Price Stabilisation and Income Support Measures in Agriculture in the U.S., Canada, EEC and Australia: Lessons and Implications for the Regulation of International Commodity Trade

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CONTENTS

SUMMARY

1. The object of the paper is to discuss the extent to which experience with the agricultural policies of developed countries can be related to the problem of international commodity regulation. The basic similarity of the problems is striking (paragraph 4), and the techniques used by governments in farm policy also have a close affinity to those suggested in an international context (paragraph 5).

2. Traditional (pre-1930s) farm policies relied heavily on tariff protection against the growth of agricultural trade: the 'new' policies of market intervention arising from the depression went further, in particular, in exporting countries (paragraph 8). This was consistent with the growth of government control over other aspects of economic life.

3. Farm policies evolved to meet wartime and post-war conditions, and then to assist in the control against inflation in the last decade. As commodity prices resume their more normal relative levels, concern over farm income support has tended to re-emerge. But the political basis for such policies may now be much weaker than previously.

4. The objectives of farm policies are a reflection of the agricultural trade balance, the general economic attitudes and performance, and the political structure of the country concerned. There are strong similarities in the ways in which developed countries have tackled their farm and agricultural market problems, in spite of these differences in economic circumstance. In particular the instruments used have differed in emphasis rather than in kind.

5. Political attitudes towards the role of the market in influencing personal incomes and business investment decisions is one important factor in the development of farm policies. But this has varied over time in all countries, and is not a reliable guide to the policies of any particular country.

6. Countries have used a mix of policies including the improvement of markets through producer organisations, the state purchasing and sale of output surplus to domestic market needs, the control of output through delivery quotas and acreage allotments, and the payment of supplementary subsidies to hold up farm returns. The emphasis has been on price control in agricultural markets, rather than the improvement of efficiency and the facilitation of resource adjustment per se.

7. All the countries studied have run into budgetary problems, and the control of exchequer costs has proved the main constraint on farm programmes (paragraph 40). The policies have not been particularly cost-effective, but have survived because they appear to be tackling a nagging and persistent social problem. The more positive policies have aimed at improving market channels and investment decisions: the least successful have given blanket guarantees of markets which would not exist without government support.

8. International commodity programmes differ from farm policies in their institutional and administrative forms. A political consensus which readily accepts income transfers, and a sizeable bureaucracy which is adept at modifying programmes to new conditions have given farm policies a degree of continuity and flexibility. These conditions may be less easy to obtain at an international level. Control over markets may be easier to achieve, and problems of information less serious at a national level (paragraph 47).

9. Short-term intervention in markets has often, in national policies, taken the place of longer-run market development. This has led to an obsession with current market prices. International policies might benefit from the integration of all aspects of commodity market performance. In particular, long-term market trends are not often influenced by short-run price policies. Developed country agriculture adjusts to economic conditions in the economy as a whole in spite of, rather than as a result of government price policies (paragraph 53).

10. The setting of price levels is a crucial aspect of national policy and equally important in international market regulation. The appropriate price enables control instruments to be effective: an insupportable price brings the most sophisticated control device into disrepute. The experience of farm policies suggests that flexibility in price fixing has to be maintained (paragraph 56). The techniques need have applicability to international discussions (paragraph 57).

11. As to the choice of instruments, farm policy experience points to several conclusions. Supply control has been successful in a limited number of cases, but raises difficulties in administration in an international context. As with other methods of revenue increasing, the full effects tend to be dissipated over time. Stabilisation policies have also been useful in distributing crop output over time to meet demand. But the scope for such policies is constrained by the actions of others as well as by the nature of the product concerned (paragraph 65).

12. Policies which provide a market floor have been less successful, in that they are not increasing the value of the crop or product to consumers. As such they run into financial difficulties. They are in any case more difficult to operate internationally, as they rely on residual markets into which to dispose of unwanted produce (paragraph 66).

13. In national as well as international policies, the basic choice in an inherently unstable market is that of deciding which variable to allow to fluctuate. Deliberate variability in stock levels, for instance, can stabilise consumption patterns. By contrast, efforts to control stock levels and financial costs implies that other variables in the system become less stable. In national policies, domestic price stability has tended to be the dominant aim, to the detriment of stability in other aspects of the market (paragraph 67).

14. Farm policies interact with each other through the medium of international trade in temperate zone products. World prices react to the

assiduousness with which countries pursue domestic objectives. This also has implications for international programmes. They must offer the equivalent degree of security as national programmes if they are to supplant them. The same problems do not arise with minerals and tropical agricultural products (paragraph 71).

15. The conclusion of the paper is that flexible pricing and adequate funding can improve the performance of international markets. Domestic farm policies have often run into problems when rigid price support mechanisms have attempted to obscure the underlying market conditions (paragraph 73).

INTRODUCTION

1. The terms of reference for this paper were to discuss the measures used in developed countries in pursuing price stabilisation and income support objectives in the agricultural sector, and to relate these to the regulation of international commodity trade. I was asked to consider the policies of the US, Canada, the EEC and Australia; to cover the types of measures used, the commodities affected, and the objectives behind such policies; to quantify where appropriate the extent of support; and to draw out the implications for the adoption of price stability and income support measures in international commodity trade.

2. I have interpreted the assignment in the following way:

> The governments of all the countries mentioned, as well as most other advanced economies, have experimented with a variety of measures which regulate the market for agricultural products. The extent to which these policies have been successful throws light upon the possibilities and limitations of international commodity control. Three aspects of such experience have particular interest - the choice of instruments of policy used in the pursuit of particular objectives, the methods of financing such policies together with the implications of various financial devices, and the administration of such programmes including the decisions taken on price levels and on the adaptation of policy instruments to changed market circumstance. In the search for acceptable and appropriate means of regulating international commodity trade, the lessons, mutatis mutandis, of such experience are of value. Moreover, the existence of such policies has itself some direct implications for international regulation in the products in question.

For convenience, I shall refer to the EEC as a country to avoid having to use a phrase such as countries or regional groupings of countries when making a generalisation. Except when otherwise stated, reference is to the EEC of nine countries. I have used the phrase farm policy or agricultural policy in its broadest sense to include government measures - in particular, those taken by central government or at the federal level - which impinge directly on the operations of the market for farm products. Such measures often include policies designed to influence variables, such as consumer prices, which are not related to farm incomes.

3. The limitations of the study need to be acknowledged. It is not possible to include a full evaluation of the policies discussed in all their complexity. Such information is often not available even to the governments responsible for the measures, and is certainly outside the scope of this report. The degree of quantitative assessment possible is limited not only by time but by the nature of the policies themselves and their underlying objectives. How much price stability and income support was intended by a particular policy, and what cost could be considered reasonable in attaining these aims? Such questions are not capable of quantitative evaluation by an economist. Even political appraisal of success is unlikely to be unequivocal. This paper is more concerned with underlining the implications of government measures. As such, it relies on an analytical examination of the experience: judgements on 'success' are largely impressionistic rather than precise. Similarly, the implications of this experience for international commodity trade regulation are not amenable to quantification. It may, for instance, be possible to say what problems could arise in a renewed attempt to stabilise world sugar prices by means of a buffer stock policy: to detail the stock management rules necessary in such an attempt requires a very different exercise.

4. Within these limitations, a number of constructive avenues can be explored. The basic similarity of the problems of developed-country agricultural policy and those of international commodity regulation is striking. Both start from a feeling of profound dissatisfaction with the unfettered workings of the market. In the case of farm policies, governments have taken the view that the performance of free markets has unacceptable social consequences for those who are engaged in the production of farm goods. This shows up in the level of incomes of farmers and in the stability of such incomes. Depressed or unstable farm incomes in turn have implications for the whole rural economy and often for the economy in general. Fluctuating farm product prices are of concern to consumers and variations in export revenue or in import cost tend to destabilise the economy as a whole. If a 'free' world market is also unstable, then the concern at an international level is with the implications for countries deeply involved in such trade. Macro-economic policy becomes difficult in such a situation. And if such a market produces periods of depressed prices then foreign exchange earnings and real incomes suffer in exporting countries much as rural incomes are held down by low product prices in agricultural regions of developed countries.

5. But the similarities run deeper. The techniques by which governments can influence the workings of the market are basically limited. Even if there were no correspondence in the objectives and motives for such intervention, the instruments used in the attempt to improve markets would be from the same stable. The analytical implications of a particular policy measure in a market are not in themselves dependent upon the motives behind such a policy nor, in general, upon the geographical and political definition of the market in question. An examination of these techniques is of interest in its own right. Each technique or policy instrument has its own characteristics, which can be stated in terms of the effect on the market, the incidence of benefits and of costs, the administrative decisions, and flexibility in the light of changed circumstance. This study will attempt to explore both the relationship of policy measures to objectives and the characteristics of the measures themselves.

6. The report is subdivided in the following way. Section I deals with the development of farm support policies in the four countries - the objectives, the mechanisms, the problems and the achievements of these measures. The second section relates this experience specifically to a set of perceived problems in international commodity trade, and attempts to define the differences as well as the similarities between these two sets of problems. A concluding section gives an appreciation of the possibilities and constraints facing negotiators dealing with commodity problems in the light of the experience of farm policies. Finally, some more detailed analytical and statistical material is presented in the appendices.

