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### THE FUTURE OF AGRICULTURE

## Technology, Policies and Adjustment

#### PAPERS AND REPORTS

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#### SPECIAL GROUP I

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#### Agricultural Adjustment in Developed Countries

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#### INTRODUCTION

THE concept of agricultural adjustment has been in the forefront of discussions on agricultural policy for more than twenty years. The need for such a concept was apparent long before the label by which we now describe it had become firmly attached. As economists reflected on the experiences of the Great Depression and on the causes of poverty among farm people, they became increasingly aware of a persistent discrepancy between the productive capacity of agriculture and the absorptive capacity of markets to take up the delivered products at prices which would give the producers a reasonable level of income.

The idea that technological change brought with it the need for more or less continuous re-allocation of resources in obedience to the principle of equi-marginal returns had a respected place in economic theory well before the Second World War. Even so, in 1946 it was still necessary for economists and politicians alike to be reminded that 'the creation of conditions in which transfers will be less difficult and resistances less likely to be successful should be a major objective of public policy'.<sup>1</sup>

In 1958 Willard Cochrane<sup>2</sup> still felt it necessary to warn that no hopes should be placed on any mythical quality of agriculture to find its own way towards 'some desirable level and pattern of prices, production and incomes' which would then be established permanently. Men long for once-and-for-all solutions to their problems, but we have come to realize that in a world of fast-moving technological and social change any attempt to preserve a rigid structure in the agricultural economy—or in any other sector for that matter—could result only in cracks and fissures, social cleavages and economic distress.

It was not that the agricultural population had shown no sign at all of responding to the pressures generated by the inherent supply—demand disequilibrium, but rather that the response was more like a series of involuntary muscular contractions than a deliberate and co-ordinated movement so as to maintain balance in an ever-changing situation.

The call for 'adjustment' has focused attention upon the need for continuous adaptation at the points of greatest pressure and for a

deliberate, gradual redeployment of resources undertaken in full knowledge of existing trends and with due regard to emerging potentialities.

Such adjustment, even if it is discussed mainly in aggregate terms, must ultimately consist of a limitless number of individual decisions taken at the level of the single farm business. However, some farm economists seem never to consider the adjustment problem except in these terms, and remain untroubled by the thought that the course of action which is rational in the individual case (such as expansion of the dairy herd to offset declining profit margins per cow) may be quite irrational and even disastrous if it is repeated by thousands of farmers who find themselves in a similar situation. Adjustment, properly conceived, implies an awareness of the repercussions of decisions as well as of their immediate effects.

Radical adjustment, even if it is transitional, is usually a painful process. Sometimes the strains inherent in a situation can be transferred from one producer or group of producers to another by using some kind of protective device. This shifting of the burden often takes place across international frontiers, but it in no way lessens the ultimate effects. Indeed, it may aggravate them by inflicting the greatest tensions on the most vulnerable groups.

#### THE WORLD DIMENSION OF THE ADJUSTMENT PROBLEM

If hitherto agricultural adjustment has been discussed mainly with a view either to easing the problems of individual farmers in a restricted locality or to restructuring the national agricultural economy, in the context of world agriculture these horizons will prove to be too narrow. There is now a growing realization that agricultural adjustment must be consciously international in its design. Plans, whether of farmers or of governments, have to be made mutually compatible across national boundaries and conducive to general development.

Recent studies by Gale Johnson<sup>3</sup> and by FAO<sup>4</sup> have been particularly concerned with what has been called 'the world dimension of the adjustment problem', though they have looked at it from different points of view. The particular emphasis in the FAO study is to seek ways of ensuring that modifications of agricultural structures and policies in developed countries should facilitate rather than handicap the development of agriculture in the less-developed countries. Gale Johnson's book is more concerned with the analysis of the causes of the chronic imbalance of agriculture, but he too argues for international action, not especially for the benefit of the developing countries but to reduce the enormous cost of present farm policies and to bring about a more rational pattern of agricultural trade.

The case for basing future agricultural adjustment on international agreement rests on two main arguments: (1) that existing national plans or current trends in national production are incompatible and therefore mutually destructive—we are set on a 'collision course' and (ii) that

countries acknowledge some degree of collective responsibility for the welfare of all, and particularly of people in the less-developed countries.

The first of these arguments derives support from statistical studies of production, consumption and trade. In its simplest terms, the position is that exporting countries are planning—for a variety of reasons—to increase their exports of agricultural products while at the same time the importing countries—for the same or different reasons—are tending to raise their level of self-sufficiency so that it is expected that they will stabilize or reduce their import requirements of some of those same products. These two sides of the trade equation do not and will not balance. Somehow a mutual reconciliation of these trends has to be reached.

