they come under pressure to cut their bilateral development assistance. Moreover, aid in the form of saleable cereals is more likely to attract attention than aid in the form of almost unsaleable dsm.

This raises the problem whether the EEC should plan to produce food specifically for food aid. Unplanned and embarrassing surpluses probably have the highest degree of additionality, but they make for a lumpy, and hence less valuable, aid programme; and yet at present almost the only available surpluses that come in this category are dsm and butter-oil, both of which have drawbacks as food aid commodities. It is thus most unlikely for it to be in the best interests of ldcs for the EEC to try and produce surpluses of butter-oil or dsm, but it is difficult to be so categorical about cereals.

One is caught here between prediction and prescription. There is no reason to suppose that cereal food aid is inherently superior to financial aid - indeed, it has extra disadvantages; and it is difficult to see why food aid should be additional unless it is costless, which it clearly is not if it results from a planned sacrifice of resources. On the other hand, the Community apparently still takes far more account of budgetary costs than resource costs; and planned cereal production for food aid is likely to be - at least in the short run - partly additional. It also means higher world food production, and a greater share for ldcs. On balance, therefore, it probably is in the interests of ldcs for the EEC to plan production of more cereals for food aid.

To sum up, it would be in the interests of ldcs as a group for the EEC :

(a) to switch its sources of supply of meat and livestock products in favour of imports from ldcs;

(b) to consume less meat and livestock products, particularly at times of global food shortages;

(c) to produce more cereals, particularly at times of global food shortage;

(d) to set up a formal framework ready for the establishment of EEC food security stocks when the world food supply position eases;

(e) to plan to increase cereal production specifically for the purpose of providing food aid.

Printed in England by The Furnival Press

Overseas Development Institute

The Overseas Development Institute (ODI) is an independent, non-government body aiming to promote wise action in the field of overseas development. It was set up in 1960 and is financed by donations from British business and the British Government, and by grants from British and American foundations and other sources. Its policies are determined by its Council.

The functions of the Institute are:

1 to provide a centre for research in development issues and problems, and to conduct studies of its own;

2 to be a forum for the exchange of views and information among those, in Britain and abroad, who are directly concerned with overseas development in business, in government, and in other organizations;

3 to keep the gravity of development issues and problems before the public and the responsible authorities.

Some recent ODI publications

Development Options and Prospects in the Commonwealth Caribbean
The report and papers of the February 1976 conference sponsored by the British North-American Research Association and the Overseas Development Institute. Representatives of the Commonwealth Caribbean and the traditional bilateral and multilateral donors discussed the area's current economic problems, the area's view on how these should be tackled, and the contribution which external agencies could make towards their solution. Ed. Edith Hodgkinson. 1976. 88 pages. £1.50

The Commonwealth and Development
Report of a Conference jointly sponsored by ODI and St. Catharines - Cumberland Lodge, which explored the emerging role of the Commonwealth in the establishment of a new international economic order, reviewed the EEC's relationships with the developing Commonwealth, and examined the role of multinationals in a Commonwealth context. A statistical appendix provides data on levels of development and Commonwealth trade and aid flows. Ed. Sarwar Lateef. 1976. 60pp. £1.50

ODI Review
Twice-yearly analysis of issues in the political and economic relationship between the developed and the developing world. Published in March/April and September/October. Single copy: £2.20. Annual subscription: £4.00.

ODI Review 1-1976 contains articles on the problems facing non-oil developing countries in financing the payments deficit forecast for 1976, current British aid policies, dilemmas facing British aid in Kenya, trade adjustment problems for the British jute industry, and the urbanisation of the Third World. The statistical appendix provides data on flows of aid from Britain and other DAC countries, and trends in commodity prices.

ODI Review 2-1976 contains articles on the outcome of UNCTAD IV and the World Employment Conference, commodities after Nairobi, the dismantling of welfarism in Sri Lanka, pressures facing pastoralists, and the problems of encouraging small scale industry in backward regions.

All ODI publications, and catalogue, available from:

Research Publications Services Ltd.,
Victoria Hall, East Greenwich,
London SE10 0RF.

Please send cheque with order