I. Agricultural policies of the U.S., Canada, EEC, and Australia

(i) An historical overview

7. Agricultural policies in one form or another have a long history. Until the last five decades, such policies tended to be a reflection primarily of the trading position of the country concerned. Agricultural markets were protected by a variety of instruments designed to give preference to domestic producers. Protection levels were often high, in particular, where old-established forms of agriculture were threatened by technical developments overseas and the opening up of new lands. But whereas these trade policies, implemented largely through tariffs and quantitative restrictions, did represent a conscious effort by governments to influence agricultural conditions, they are of minor relevance to the question at hand. They were by their nature policies which were more suited to the problems of importing countries. They reflected attempts to preserve the profitability of 'old world' agriculture against the natural advantage of the new. They did not involve extensive government involvement in the marketing of agricultural products, and they did not impose any sizeable burden on national treasuries. Exporting countries, although they also employed tariff protection, found the pattern and direction of trade severely constrained the assistance that such policies could offer to domestic agriculture. Since international commodity problems have

mainly been associated with the concerns of the exporter, experience with these tariff-type agricultural policies is unlikely to have direct relevance today. Indeed, the more 'global' the commodity problem, the more difficult it would be to find a group of producers against whom to discriminate by means of a tariff.

8. The growth of government involvement in agricultural markets was fostered by the depressed conditions of the 1930s. The new policies required the backing of trade restrictions, but introduced new domestic instruments. The exporting countries participated and even led the way, as the volume of agricultural trade slumped. The motives were akin to those that prompted intervention in other aspects of economic life. Governments assumed a new and enlarged role - that of countering cyclical variations in regional and national economic activity. This new national economic order introduced short-run stabilisation policy into the arena of administrative action. Farm policies nurtured in this period had as their aim the amelioration of rural depression. These 'new' policies were broadly of two types: the establishment of para-statal bodies for the marketing of farm products, and the attempt by governments to limit supply. The growth of marketing legislation built upon and encouraged the development of co-operation among farmers, which in many countries had already reached a considerable level of development. The new legislation provided a more comprehensive framework in which voluntary co-operation could grow, but also introduced rules which allowed a co-operative marketing venture once established (usually by means of a producer referendum) to obtain more or less exclusive selling rights for the product in question. Where the government took steps to control trade, the combination of producer marketing agency and trade restriction effectively separated the development of that sector from the cold winds of world conditions.

9. The development of supply control, which reached its height in the U.S., was also inevitably linked with trade restrictions. The basis for successful supply control rests on the existence of a market demand relatively unresponsive to price. Where unrestricted trade is allowed, such conditions often do not obtain. Thus trade policy became inextricably entwined in domestic agricultural programmes, and trade flows came to reflect domestic policy decisions rather than commercial cost-advantage. The new policies ensured that agricultural trade would be treated in a different manner to industrial trade in international discourse. Together with the growth of an administrative infrastructure and a determined political sub-system, the modern agricultural policy had been born.

10. Whether these depression-generated policies would have survived a return to economic prosperity is an open question. The Second World War intervened to add a new task to that of maintaining rural spending power. Governments took command of the strategic potential of agriculture and harnessed it to the war effort, and subsequently to the task of recovery and reconstruction. As with many other facets of economic life, regulations and controls established over this period survived into peace-time. Governments took on responsibility not just for broad macro-economic management but for social conditions and for economic programmes. Farm policies took their place in the orchestra of instruments of the modern mixed economy. Their tasks included the maintenance of incomes in rural areas not just against economic collapse but to ensure equity and social justice; their prime responsibility was to preside over the modernisation of agriculture, to protect those in danger of being left behind by the process of technical change, and to harness the fruits of scientific farming for the cause of economic growth. The instruments of supply control and marketing agencies were supplemented by injections of government funds for research, for farm

credit, and for extension services. New policy measures were aimed at problem sectors, including firm price guarantees backed up by exchequer payments or supported by state purchasing. The trade policies developed to support earlier programmes were used more aggressively to expand domestic markets and maintain overseas sales. Farm inputs were often subsidised, and improvements in the quality of farm land encouraged. The strains of the post-war world economy also impinged on farm programmes. Foreign exchange needed to finance industrial expansion as well as to pay off debts could be earned by increasing agricultural sales abroad or saved by reducing food import requirements. Those who left farming contributed their labour to the expanding industrial sector, and those who remained improved their individual productivity by farming larger areas with the help of modern methods. Farm policy walked the tightrope of encouraging expansion by guaranteeing markets and supporting incomes, and facilitating mobility by stimulating the exodus in particular of the young and the landless to the towns.

11. Towards the end of the nineteen-fifties it became clear that the balance could not be maintained. Farm expansion had been too successful: the output generated found no buyers at the prices fixed under farm programmes. But to reduce these prices would not only offend social equity but put undue burdens on those who neither had the mobility and education to move to urban employment nor the resources to exploit the new technology. A new concept was needed - that of 'adjustment' in agriculture. The market related policies remained, now justified by social concern for the rural poor, and a set of structural measures attempted to fill the gap left by the undue emphasis in social security and welfare programmes on urban conditions. Costs of policies to dispose of excess production escalated and competed with demands for funds for rural development. The edifice of farm price supports began to look out of place in the more liberal environment of the sixties, and the ingenuity of administrators was taxed to the full in trying to contain the flow of overpriced agricultural output. Much of the complexity of present-day policies stems from the attempt to restore the balance between legitimate and commendable programmes to stabilise agricultural markets and the unwanted consequence of the accumulation of unsaleable commodities produced for the government rather than for the market.

12. The process of reducing the real value of price supports, of limiting programme costs, and of disposing of surpluses was well under way when the events of 1972-1974 interposed a new set of problems. A shortage of animal feeds increased farm costs already under pressure from accelerating inflation. A combination of harvest failures and policy changes put un precedented pressure on cereal supplies. The shock of the escalation of oil prices led governments to redouble efforts to control inflation and to offset balance of payments deficits. Economic activity faltered, and government spending plans based on the continuation of growth had to be checked. The complex of government agricultural policies had new demands imposed upon them: domestic farm output, once in surplus, became a valuable ally in the effort to control consumer prices. Stocks expensively hoarded became useful food reserves, to be replenished when exhausted against the contingency of the next 'food crisis'; export volume became less important as export prices increased, and became subservient to maintaining supplies for domestic use. Consumer subsidies quickly appropriated expenditures which in other circumstances might have paid for farm programmes. Traditional patterns of trade, with reliable sources of imports at relatively low cost, were remembered with nostalgia where previously they had evidenced the disruptive marketing policies of exporters shifting the failures of domestic programmes onto world markets. With the augurs pointing to continued market instability and the likelihool of recurrent food shortages, importers began to think in terms of conscious food supply policies, into which agricultural programmes and the level and pattern of domestic output would naturally fit.

13. It is becoming clear that this policy reaction was somewhat hasty. World prices have now receded, relative to those of other products, to the levels associated with the early sixties. The old programmes are reverting to their pre-crisis roles of underpinning markets for domestic producers. But government funds are still tightly controlled, and the political base of agriculture has been weakened by the attentions of other interest groups stimulated by the elevation of farm policies in the national consciousness. The re-emergence of old problems could provoke a fresh attempt to provide lasting solutions. High on the list of such possible approaches is the more determined search for international or co-operative intergovernmental action to deal with farm product marketing problems. Increasing awareness of economic interdependence has brought such a possibility nearer than at any time since the national farm policy began.

(ii) National policies compared

14. Two characteristics emerge from this brief historical sketch of the development of farm policies. The first is their flexibility. Changes in economic conditions - the degree of inflation, the rate of growth, the balance of payments position, and the level of unemployment - have had a major impact on the emphasis of agricultural policy measures. Each new problem leaves its mark on the direction of the policies and the instruments used. This makes it difficult, and even misleading, to talk about the 'objectives' of such policies. Governments do formulate objectives, but what is significant in influencing policy is not these political statements themselves but the perception of the dominant problem at any point in time. The explicit objectives of almost all countries include the stabilisation of market conditions, the provision of equitable returns on farm resources, and the adequate supply of goods to consumers at reasonable prices. Implicit in the link between these objectives and the formulation of policies is the judgement that unregulated markets are unstable, that farm resources are underpaid in the market-place, and that supplies are likely to be unreliable and overly expensive if governments do not intervene. But the history of agricultural policies paints a more complex picture.

15. The higher-level objectives of a modern society include economic and social stability combined with an equitable distribution of material benefits and the realisation of the development potential of the countries natural resources and human skills. Pressures arise of a positive and a negative kind: positive action is required and expected of governments to facilitate change and take advantage of opportunity, and negative or defensive policies are called for when events move against particular groups and interests. The political structure keeps such concerns before the administration and their response is bound to produce an array of ad hoc devices designed for the moment. Agricultural policies, or at least those with the greatest visibility, have tended to be of the defensive type. Agriculture has not, during peace-time, been planned in western democracies. Policy success cannot be related directly to a set of articulated goals; it is more a question of whether the most serious impact of events within and outside agriculture has been softened. The flexible use of policy instruments has contributed to the continuity of the major agricultural programmes over the past forty years.

16. The other dominant feature of agricultural policies in the major developed countries has been their similarity. This is related to the degree to which they react to changing circumstance, since the changes themselves are of a kind that disregard national boundaries. Depression, inflation, agricultural technology, social aspirations and political views on the role of government in the economy all spread throughout the industrial world.