Long-term projections of supply and demand have indicated the same kind of discrepancy for certain commodities. These projections have to proceed on a whole set of assumptions about trends in population, income, elasticity of demand, agricultural production and other variables, and of course these assumptions are open to question. But to the extent that they throw into sharp relief the imbalance which is inherent in the continuation of present trends, they serve to underline the need for action aimed at changing these trends so as to prevent the occurrence of massive surpluses or severe shortages.

FAO projections, which have generally assumed only small increases in consumption per head in the developed countries, simultaneously with some acceleration and geographical extension of the technological revolution which has been characteristic of agriculture in many countries for the past thirty years, point to rising levels of self-sufficiency for agricultural products in the more developed countries. During the 1970s the total demand in these countries is projected to increase at a rate of only 1.6 per cent per annum, while production is projected to increase at 2.1 per cent.<sup>4</sup>

The second argument for international agreement for agricultural adjustment—that based on mutual responsibility and concern for world economic development—draws its strength from the assent which countries have given on numerous occasions to international declarations calling for concerted efforts to improve the economic and social conditions of the less-developed countries and to refrain from trade practices which are harmful to the interests of producers in these countries. There has been widespread acceptance of the view, expressed in the Report of the Commission on International Development (the Pearson Report), that 'not all of the conditions necessary for growth and development are in the control of the poorer nations themselves. By far the most important of the external conditions for growth is the opportunity to expand participation in world trade'.5

#### THE INTERNATIONAL ETHOS

Before considering some of the suggestions which have been put

forward concerning ways in which international agricultural adjustment might be put into effect, the concept of mutual responsibility for economic development requires closer scrutiny. Too often allegiance to this concept has been implicitly assumed, and not enough has been done to bring out into the open the precise nature of the obligations which nations are willing to recognize and honour.

First, it must be said that if international agreements about trade and development are to succeed it is highly desirable, and in many circumstances essential, that the agreements should command universal adherence. If some countries abstain the success of the operation is most unlikely. If countries are to make voluntary adjustments to their domestic economies in the interests of other countries they will want to be assured that no other country stands to gain by remaining outside the agreement.

Secondly, it is clear that in forthcoming trade discussions the idea of 'fair shares' in world markets for the various exporting countries (actual or potential) is likely to be widely invoked. Already this idea has received much support in public speeches, along with similar references to 'equitable arrangements' and 'due regard for each country's legitimate interests'. It is, however, impossible to discover exactly what is understood by 'fair shares' or to secure any explicit assurances which would guarantee them.

It is probably unrealistic to expect very rapid progress in this direction, for any kind of surrender or pooling of national sovereignty is likely to proceed by very small and tentative steps. When national governments of many developed countries have been seriously preoccupied for many years with the problems of finding ways of controlling agricultural production without damaging the interests of their own farmers it is going to take some time for them to get used to the idea of making further adjustments in order to promote economic development in poorer countries. Yet this is what is being proposed in the reports previously mentioned. The Pearson Report explicitly recommended that 'developed countries should draw up plans in respect of protected commodities, designed to assure that over time an increasing share of domestic consumption is supplied by imports from developing countries'.

This suggests that 'fair shares' would mean increased shares for some and decreased shares for others. But there are other possible interpretations. For instance, 'fair shares' could mean perpetuation, within agreed limits of variation, of shares which prevailed in a past period. Or it could mean assuring to certain countries an increasing share of any expanding markets in other countries but a diminishing share of any contracting markets, thereby giving preference to domestic producers within those markets up to a certain quantity. Again, 'fair shares' could be related in some way to efficiency or comparative advantage.

No doubt there are many possible variants, but it seems important that those who profess to support the idea of 'fair shares' in international trade should be pressed to attach some specific meaning to the phrase. Our personal sense of international responsibility may be very imprecise. We may vaguely feel that we should like to discourage trade practices which deprive the developing countries of export opportunities which would otherwise be open to them, and which they badly need in order to earn foreign exchange; we may regard with disfavour the tendency for developed countries to obtain from each other more of their imports of 'competing commodities' (i.e. those which can be produced both in developed countries in temperate regions and in developing countries in tropical regions); yet if these attitudes are to be reflected at the political level they will at some stage have to be translated into quantitative terms, margins of preference or orders of priority. FAO has rightly emphasized that 'the crucial issue in adjustments at the international level is . . . how the benefits and sacrifices should be shared.<sup>4</sup>