This communality of circumstance and government responsibility produced similar reactions, in agricultural as well as in other areas of economic and social policy. In agriculture, the impact of this common response has been largely responsible for the trading difficulties observed in international markets for temperate-zone commodities. These problems are discussed further in the treatment of commodity market issues below. But despite the general similarity of approach, differences naturally occur among countries in the way in which agricultural problems are handled. These differences can be traced to the peculiar national characteristics which shape domestic policy response. The most important of these is the inherent trading pattern, the relationship between the size of the domestic market and the capacity to produce various agricultural products. The actual trade pattern is of course influenced considerably by the policies themselves, but the size, tastes, and affluence of the population circumscribe the domestic demand and the basic resources of land and technical skills put limits on overall supply. Moreover, the availability of employment in the non-farm sector has a major impact on the size of the farm labour force, and the level of off-farm incomes influences the acceptable level of incomes in agriculture. The structure of land use inherited from previous generations, and the legal basis for tenancies and land ownership all modify the concept of productive capacity, as does climate and its variability, soil type and the development of rural infrastructures. But in spite of this, few countries can at will and with reasonable cost alter the inherent balance of agricultural trade. These trade patterns in turn limit the choice of policy instruments and give their own emphasis to the perception of problems. This combination of different problems and different constraints itself makes comparison of policy success more difficult.

17. The difference in farm structure and land tenure traditions, besides influencing productive capacity puts its own stamp on national policies. If farm policy is to preside over social change and to regulate the burden of such change then one would expect to see the emphasis of policies reflect the magnitude of the adjustments to be faced. Important in this respect is the political attitude towards change induced by economic pressures - the degree of paternalism expressed in government programmes. These same political attitudes to the question of individual and collective responsibility show up in the emphasis given to stability objectives. The willingness to absorb publicly the risks in agriculture differs even between countries in rather similar economic circumstances. Agricultural policy will reflect in most cases the dominant political ethic, though this can be tempered when national interest is at stake in international affairs.

18. Finally, the difference in economic performance seems to have a marked influence over agricultural policy decisions. In part this reflects the ease with which a growing economy can absorb change, though expenditure on farm programmes may increase in periods of affluence both because of the availability of government funds and also because the income aspirations of farm people are linked to the living standards of their urban counterparts. In periods of rapid inflation, administered farm prices often lag behind the general cost of living and the prices of farm inputs. Balance of payments problems usually stimulate government activity in the agricultural sector; a persistent surplus has in some cases led to a reduction in protection for domestic agriculture.

19. The similarities and differences show up in the comparison among US, Canadian, EEC and Australian policies. One common feature which has a bearing on agricultural policy is that all of these countries have a federal structure. Discussion of their policies is complicated by the sharing of power between central and state or provincial governments. In the case of

the EEC, the conflict between member state and Community responsibility is most marked. National governments have kept to themselves a number of policy instruments, in particular, legislation relating to land ownership, taxation, and the farm labour force. They have passed to the Community control over foreign trade and the responsibility for the major aspects of domestic commodity market policy. Though decision-taking resides in the Council of (national) Ministers, policy initiatives in these areas must emanate from the Commission. A limited degree of price differentiation has re-emerged in the EEC through the operation of the system designed to counter exchange rate movements. In Canada the federal government also controls trade both international and inter-provincial. Marketing legislation which does not involve restraints on trade between provinces is enacted at the provincial level; most of the major farm policies are the responsibility of the federal government. In the US, state legislation also regulates local marketing conditions but federal agencies have responsibility for the bulk of the commodity programmes and for international trade policy. In Australia, States have considerable powers over production, marketing, and land use within their territories, whilst the Commonwealth government again is responsible for international trade. States participate in decision making at the Commonwealth level.

20. This federal structure is important for two reasons. First, the existence of predominantly free trade within the boundaries of the federations imposes significant limitations on the potency of restrictive marketing policies, and hence on the ability of governments to favour one group of producers. Thus regional interests, which vary widely on account of economic conditions as well as soil and climatic disparities, have in general to be satisfied at a federal level. The problem is most marked in the EEC, where regional specialisation has proceeded less far than in the other areas. But even in the other countries, the politics of farm policies are those of regions, states and provinces coming together at a federal level. The other feature of a federal structure is that of common financing of farm programmes; the shape of agricultural policies is an important determinant of transfers of funds from one area to another. Where such transfers are generally acceptable, the particular policy instruments used may be of lesser importance: Where they are contrary to considerations of equity they may lead to the rejection of policy measures that would otherwise be satisfactory. The problem of transfers is of greatest political importance in the EEC, but can influence farm policies in other countries as well.

21. All four countries are important trading entities, and agricultural trade is in each case a significant part of their international transactions. Canada and Australia are the most 'open' of the economies; the EEC and the US are, though less dependent on trade, more important in absolute terms on account of their much greater economic size. Both aspects are significant for agricultural policy. The absolute size of exports (or imports) of a particular commodity limits the extent to which the world market can be used to absorb additional supplies generated by price supports. In contrast, the larger the relative share in trade the greater is the possibility of the use of market power through supply control. If agricultural trade is an important part of the total international trade in a country then it is more likely that policies in that area will be influenced by considerations of general trade policy. This may not be entirely rational, as extra output is likely to have the same value expressed in foreign exchange earned or saved irrespective of whether trade is significant or negligible. But policy priorities are bound to be influenced by the visibility of items in the trading account. Though convenient to talk of the US and Canada as agricultural exporters, both have very considerable imports of farm products. Australia

does not need to import significant quantities of temperate-zone products, and therefore has a less ambiguous trade interest. The EEC is a net importer of agricultural products but with considerable export sales.

22. There are significant differences among these countries in their attitudes towards the role of government in economic decisions which prereflected in the choice of farm policies. Australia and Canada share a relatively uncomplicated political ethic that the task of government is to provide the framework for commerce, and that subject to socially acceptable minimum living standards the individual entrepreneur bears the major responsibility for output and investment decisions. This leads to a low degree of direct government involvement in agricultural markets except where the national interest appears to suggest otherwise. The Canadian and Australian Wheat Boards are the prime examples of agencies using monopoly trading powers to control sales, operating in an otherwise relatively liberal economy. The US, also philosophically inclined to free enterprise, has not set up agencies under federal legislation to control trade, and the powers of producer organisations are limited by anti-trust laws. In spite of this preference for a low government profile in economic affairs, strongly supported by some of the major farm groups, the US government has a comprehensive and involved set of agricultural measures administered by a sizeable bureaucracy. Europe represents an odd contrast. Individual member states differ in their approach to economic management, but in setting up the Common Agricultural Policy the decision was taken to involve government agencies intimately in the regulation of markets but, except in the case of sugar, to avoid output control. Producer co-operation is encouraged but its scale is limited by the competition legislation of the Rome Treaty. No attempt has been made to given sole trading rights to Community agencies, despite the fact that such arrangements were an important part of the pre-existing policies of member countries. The general attitude of the Community to such problems as farm incomes and their protection against market forces is much more paternalistic and dirigiste than the other countries, but in practice the policies of the EEC show less willingness to adjust output and control marketing channels than the more market-orientated economies of Canada, Australia and the US.

(iii) Policy instruments used

23. Just as there have been similarities and differences in the approach to policies in the agricultural sector in the four countries, so an examination of their choice of policy instruments shows both diversity and similarity. Often it is the emphasis among policy measures that differs from country to country. This is to be expected since policies and objectives cannot be simply related. If the objectives themselves are a complex reflection of the perceived problems, then the instruments must complement and interact with each other in the meeting of these objectives. Agricultural mechanisms can be discussed in at least three ways: the types of instruments can be viewed in relation to their strengths and weaknesses; the instruments used in the control of particular commodity markets can be compared across countries to illustrate the variety of approaches to related problems; and the main characteristics of each national programme can be described as reflecting the particular problems faced in that country. The analysis of the individual instruments is relegated to an appendix: the remainder of this section deals first with national characteristics and then with a discussion of commodity problems.

24. The policies of the USA emanating from the Agricultural Adjustment Act of 1933 but subject to major modifications at intervals since that time might best be described as an attempt to reconcile the political desire for individual and corporate economic liberty with the over-riding concern of

successive administrations for the health of the agricultural industry. The sector is to be saved from itself. The major innovation in early US policy was supply control in the most significant commodities through acreage allotments and marketing quotas. Much of this legislation remains today. Two federal agencies, the Agricultural Stabilisation and Conservation Service (ASCS) and the Commodity Credit Corporation (CCC), are responsible for the administration and financing of farm programmes. Price support schemes are mandatory for the 'basic' commodities - cotton, rice, tobacco, wheat, maize (corn), peanuts, as well as for barley, rye, oats, sorghum, wool and milk. Other commodities, such as soyabeans and flaxseed are also supported under the discretionary powers of the Secretary of Agriculture. Fluid milk sales are regulated under marketing orders relating to the major urban areas, and sugar has usually been supported under separate legislation. Meat and poultry products are marketed freely domestically, though subject to some trade controls.

25. The most severe problems, and hence the most comprehensive legislation, surrounds the main arable crops in which the US also has a pronounced export interest. Supply control has been applied over much of the period as a means of regulating output to meet domestic and foreign demand. A further outlet, food aid, was added in the 1950s to relax the pressure on accumulated surpluses as well as for more altruistic motives. The surpluses themselves were an indication of the failure of supply control to limit output of export crops. As a consequence, support prices (limited to those farmers who participated in acreage reduction schemes) were lowered, and partially replaced with direct payments. Acreage controls were themselves relaxed for cereals to meet shortage in 1967 and 1968, reintroduced in 1969, then given a somewhat more flexible form (the 'set-aside' arrangements) in 1971-73, and subsequently dropped again when world markets became firmer in the last few years. Policy changes danced to the tune of export demand developments and the associated budgetary costs incurred in price support payments, export subsidies and storage charges. The main aim in recent years has been to control such costs arising from the obligation to support farm prices by attempting on the one hand to maintain and expand export markets and on the other to avoid the overpricing of domestic output relative to market demand. Thus many of the provisions of domestic programmes, in particular for cereals and for sugar, were allowed to lapse when prices rose in 1973. Future policy will indicate the extent to which attitudes to government involvement in domestic markets have been significantly modified by the events of the past five years.

26. Canadian policy has had to keep in step with that of its neighbour and trading partner to the south. The concern with overseas cereals markets is an even more dominant theme in Canada. The methods employed have differed from those of the US. Acreage control has only been attempted on one occasion (the LIFT programme of 1970) for the major arable crops. But a comprehensive system of delivery quotas, by farm, has been in operation since 1940, allowing Canadian wheat producers in the Prairie Provinces little individual choice in their farming pattern. In return, that output is marketed with the weight of the Canadian Wheat Board (1936) which can adjust deliveries to meet anticipated domestic and export outlets. In general, the CWB has been self-financing; it is relieved of the 'residual buyer' obligations of the CCC in the US and the intervention agencies in the EEC. The main federal instrument of Canadian policy for products other than Western wheat is the Agricultural Stabilisation Act (1958), and the

associated funding agency, the Agricultural Stabilisation Board (ASB). Many commodities are mandatorily supported at price levels related to historical averages, such as cattle, sheep, pigs, dairy products, non-prairie cereals, and eggs: others receive occasional support through deficiency payments (such as wool, and sugar beet) and through government purchasing (potatoes). The Canadian Dairy Commission, also funded through the ASB, is the most important federal agency after the Wheat Board other marketing legislation being predominantly at the provincial level. Liquid milk markets are, as in the US, controlled by a quota system matched to local demands, with national support measures operating mainly in the market for manufacturing milk. Canadian agriculture also received an improvement in income related to the 1973 sellers market, and this will have an important influence on future policy attitudes.

27. Australian policy bears considerable resemblance to that in Canada, though modified by the importance of wool, sugar and dairy product exports, and by a somewhat more distant relationship with the US. The wheat market is dominated by a federal agency, the Australian Wheat Board (1948), which has however only relatively recently instituted individual farm quotas (1970). It is 'grower-controlled' to a greater extent than the CWB, the CCC, or the EEC intervention agencies. Its activities were intended to be self-financing, like the CWB, but have attracted considerable government funds at periods of low world prices. Domestic and overseas markets are separated, to enhance earnings from sales of the crop. This aspect, the maintenance of separate and generally higher prices on domestic markets, is also a feature of dairy and sugar policies in Australia. State marketing boards allocate liquid milk quotas, whilst a national agency is responsible for milk product exports. An equalisation fund, supported by export subsidies and government bounties, provides for the payment of a pooled price on domestic and overseas sales. Australia, as is the case in the US and Canada, allows a relatively free market to obtain in meat, though exports are promoted by a marketing board. Sugar production is controlled by farm quotas, and income is supported when necessary by export subsidies and fixed domestic prices. The wool situation has stimu ated its own set of policies over the years, based on the original Australian Wool Board (1936), and has gradually involved more marketing control and the introduction of minimum prices and deficiency payments. A new body, the Australian Wool Corporation, now administers this programme. Production of wool has not, so far, been restricted.

28. Policies of the European Economic Community have at once a simplicity of form based on a relatively short history, and a complexity of motive accounted for by their intergovernmental nature. The main difference between EEC policy and that of other countries in the matter of instrumentalities is the emphasis on border controls facilitated by the fact that imports of the major products are of much greater significance. The establishment of a comprehensive system of threshold prices to prevent direct price competition by overseas suppliers from weakening domestic markets has been in many respects the cornerstone of the Common Agricultural Policy (CAP). Where such border protection is ineffective, support buying on the internal market guarantees a floor price. Produce so acquired is usually exported with the aid of subsidies financed by central funds. Marketing agencies at a national level are not, at present, a major feature of policy, and no Community-wide marketing bodies exist. The future of such relics from past national programmes, such as the marketing boards for milk, hops and potatoes in the U.K., is clouded not only by the ambiguity of their function within an EEC market system but also by doubts of their compatibility with more general notions of fair competition.

29. The system of variable import levies applies to cereals, rice, sugar, olive-oil, and milk products. Protection for livestock products derived from cereals - pigmeat, poultry and eggs - is related in part to the effect of the levy on grain. Imports of other meats attract fixed duties, modified in the case of beef by a variable component related to domestic market prices. Soyabeans enter freely, with a modest tariff on the related oils and meals. Domestic intervention buying covers cereals, rice, tobacco, sugar, beef, butter, cheese and oilseeds. More flexible support buying and aids to private firms for storage apply to fruits and vegetables, wine, pigmeat, flax and hemp. Deficiency payments help to support the incomes of durum wheat producers and stimulate the use of domestic tobacco and oilseeds. Production quotas, allocated by country in the first instance, operate only for sugar beet. The 'guarantee' section of the European Agricultural Guidance and Guarantee Fund (FEOGA) is responsible for expenditure incurred in price support operations. Producer groups at a sub-national level are encouraged, and are occasionally used as a vehicle for price support activities.

(iv) Commodity policies compared

30. The previous discussion of policy instruments indicated the range of devices employed in each of the four countries. Evaluation of the effectiveness of these measures is simplified by considering their application to particular commodity markets. The discussion will be limited to wheat, feedgrains, dairy products, and sugar. More general implications for other commodity markets are given later. The commodity classification is useful in the present context in two respects: first it underlines the link between the attributes of the commodity in question and the type of policy measure appropriate in that market, and secondly it illustrates the relationship which exists among national policies. Both of these aspects will be discussed at length in the later part of this report.

31. The wheat market provides a convenient starting point for a cross-country comparison of policies. The problems faced by the US, Canada, and Australia are basically similar. Wheat markets are subject to instabilities arising mainly from the influence of the weather, but also to a more limited extent from demand changes particularly in the market for animal feed. The fact that this demand for feed wheat is also known to be responsive to price implies that supply instability can be absorbed to a limited

extent by changes in feeding patterns. Its place as the world's major traded foodstuff imposes additional obligations on major exporters. As a consequence, they face the need for policies which maintain stability of incomes for their own producers, which ensure supplies for countries where domestic output is particularly vulnerable to yearly fluctuations, and which are consistent with the overall demands of economic policy. Since wheat farms in these countries are in the main of reasonable size and use modern technology, the problem of low absolute farm incomes does not directly arise. In Europe, by contrast, small scale wheat farming has been preserved, particularly in Germany, Denmark, and the Netherlands. The wheat policy of the EEC does not have to cope with variations in yield to the same extent as on the new continents, but prices set under the CAP have reflected the generally higher (non-land) costs of production.

32. The fact that wheat is easy, if expensive, to store, reflects itself in the willingness of farmers, traders, and government agencies to carry over a part of the crop to the next season. A fairly extensive trade in wheat futures on major commodity exchanges ensures reasonable information on short term market trends, and allows merchants to hedge against sudden price movements. The oligopolistic structure of the private trade in some countries gives rise to concerns about undue market power and to possible manipulation. Uncertainty about Soviet conditions, which in quantitative terms have a marked effect on supplies, tends to make the market sensitive to rumour and speculation. The long term trends point to a steady but not dynamic growth in demand largely centred in low and middle income countries: trade patterns have already reflected this trend in recent years.

33. All the four countries have pursued policies which try to prevent changes in world conditions from impinging directly on domestic producers. Only Canada and Australia control output at the farm level with delivery quotas, facilitated by their near-monopoly selling agencies. Though apparently satisfactory to farmers, it is doubtful whether this para-statal trading really confers much market power. Output in these countries may not in fact have been much less than if farmers were free to choose production levels, and the boards in consequence may not have been selling significantly less grain than if a more competitive market structure had obtained. The major benefits have probably come in the orderly marketing of the domestic crop over the year, rather than the manipulation of output quantity. In both the US and the EEC, state buying agencies have imposed a floor in the market, and as a consequence have accumulated stocks when world prices have been low. Direct export subsidies have then been needed to remove unwanted reserves into overseas commerical (and concessional) markets. The US has used acreage control, with significant payments to induce farmer participation, to limit wheat output in surplus periods. Whilst being reasonably effective in controlling the programme costs involved in storage and export subsidies, these land diversion policies have probably not kept world prices up over time. Any firming of the price of US wheat has encouraged additional output in other countries. Only more concerted action among the major exporters could really have made supply control effective in the medium run.