### NEED FOR A FRAMEWORK OF ECONOMIC AND POLITICAL PRINCIPLES

It is quite evident that agricultural adjustments of supply to demand must inevitably take place. What is at issue is the location of the adjustments, and their respective extents. These matters will be determined as much by political as by economic forces. A recognized framework of basic principles will be needed if worthwhile arrangements are to be negotiated. Agreement on these principles would be a great step forward which could be taken well in advance of any national declarations as to how far countries were prepared to go in giving effect to them in specific cases. The abandonment of exclusive national loyalties would have to go concurrently with an understanding of the problems of conflicting loyalties. We cannot be blind to the fact the farmers' organizations in most countries are anxiously looking for ways of improving access to their own domestic markets.

A more integrated approach to international adjustment problems is bound to take a long time to evolve. National governments have been painfully slow to move from a one-sided approach to their agricultural problems through price supports to a more comprehensive approach to the whole question of rural development, within their national boundaries. To ask them to reconsider these newer and more far-reaching policies in the light of their international repercussions is a tall order, but it is implicit in the acknowledgements of international obligations which they have made.

Another difficulty is that, although they may not readily admit it, there are limits to the extent to which governments can effect adjustments in their national agricultural sectors, even when they have resolved to do so. In order to control the volume of output they must in some way influence total factor input. However, it is well known that the mobility of factors out of agricultural uses into other uses or into retirement is often limited. Long-term plans will be needed to provide the necessary inducements. Gulbrandsen and Lindbeck have pointed out there is no certain knowledge of the price-elasticity of agricultural supply. The concern of policy-makers is to influence not simply the short-run use of existing

productive capacity, but also the long-run amount of productive capacity. In the view of these Swedish authors, the agricultural sector can only be expected to shrink if the return to factors is seen by farmers to be lower than in other sectors. 'Efficacy of controlling factor input through agricultural product prices will depend to a considerable extent on whether the reduction of prices is understood by farmers as a deliberate long-term policy.'6

## WHAT 'INTERNATIONAL AGRICULTURAL ADJUSTMENT' MIGHT MEAN

The studies by Gale Johnson and by FAO seek to identify what form an arrangement for international agricultural adjustment might take. One approach already proposed (for example in the Mansholt Plan for the six original members of the European Community) is to improve farm structures so that farm people could withstand the gradual reduction of protective tariffs and similar measures, thereby facilitating the liberalization of world trade.

A second approach of a more direct nature would be to agree to national measures to adjust output more rigorously to market demand, reducing the degree of support and preventing the accumulation of surpluses.

A third approach would be to undertake specific measures to facilitate agricultural exports from less-developed to more-developed countries. This would be likely to require previous discussion of the expected size of the market in the respective importing countries, and arrangements to monitor the eventual realization of the expected total market quantities. Within that framework discussion could then take place of the sharing of the market. One suggestion is that present or recent self-sufficiency ratios could be the basis for production adjustments. Countries with high SSRs might be required to peg or reduce them. It is difficult, however, to see how this could proceed without some consideration of relative costs of production, and their trends.

Certainly it would appear that recent tendencies towards greater self-sufficiency in developed countries have to be halted if these countries as a group are not soon to become net exporters instead of net importers of agricultural products.

A common element to all the adjustment proposals is that participating governments would have to ensure that in future total resources used in agriculture will be smaller than they otherwise would be, i.e. if all adjustment was self-generated. These governments would have to make the most of the fact that agriculture today is a highly dynamic industry; they would have to anticipate and facilitate many of the changes which are already taking place, without, however, forcing the pace to the point where the social and economic effects would be unacceptable.

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#### SPECIAL GROUP I REPORT

Professor Britton's thesis that agricultural adjustment in DCs must be consciously international in its design did not meet with any disagreement. Encouraging confirmation was shown earlier in the XVth Conference: Gulbrandsen spoke of the 'Internationalization of production'; Simantov stated 'the international market is a collective reflection of the maladjustments of national domestic policies'. This thesis implicitly draws attention to the close links between the various levels at which the adjustment problems must be tackled (individual farms, regional, national and international) because actions taken at these levels are interdependent in the sense that they condition one another.

It was recognized that the international setting has been modified recently by several influences such as the internationalization of inflationary pressures, the possibility of food and feed shortages for some time to come and the slow pace of diffusion of the so-called Green Revolution. This modification probably will exert a considerable influence on future international trade negotiations.