34. The stock policies of these four countries have not been noted for their consistency and articulation. Wheat accumulates on farms in Canada if harvests are good relative to CWB delivery quotas. The government pays certain storage costs, and farmers adjust their next year's production in the light of their own carryover. Though such a system will tend to stabilise farm income in the light of fluctuations in domestic yield, it is not clear that it provides an effective stocks instrument such as might be required by an internationally co-ordinated set of reserves. Similarly in Australia no

active reserve policy is pursued. The policy of the Wheat Board is to maintain working stocks, but there are no 'government-owned' reserves as such. On-farm storage is not so prevalent in Australia as in Canada or the US. European Community storage policy is essentially a byproduct of the intervention-buying system. Given little flexibility in setting this price, the intervention agencies have to accept grain offered to them, subject to various quality and other standards. They can dispose of this grain on tender to exporters who benefit from a subsidy. It would be possible to regulate stock holdings by varying this subsidy, but this is not normally done. One or two individual member countries are reported to have their own emergency stocks, but these have no importance in terms of market stability. The US employs a somewhat more sophisticated stock system through payments for on-farm storage as well as through CCC administration of grain stocks purchased under price support programmes. In recent years the volume of commercial relative to government stocks has increased, and there has been a reluctance to incur the costs involved in extensive storage programmes. The aim in the US, as with Australia and Canada, has been to preserve credibility as an exporter by being able to offset from reserves the variations in domestic output: the reality has been that the level of stocks has reflected external demand as well as internal supply. In most years this represents a stabilising mechanism for other countries, but in the absence of more satisfactory co-ordination of stock management it can also contribute to price fluctuations.

35. The market for feed grain is somewhat less sensitive than that for wheat, both in domestic and international terms. The national objectives are also somewhat more complex as higher feed grain costs impose a burden on the livestock sector. In addition, much of the grain used in animal feed is consumed on the same farm on which it is grown. As a consequence, feed grain policies are less visible in the four countries. It is in fact arguable that, in the absence of the programmes in the wheat sector, feed grain prices might have been left even more to the play of market forces. In economic terms, the two major characteristics of feed grains are the relatively price-elastic demand and the dominance of the US as the major exporter.

36. The relatively modest scope of feed grain policies shows up in Canada, where the Canadian Wheat Board handles only about one third of the barley grown in the prairie provinces, and where the delivery quotas do not seem to be an effective limit on production. For non-prairie barley and oats, only rather low minimum prices are set under the Agricultural Stabilisation Act, and have not involved the government in deficiency payments. The major domestic programme is a system of subsidised freight rates to move grain to eastern livestock farms. Ontario corn prices are protected by means of a tariff on imports which enter mainly from the US. In Australia the feed grain policies are almost entirely in the form of State marketing boards, which buy and sell the local crops in competition with each other but do not attempt to support prices. In the US, the main instruments of feed grain policy have been similar to those in wheat. Acreage allotments and, later, set-aside programmes have been in operation. Only one half of the farmers who grow feed grain have participated in these schemes; but those who did received price support payments and diversion payments according to the area of land which they kept out of production. This has had the effect of allowing the US government to limit surpluses at times when market demand has been weak. The support price for feed grains as well as the national acreage allotment have been adjusted to preserve market balance. As the major exporter of corn, these adjustments have been tantamount to supporting world price levels, a stance which was relieved by the price rises of five years ago. EEC maize and barley policy also follows that

relating to wheat: in this case, however, a net deficit position ensures that little support buying is required as prices are maintained by use of the import levy.

37. The dairy sector is by its nature complex and the range of policies reflect the various facets of the market. Unlike the situation in the major cereal growing areas, many dairy farmers in North America, Europe and even Australia have small herds, are relatively poor, and retain the sympathy of urban voters. Price supports are accordingly generous, which leads in part to the establishment of a smaller number of much larger enterprises the output from which puts pressure on the market. Countries which would otherwise import dairy products have no hesitation at restricting market access to deal with internal problems. In doing so the market demand is curtailed and the surpluses exacerbated. The usual instruments of market control, besides tight import restrictions, are differentiation by product and by destination. In the US, Canada, and Australia, captive urban milksheds are allocated by licence to local producers and wholesale prices are controlled. Milk going for manufacture into butter and cheese, commonly from smaller farmers in more remote areas, is sold at lower prices but still requires considerable subsidy. Only in Europe has this market division been avoided: all milk sells for roughly similar prices maintained by heavy government involvement in the manufactured milk market. Without any effective means of controlling supply, the EEC faces more severe policy problems. And with milk prices a sensitive domestic issue, the task of reducing the level of support given by the CAP has proved too great for the Community. At present about one-third of the EEC agricultural spending is on dairy product support, and this in turn represents almost one-quarter of the entire Community budget.

38. The sugar market is an example of a situation where farm policies do not seem to emerge naturally from broad social and economic concerns. No social problem exists, as in the case of dairy production, and no national interest is at stake as in the case of wheat. It does not, as does feed grain, form the basis for a large secondary agricultural industry. Sugar supplies are important in diets both directly and through their use in prepared foods. But this does not explain why protection of the incomes of sugar beet producers has become such a permanent feature of developed country agricultural policy. Generous price supports are explicable only in terms of the political acumen of a small group of businessmen and farmers. Allied with historical trading patterns, the protection of the domestic sector leads to some unique policies. In the US, which has been a major importer of raw sugar, a combination of direct subsidies, occasional acreage controls and domestic production quotas is used to maintain farm incomes. In the EEC prices have been set generally at a high level and yet it is the only crop to have come under production controls. In the UK, before joining the Community, acreage was tightly controlled even though one-half of sugar consumption was satisfied by imports. Canada employs deficiency payments to support a small sugar sector, and Australian policy, reflecting an export interest, has been to maintain high domestic prices and grant export subsidies. The political nature of the sugar trade suggests that farm policies in this sector do not give an unambiguous picture of countries using selective intervention to support and stabilise farm incomes: factors specific to sugar have played a dominant part in shaping such policies.

39. Policies for other products vary from high levels of support given to crops grown in areas where as a matter of regional policy it is felt desirable to maintain population and incomes - such as for durum wheat in Europe - to virtually free market regimes where no particular interest is at stake or

where policy instruments would be unduly cumbersome to administer. In Canada, Australia, and the US, the meat sector receives little direct support from government, though imports are controlled by 'voluntary' quotas in the case of the US and exports are subsidised in Australia. A floor price operates in Canada but payments are only needed when markets are cyclically depressed. The EEC has run a more active intervention policy for beef, but has avoided too close an involvement in the pigmeat sector. Wool production receives price support in the US, and in Australia the market is organised by a grower-controlled board: in the EEC, wool is treated as an industrial product and escapes the attention of the CAP. It may be significant that 'new' crops which have grown in importance since the start of farm policy legislation, have also tended to have more liberal market regimes - such as US soyabeans, where modest price supports and CCC storage policies put a floor in the market without attempting to regulate supplies.

40. An evaluation of all these policies is not feasible within the scope of this report. But several points of a general nature can be made. First, the most common method of control by governments over farm programmes appears to be through budget appropriations. Except in the EEC, where budgetary scrutiny is as yet incomplete, policies appear to be subject to implicit financial limits. As these are reached or exceeded so policy changes are implemented. A policy is considered generally satisfactory when it does not represent a drain on the public purse. The cost-effectiveness of policies is rarely scrutinised, and would in most cases probably show a rather poor performance relative to other social and economic programmes. It is almost certain to be the case that direct income supplements paid to farmers would be a cheaper way of achieving equity objectives, and that crop insurance schemes or the averaging of incomes over a period of years for tax purposes would represent better ways of smoothing the fluctuations of farmers' incomes. Price stability, whilst desirable as an end, has probably been achieved at high cost through market intervention. A 'pure' stabilisation scheme should have little cost if it evens out the flow of goods to meet demand. The fact that farm programmes have had a significant budgetary cost suggests that the manipulation of the pattern of supplies has not reflected itself in an increase in the total value of the crop or product.

41. Many of the farm programmes discussed above have a more positive element, the improvement of the marketing channels themselves. Such policies as the establishment of marketing boards, which can anticipate demand and assist producers in their investment decisions as well as providing some protection against concentration in the industries to which farmers sell, are generally constructive. But sound marketing, and the production of appropriate types and qualities of farm goods for markets is often discouraged by the activities of agencies which appear to hold out a blanket guarantee to buy whatever is offered for sale. Farming 'for the government' is an unwelcome side-effect of many price support policies.

42. The limitations of any particular aspect of farm policy can usually be explained in the circumstances peculiar to that country and commodity. Perhaps the most serious criticism of such policies is not their inappropriateness in a domestic context but their cumulative impact on the world agricultural system. Resources are devoted to agriculture in a way that is inconsistent with the generally desirable aim of producing foodstuffs and agricultural raw materials at the least cost. This economic cost has generally been found to be modest in terms of the income levels of developed countries. But in global terms such distortions can have a significant effect. At a time when developing countries are reviewing their own investment plans

for agriculture, both as a part of their food supply policies and in terms of the contribution to foreign exchange earnings, the impact of developed country agricultural policies on the pattern and terms of world trade can lead to costly decisions which can be ill-afforded. There is, however, another aspect to the external impact of developed country policy towards agriculture. If aggressive domestic stability policies throw much of the burden of production instability onto world markets then those markets themselves will be unreliable. The integration of domestic policies with responsible attitudes to international trade has yet to take place.

II. Lessons and implications for international commodity control

(i) National and international policies compared

43. In order to indicate the applicability to the question of international commodity control of the experience of developed countries with farm policies it is necessary to compare the context in which these two sets of policies operate. The objectives of such policies have a basic similarity. Dissatisfaction with the outcome of market forces leads to be belief that selective policy interventions can stabilise and raise producer incomes. Such interventions themselves are pursued with similar instruments, such as output control, price fixing, and reserve policies. Both types of policy have financial and distributional effects which are either intended or accidental. But the degree of similarity is put into context more sharply by examining the differences. It is these differences that indicate the extent to which experience with one set of programmes can be transferred to assist in the formulation of policies of the other type.

44. The main difference would seem to be one of administration and politics rather than economics. The prerequisite for a viable farm programme is the existence of a political consensus which accepts that government has responsibilities to the farming sector. In all four of the countries discussed in the previous section this consensus has existed for forty years. Farm policies have on occasions raised party-political issues, and changes of government have left their mark on the shape of agricultural programmes. But even when these policies have been unpopular, the call has been for reform rather than dismantlement. The greatest pressure on such policies has come from farm groups themselves who can always find ways in which support systems can be improved. Consumer, urban, and manufacturing interests commonly complain of undue expense and of maladministration in farm programmes, but make no conscious political effort to dilute these policies or to move towards their eventual termination. The reason appears to be twofold: first when seen within the complex of domestic policies which impinge on virtually all aspects of economic life, the agricultural programmes lose much of their visibility, and secondly, they have attracted a large bureaucracy which has become skilled in manipulations designed to divert criticism, obscure embarrassing issues, and correct blatant imbalances. The first of these two reasons is tied up with the existence both of a political system sensitive to diverse group interests and of an economic system which contains general taxation and redistribution programmes to counter the inequitable effects of any particular set of sectoral measures. The second is responsible for the continuity and flexibility of farm policies, as well as for their complexity, and has meant that 'outside' groups can rarely muster the right ammunition or keep track of the moving target.

45. In the context of intergovernmental discussions of commodity policy, these conditions may not be fulfilled. A political consensus is harder to reach among governments where national interests are reasonably distinct. Most congressmen and members of parliament have in their constituencies some people who make their living from the land: relatively few countries grow coffee. Agreement on measures to stabilise coffee prices must therefore either have elements attractive to non-producing countries or be bound up with similar measures relating to other trading issues. In this connection, it is worth noting that farm policies have rarely been established as a means of diverting a threat. Though farm groups may on occasions predict national disaster if some particular sector is left unsupported, governments are not often impressed. And if those same groups indicated that in the absence of public support they would themselves 'organise' to achieve their aims, then

most administrations would be delighted to let them try. This is not to indicate that all international commodity negotiations are stimulated by fear of the disastrous consequences of lack of agreement, but merely to point out that by the nature of things few governments need farm policies to placate implicit market power. The more common stance is to encourage and cajole producer co-operation in the face of traditional habits of independence and rivalry.

46. The search for an international consensus on commodity policy has of course been tied up with the package of developments articulated within the United Nations framework as the New International Economic Order. Moreover, the linking of commodity issues in the Integrated Commodity Programme helps to fulfil the condition implicit above that programme stability is further enhanced by a multi-product approach. In particular, the use of a common fund to divert attention from individual programme costs is in accordance with government practice in farm policies. But the absence of an international taxation system is a major distinction. Within countries a taxation system, usually progressively related to income, helps farm policy in two ways. It removes into a quite different area of discourse the question of the raising of funds, and consequently blurs the connection between income generated by and expenditure incurred in the programmes. Secondly it ensures that excessive benefits from policies are 'clawed back' in the form of taxes and any deficiencies of income not remedied by policies are made up from other social security programmes. These comments apply particularly to farm policies which have a visible budgetary component, but the same considerations undoubtedly hold in those cases where price levels are manipulated to transfer income.

47. The fact that farm policies are both complex and flexible attests to the skill of their bureaucratic progenitors. International policies relating to commodity trade, by contrast, tend to rely heavily on single instruments; they are often negotiated over a lengthy period, emerging as an inflexible compromise; they do not have the backing of administrative skills on anything like the same scale as even relatively minor national programmes. Moreover, though many national officials are actively involved with the negotiation and operation of international agreements they themselves find problems of divided loyalties and conflicting priorities. Policies also require in most cases a degree of detailed statistical and technical information which has traditionally been collected by ministries and departments of agriculture. Again the factual base for many commodity policy negotiations is itself weak - not through any lack of competence of the international organisations who are responsible for such information but because they lack the influence over data sources, often national governments, which the governments themselves have over their own national institutions and individuals. The control of information is itself an important part of market power: it may be premature to assume that such information will be readily available to run an international commodity policy.

48. A further significant difference between national farm and international commodity policies revolves around the question of control. It is possible in most circumstances for a government to restrict entry into a particular sector of domestic agriculture, to limit the numbers of firms permitted to sell a product, and to influence through legislation the purchase and use of the commodity. In international terms the degree of control that a group of countries participating in a commodity pact will have is circumscribed by their ability to prevent others from receiving benefit from the agreement without accepting the disciplines involved. This 'free-rider' problem does surface occasionally in domestic farm policies, where it raises questions of individual liberty and restraint of trade. In international policy it is

quite fundamental to the question of whether an agreement is viable, and it subsumes the question of responsibility for the activity of domestic firms operating in overseas markets.

49. One practical difference between most domestic farm policies and the conclusion of international agreements is that the former operate essentially within a currency area. This has two aspects: first, the currency in which prices are denominated is that which is of interest to producers, and secondly, there is no ambiguity about financial liability for programme expenditures. By contrast, currency changes have a potential impact on the viability of commodity agreements and complicate the calculation of financial contributions.

(ii) Lessons of farm policies

50. With these differences in mind, the experience of national farm policies can be related to the control of international commodity prices. The objectives of such control will be taken as the stabilisation of export earnings of developing country primary producers, around a trend which at worst reflects the rise in the cost of imported products and at best transfers purchasing power over time to low income countries.

51. The major lesson which appears to stem from the experience of developed country agricultural policies is that policies designed to alleviate short-term problems are not in themselves a sound basis for long-run market adjustment. The typical 'life cycle' of a policy would seem to be as follows: a crisis is experienced in a particular agricultural sector; policy instruments are fashioned or adapted to meet it; the sector comes to rely on the policy; the policy absorbs the effect of the crisis and becomes costly; pressures develop to modify the policy, which achieves some stability until the next crisis. This process is discernible in the 'permanent' support systems, such as the EEC import levy - export subsidy policies and the US wheat and feed grain programmes, as well as in the more obviously ad hoc schemes such as are used widely in Canada and Australia. The ability of policies actually to anticipate trends and to assist in the adaptation of the industries concerned to meet new economic conditions is put in doubt by the experience of these four countries. The reason would seem to be the undue emphasis on price to the exclusion of other elements which determine resource returns. Thus the problems into which these policies run is largely manifest in terms of the appropriate price to set. To over-simplify somewhat, if the price established within a policy is 'wrong', no amount of clever manipulation of instruments can hide the fact: if the price is 'right', constructive intervention by governments can absorb risks, develop markets, promote better resource deployment, and create the appropriate climate for profitable investment.

52. This condition, translated into international terms is of course contentious. It implies that, over time, the determinants of the terms of trade of primary exporters are the state of technology and the level of demand in the market. Primary products would trade in the same commercial environment as other goods. Political aspirations regarding the development of these markets would have to be consistent with underlying economic trends. The regulation of international commodity markets would involve the creation of stable conditions to allow profitable investment decisions to be taken. The result may or may not involve significant resource transfers through price trends: this would be determined by underlying cost advantages and by the pattern of demand. This may not be satisfactory in broader political terms. But the experience of domestic price policies, in so far as it is

relevant, shows that even within countries - where administrative problems are less - the scope for manipulation of the long term trend in prices of farm goods is severely constrained.

53. In practical terms, the implication of this conclusion is as follows. Agricultural incomes have developed broadly in line with those in the non farm sector, in spite of long periods of decline in relative farm prices. This has been brought about by dramatic improvements in productivity, an orientation of production patterns to meet emerging demand, mobility of the workforce and of investment capital among sectors, and increased education and skills to close the gap between the urban and rural labour force. Agricultural policies related to the improvement of marketing channels and information, the development and adoption of technology, and the mobility of the labour force have contributed to this situation. Farm price policies which have seemed to offer to farmers an alternative route to prosperity through guaranteed markets and open-ended subsidies have often delayed these adjustments. This delay has been consistent with the general social concern for a sharing by other sectors of the economy of the burdens of such adjustment. But the quid pro quo has been that policies themselves operate within accepted cost limits and do not permanently mask the underlying trends. The absorption of risk on current investment of human and physical capital is widely accepted: the creation of artificial markets for future investment has rarely been tolerated for long. It seems likely that the international community might impose similar constraints on the attempt to regulate commodity markets.

54. If this is the case then it suggests three aspects of the problem of commodity control where farm policy experience may be of value. These are the setting of price levels, the use of instruments, and the development of complementary policies to relieve the burden on price control mechanisms. The level at which policy prices are set is, as was suggested above, the most difficult and most crucial aspect of policy administration. In one sense it is the only way of distinguishing between support and stabilisation policies. It is also the main determinant of policy costs, with the type of instrument used largely indicating the incidence of the cost. In most cases, the setting of policy prices is an annual preoccupation which attracts attention from those responsible for budgets and consumer food prices as well as focusing public opinion on the farm problems. The price-setting process is often the time when changes in policy instruments are introduced, and it provides in many countries an opportunity for the various interested parties to discuss with government the trends within the industry. In the light of all this, many administrations have attempted to employ various formulae to assist in the determination of prices. Such quasi-mechanical price decisions are occasionally encompassed in the basic legislation, limiting the freedom of the executive body to make changes without new authority. But even in these cases there is a degree of flexibility in the choice of prices.