The present situation of relatively high prices on the international markets might well mean a turning point in the discussion and in the measures to adjust world agriculture. This possibility exists despite the fact that there still are too many conflicting opinions, probably partly depending on political interests of various kinds. The situation could probably be exploited advantageously both to ease or rationalize agricultural adjustment processes, at least in some important groups of DCs by way of reducing the high degree of protection which has prevailed up to now in most of them, and to induce a faster rate of growth of agricultural production in LDCs by accelerating the commercial transformation of large sectors of traditional agriculture. Some reduction of DCs' self-sufficiency rates would improve LDCs' opportunities to expand their participation in world trade. Such expansion would be very important, especially so because LDCs will be confronted with the fact that the target of development assistance probably will only be half met in the coming years.

The group paid attention in some detail to a number of related but different problems which are covered by the term agricultural adjustment in DCs, such as: the structural imbalance between internal supply and demand for some important groups of primary products; the existence in various regions of a labour productivity gap between agriculture and other sectors, often matched by an income gap between farm and non-farm families; the encroachment in agriculture of too large total inputs; the decline of the agricultural sector, as traditionally conceived, relative to agri-business as a whole; the growing demand for environmental services which are still mainly a by-product of traditional agriculture. In addition to the complexity and interdependence of objectives agricultural adjustment policies must pursue, the unprecedented magnitude of the adjustment needs and the extent of actual changes were discussed. In respect to the latter special attention was given to factor mobility problems, notably of labour.

Partial disagreement was felt with Professor Britton's statement that the call for adjustment has focused attention upon the need for continuous adaptations at the points of greatest pressure. Actual adjustments were thought to take place more frequently where a new farm structure can more easily be introduced and this would seem to happen rarely at the said points. At such points the only alternative in many regions (poor soils, hills, etc.) might well be a radical change in land utilization and farm acreage, requiring physical re-shaping, capital investments, working capital, managerial capacities with which the small producer hardly can cope. Thus adjustment will lag behind recognized needs. This illustrates the need of institutional change whose importance in the DCs is just as great as in the LDCs especially when and where large regional disparities still exist.

Some participants felt that governments should move from crude price support policies to wider questions of rural development, whereas others seemed not convinced that 'the high point of agricultural price policy is passed' (as stated in an earlier session by Dr Josling). The possible ways ahead, as mentioned by Professor Britton, did not raise much discussion. However, some detailed reference was made of a paper on 'A system of direct compensation payments (DCP) to farmers as a means of reconciling short-run to long-run interests' (in *European Review of Agricultural Economics*, Vol. 1, No. 2, December 1973, Mouton, The Hague, Holland).

This DCP system implies a fundamental change of the present market and price policy's purpose. Instead of ensuring a reasonable degree of income parity for domestic agriculture in its present form and structure, the purpose of the new price policy would be to ensure for the main domestic agricultural products a level of prices being equal to 'normalized' prices of a future world market not distorted by overprotection of national or 'common' markets. Such a change would probably mean a drastic reduction of the price guarantees which have so far applied. Agriculture must be given ample time, e.g. twenty years, to get

fully adapted to this new policy. The system would provide nontransferable rights to direct compensation payments for specific persons for the said period or until they reach 65 years of age during this period. It would apply to every farmer at the time of change-over to the new system. However, only a limited number of newcomers to farming would be eligible for DCPs. They should be suitably qualified and their farms should be of a size satisfying the local planning norms. Total DCP on a farm would for a period of, say, 5 years fully compensate for the loss of income due to the price reduction. The amount to be paid per year later on would, in general, be diminished gradually and extinguished fully at the end of the system's period. Farmers would clearly understand the system as a deliberate long-term policy. They would get long-run certainty. Agricultural adjustments would proceed neither too rapidly nor too slowly, and fully in accordance with regional circumstances. The system would for this reason be combined with regional non-agricultural development projects where needed. It is externally oriented and capable of reconciling the interest of the present and the future farmers to the interest of society at large concerning both food supply and environmental values and costs. It does not require a large administration and is easily checkable. Moreover, it will not give rise to insuperable exchequer problems and provides ample time for a reorientation of agriculture according to the patterns of comparative advantages within the individual countries as well as in the world at large.

Among the participants in the discussion were: G. R. Allen, U.K.; G. Barbero, Italy; J. P. Bhattacharjee, F.A.O. India; H. Breimyer U.S.A.; D. K. Britton, U.K.; E. Elstrand, Norway; H. de Farcy, France; D. Gale Johnson, U.S.A.; S. Holmstrom, Sweden; G. Miller, Australia; F. J. van Riemsdyk, Netherlands; G. Schmitt, West Germany; G. Weinschenck, West Germany.