55. Three types of considerations influence annual price decisions and therefore over time the trend of such prices. First, and most popular with farm groups are those that relate to farm costs. Perhaps the best known of these is the concept of 'parity price' used in the US since the inception of the farm support programmes. This reflects the relationship between prices received by farmers and those paid by them for the basic production prerequisites. Individual commodity parity prices are the product of the relative commodity price and the overall parity ratio' using the period 1910-1914 as a base. An alternative measure, the level of parity income, has been suggested but not generally adopted. Clearly if successive administrations had to keep farm product prices at their parity levels, there would be no pricing flexibility. Instead, the system is a way of keeping support prices within bounds, say between 75 and 90 per cent of parity as in the case of manufacturing milk, determined by Congress. Support prices for some crops have dropped at times to about 50 per cent of parity, indicating that the formula does little more than reflect pricing decisions taken on other grounds. Policy price decisions in the UK, before accession to the Community, were based on another variant of the cost-based formula. The annual cost increase attributable to the production of supported products was calculated and the figure 'agreed' with representatives of the farm sector. In addition a productivity increment was estimated and the value of price guarantees was raised by some figure between the cost increase itself and that which would have been suggested if productivity had lowered costs by the full amount. Again this gave some pricing flexibility by the under-recouping of costs when the budgetary burden of the policy was deemed to be excessive. More recently, the EEC Commission has used as a starting point for its proposals to the Council of Ministers an 'objective method' of calculating price increases necessary to keep labour incomes on certain types of farm in line with non-farm earnings. The Council has not as yet tied itself to accepting such a formula, and insists on modifications to the price proposals to meet other objectives.

56. The second method of price fixing has been the use of historical series for each commodity. Thus in Canada, many commodity programmes have included the stipulation that price levels be no less than 80 per cent of the previous 10-year average. The Agriculture Act (1957) in the U.K. limited price decreases to an average of $2\frac{1}{2}$ per cent per year, with a slightly greater tolerance for each commodity. Rapid inflation has removed any constraints that such limits might have had on product prices. The third, less specific, pricing rule has been to link price changes to market conditions. This can still imply a level of price support, but is intended to put limits to government cost and to allow policies to reflect circumstances sooner than would otherwise be the case. This technique is used to a certain extent by the EEC Commission when allocating price increases among commodities; it is even more prevalent in Australian and Canadian Wheat

policies where initial price supports (and hence minimum administered prices) are set to reflect anticipated domestic and export demand strength. In the US, at times when acreage control is in operation, the support prices are set concurrently with average targets also on the strength of the market.

57. Similar choices face those responsible for administering international commodity programmes. Cost-based pricing was incorporated in the arrangements under the Commonwealth Sugar Agreement: it is implicit in the Lome sugar arrangements through the linkage with internal EEC prices. Proposals for indexation are a broader version of these schemes, relating to developing country import prices rather than to commodity production costs. Experience in domestic farm policies suggests that any rigid formula has to be reinterpreted regularly to keep programme costs in check. Historical averages of prices might be thought to have advantages in markets where conditions have fluctuated cyclically. In domestic programmes they have been used mainly to give farmers longer term assurance against the progressive lowering of support prices. In international terms they may act as reference points which could trigger off compensatory finance or other policy actions. But to link a commodity price to its own history is unlikely to prove satisfactory. Ultimately under such a scheme the policy price would come to be an average of previous policy decisions; until it did so there would be a danger of exacerbating problems by stimulating output on a price downswing and suppressing it when prices turn up.

58. If cost-based pricing decisions ignore market information and historical average prices reflect with a lag the market instabilities then price fixing on the basis of anticipated conditions would seem to be superior. For national programmes this is borne out by experience. Support prices announced in advance of the production decision can relieve individual farmers of a certain amount of the marketing risk, and combined with longer term guarantees can reduce also the investment risk. But in international programmes there is the complication that these prices represent the major short-run determinant of the export earnings from primary products and hence of national income for many countries. Whether 'market information' in these circumstances can lead to an objective assessment of a reasonable future commodity price is doubtful. The experience of the EEC is in this regard of interest. Common prices under the CAP have a marked distributional effect on member countries. The result is that pricing decisions which otherwise might have reflected market trends and kept FEOGA costs in check are avoided by ministers who have their own 'shopping-list' of price changes which are domestically profitable or desirable. The balancing act between desires and market realities works on a national level because of the ultimate authority of the government both for taking decisions and financing the policy. Even in a European Community with established supranational agencies the outcome of the price fixing process is essentially a multilateral bargain. At an international level one might expect these problems to be multiplied.

59. The experience of the Community is instructive in another aspect of pricing. The choice of the unit in which to express agreed farm prices has become acute with the divergence of exchange rates. A 'unit-of-account', originally valued at one US dollar then subsequently linked first to gold and then to the joint-float European currencies, is used in determining annual price levels. But individual member states have tended to look to the CAP for price guarantees in terms of their own domestic currencies. This has led to a complex system of border taxes and subsidies which preserves the illusion of common prices and the reality of common decisions whilst at the same time not offending national concepts of the appropriate domestic level of prices for farmers and consumers. This too suggests that price policies at an international level would, in a period of exchange rate changes, have to find some way to share risks from currency fluctuations.

60. The second potential 'lesson' for international commodity control arising from experience with farm policies is concerned with the use and choice of instruments and of their effects. Although, as was suggested earlier, support and stability policies are difficult to separate analytically since any instrument that influences the level of incomes or prices can be used selectively to stabilise those variables - it is convenient to treat them as distinct in the present context. Income increasing policies likely to be considered in the control of commodity markets are predominantly of the supply management type: stability measures would include buffer stocks, and supply and purchase commitments. A third category, of non-price measures, would include schemes such as compensatory financing. Agricultural policies give some indication as to the strengths and weaknesses of each of these policy types.

61. Supply control policies rest on two prerequisites for their effectiveness. First market demand must be such that additional revenue generated from extra sales is appreciably below the cost at the margin of production. Only in these cases will a reduction in output add to net returns. Prices can of course be raised further, but at an economic cost. Secondly, there must be a reasonable degree of control of all sources of production, or at least a strong incentive for general compliance. The first condition is more likely to hold at an international level where output from the major producing countries could face a relatively inelastic demand. In national policies, this condition has often not obtained, and the 'power' of producer groups and marketing boards to raise prices without loss of income has been rather limited. Governments can ban alternative sources of supply, but have not the same leverage on export markets. The second condition has been overcome domestically in various ways: licensing producers or giving marketing boards exclusive rights is one approach and making additional payments dependent upon compliance with supply control policies is another. In international trade regulation, a degree of moral suasion might suffice, but it is not easy to see how one might establish incentive payments for participation.

62. The experience of domestic policies suggests that price support by supply control has certain limitations in the long run. These might be thought of as competitive and non-competitive leakages of the benefits over time. Competitive leakages arise where the increased profitability arising from the output control becomes attracted to the instrument of control itself. This is particularly apparent where output quotas are associated with the land resource. Farms blessed with such quotas change hands at prices which reflect the capitalised value of the additional profitability. This raises a problem in that new entrants into that sector may not receive any of the programme benefits, and as a consequence income problems may re-emerge over time. Moreover, the government may have considerable difficulty in modifying the policy when its effects are locked up in the capital

structure of the industry. This is in fact a part of the more general problem that policy induced profitability will tend to be bid into capital values, particularly of land, however prices are supported. Such leakages through competitive pressures would presumably take a different form in international commodity control. Benefits would accrue to countries who could choose how they were to be distributed. If export rights were to be endowed by some form of licence or contract then the value accruing to this right could be redeemed if such a contract were saleable. In this case the benefits could be captured by the initial recipients of such export quotas even if they choose to move out of that particular market. Saleability of quotas has been accepted in many farm programmes because it offsets the tendency for production patterns to get entrenched. It could, at the expense of the problems mentioned above, provide extra flexibility in international commodity programmes.

63. Non-competitive leakages occur when the value of a quota can be captured in part by buyers of the product in question or suppliers of non-farm inputs. The most successful farm quota schemes appear to be those where farmers and processors share an interest in output limitation. In such circumstances the incidence of the benefit must be in doubt, as the market power of the buyer will be enhanced. In international terms this suggests that supply control will be more effective if importing countries accept and facilitate trade quantity limitations. But the benefits themselves may go in part to interests in importing countries that find the value of their own sales increasing from the processing and distribution of the restricted commodity. Transfer of processing to primary producing areas would help to avoid some of these conflicts.

64. Experience with stability policies in developed countries illustrates two propositions. The first is that stabilisation if properly carried out can enhance the value of a crop or livestock product: the capture and distribution of this benefit is the art of orderly market management. If a crop is sold directly after harvest its value to producers will generally be low. The economic returns from arbitrage over time will accrue to someone else in the marketing chain. Similar gains are to be had for evening out year-to-year fluctuations in production, but since the cost of storage will escalate it may not be in the interests of any private individual to take the risks involved even when ex post the holding of reserves might have been profitable. Storage policies associated with the farm sector have usually made provision for some of the benefit of intra-season storage to be reflected in farm incomes, through graduated price supports over the marketing year or through the remission of some part of storage costs. In this respect, the non-recourse loan system operated in the US is important in that it allows the farmer to market his crop according to seasonal demand whilst at the same time being able to finance production costs in advance of the final sale of his output. Where futures markets are available, the risk of adverse price movements during the season can be reduced by hedging. Farm policies have in general improved the position of the farmer with respect to the orderly marketing of products over the normal production cycle.

65. It is unlikely that farmers themselves will find it profitable to hold products over from one season to the next except when compelled to do so by lack of market outlets. Private traders may however have such capacity and motivation. But even the merchants and processors will face capacity constraints which put an upper limit on such storage as well as minimum stock requirements which will prevent a complete run down. In the presence of significant market fluctuations, the result will be periodic peaks and troughs to prices which no private agencies will feel able to control. If governments wish to do so they can implement policies which make stock volume more responsive to price. When prices are depressed then stock

accumulation by government agencies can supplement that of private firms, and when current supplies are tight these reserves can be released to yield a capital gain which will defray the physical cost of storage. Such an active stocks policy has one major drawback at a national level. Other countries may choose to allow the burden of such a reserve scheme to be borne by that government which has the strongest interest in the commodity and which appears to have the resources and the will to carry it out. US commodity programmes, in particular in wheat, became very expensive when they attempted to stabilise world markets almost single-handed. At an international level such problems are overcome, conceptually, by a co-ordinated agreement to manage stocks in a number of countries or by the establishment of a common stock with accepted rules to distribute the financial burden. Such an arrangement should be able to increase the value over time of the commodity by intertemporal arbitrage;it should also be able to run at a modest cost if the accumulation and disbursement rules for the stockpile are realistic in relation to market developments.

66. The type of government purchase policy which is occasionally justified in terms of price stability is that which is associated with a floor price. National policies that use this device are characterised by the disposal of government purchases at prices below that at which they were bought. Such schemes are in fact better thought of as price support, since their effect is merely to add a subsidy element over and above the price that the market would provide. The volume of stocks in such schemes as the EEC intervention policy may be considerable at any one time. They may even increase when market prices are low and be reduced when demand improves. But they do not represent stabilisation policies unless sales from these stocks are related to current and anticipated market conditions, as well as purchases. Since the world as a whole has no convenient outside market on which to dump unwanted surpluses accruing under such schemes, there is unlikely to be any international commodity policy equivalent.

67. The choice of stabilisation instrument illustrates the second of the two propositions mentioned above. If a market is unstable, either through variations in output or in demand, then stability can only be obtained by influencing the source of the fluctuations directly. Control over yield fluctuations may prove difficult, and the stabilising of the economic conditions that influence consumer demand has proved elusive. Hence the corollary of the proposition: instability inherent in a market can be shifted but not eliminated. The task facing governments is to decide which variable they will encourage to be unstable in order to add stability to other elements in the market. Stocks policy is a case in point: if stock levels are destabilised, by appropriate accumulation and disbursement, then consumption and prices can be held reasonably steady; if stock levels are not allowed to vary, then prices will be more volatile. Similarly, stability of export earnings may be a goal, in which case prices and stock levels and even consumption may have to absorb the inherent variations in the market conditions. In farm policies, stability of farm incomes as such has not been a dominant goal: the variable more usually stabilised has been domestic price. As a consequence, there has been considerable variability in farm programme costs, stock levels and farm returns. Export earnings and import costs have also reflected the market position and have not in themselves been the object of stabilisation schemes.

68. The third area of developed country agricultural policy experience which might have some lessons for commodity policy is the use of non-price measures and other devices which do not fall neatly into the above categories. Some of these have been mentioned already, for example the establishment of delivery contracts, the improvement of productivity, and

the provision of better market information. Each of these is too specific to particular commodity conditions to be dealt with in a general way. But some other types of policies should be mentioned, such as, the proposals for the extension of compensatory finance and the related question of indirect indexation via supplementary payments when terms of trade are weak. Experience with deficiency payments policies may shed some light on these questions. Generally speaking, the problem with such national policies as have used financial transfers to supplement market prices is that their cost is both unpredictable and visible. The visibility of the budget cost in turn leads to difficulties where regional or (in the EEC) national transfers are involved: from the point of view of administration, the fact that programme costs are evident can be an advantage when the policy is running well though an embarrassment when things get 'out of hand'. The lack of predictability is in the nature of the policy instrument itself, since it is designed to absorb variations in price that would otherwise impinge on farm incomes. But the combination of these two elements has meant that countries have in general had recourse to methods of controlling cost, such as through a limit on the amount of production qualifying for the full guaranteed price. Alternatively the guarantee price on which deficiency payments are based may be implicitly linked to the market price by a limit on the actual budget outlay. Open-ended deficiency payments policies have not in general survived for long.

(iii) Additional implications of farm policies

69. In addition to the lessons which one can draw from the experience of the operation of individual farm policy instruments, there is a further implication relating to the interaction of such policies. It was suggested above that developed countries reacted similarly in their farm policy response to particular market conditions, albeit with a different emphasis. It was also mentioned that the fixing of domestic prices tends to be the focus of policy, and that these domestic price targets come to reflect local aspirations, cost levels, and farm structures. In addition, a major rationale for farm policies is to defend against the unexpected and the adverse occurrence on world markets. Put these three together and one has a self-justifying system of intervention in major commodity markets where each country is struggling to defend domestically conditioned price targets against fluctuations on world markets which are themselves exacerbated by such policies. This is the main reason why stocks policies have not proved successful in the control of temperate-zone agricultural trade: the stocks themselves have to absorb the inconsistencies among the domestic price targets which show up in the form of surpluses, and in turn prove inadequate when the policies are reversed in a situation of scarcity. To put it another way: the stocks are used for domestic price stability in each country, and are therefore unavailable to stabilise world prices whenever the domestic price targets prove inconsistent.

70. This in turn leads to an odd pattern of behaviour in world market prices. The range of such prices reflects the extent to which the national price policies are pursued without regard to world market conditions. At the lower end, such prices reflect the willingness of exporters to grant export subsidies in an attempt to dispose of domestically generated surpluses; at the upper end the prices reflect the willingness of importers to bid for products in a market made more tight by the reluctance of exporters to expand supply. This price 'band' is itself different to that to be found in mineral and industrial raw material markets, where the lower end tends to be related to production or extraction costs and the upper end to the level at which demand is curbed by the use of substitutes.

71. This difference has two implications for international commodity control. First, the existence of domestic farm policies, and indeed the dominance of their objectives, must be recognised in international negotiations. The task facing the international community is to substitute action at a world market level for the domestic policies presently pursued. In addition, the international policy can aim to use the domestic market control mechanisms to achieve world market stability. The same problem is not present in other commodities such as minerals or tropical crops, nor is the same opportunity to employ existing instruments. Secondly the scope for influencing the terms of trade over time is greater in non-temperate zone commodities, as the 'band' is wide and the behaviour of price within that band is a function of structural relationships in the market. In temperate-zone foodstuffs, the band, reflecting national policies and priorities, can only be narrowed by a greater consistency among those policies themselves, and the level of price on world markets within that band reflects essentially domestic decisions not so amenable to international agreement.

(iv) Conclusions

72. My conclusions can be quite brief. Farm policies are based on the general belief that agricultural prices and markets are inherently unstable and that selective intervention can restore order. The results have been politically satisfactory in that governments have been seen to be reacting to legitimate concerns. In the long run it is doubtful whether the most visible of the policies have had much impact on the level and trend in incomes. This is governed by the relationship between agriculture and the economy as a whole. Obsession with the control of price has diverted attention and funds away from more basic problems of adjustment in rural areas. The mechanisms used are similar to those under discussion in the context of international commodity regulation. The same problems are likely to arise. Market prices can be manipulated with the injection of considerable funds. Supplies can be both controlled and phased over time through the establishment of agencies with sufficient authority. None of these interventions is a substitute for the anticipation and encouragement of long term market developments: they can however have a beneficial effect over a short period to avoid the most serious consequences of market disruption.

73. The key decision is that of the prices to be set under such policies. Agreement may be more difficult in an international context as interests are more clearly defined. But an inappropriate price that cannot be supported with the funds and mechanisms available will weaken the best control scheme. By contrast, a flexible approach to pricing can form the basis for a constructive development of policy measures which improve the equity of the trading system without impairing its essential functions. The existence of an adequate method of funding these policies is a necessary condition for their success, but is in itself not sufficient to ensure their continuation if other decisions such as the level of prices are not consistent with underlying market conditions. Unwinding an ill-conceived policy can be painful in a national environment: in international relationships the price of failure is all the more serious.

APPENDIX A: Analysis of policy instruments

Although it was suggested in the text that agricultural programmes were largely a collection of ad hoc devices designed to counter problems as perceived in the context of a particular time and place, it is still possible to discuss the relative impact of various policy instruments. The number of such instruments is relatively small and their major effects can be stated with some degree of confidence: it is their appropriateness in a particular circumstance that is much more difficult to evaluate. In this appendix, an attempt is made to compare policy instruments. This comparison will involve the strengths and weaknesses of the measures themselves, the administrative and financial problems that have been encountered, and the constraints imposed on these policies by their setting. The set of policy instruments considered is restricted to those that directly impinge on the level, stability and distribution of farm incomes and of the level and stability of wholesale or farm-gate prices of agricultural products. This excludes many measures which relate to environmental quality, food standards, and to the legal framework of land ownership and use. But it includes all the instruments likely to be translated to an international commodity control programme.

Policies to influence levels of farm income in the short-run are conveniently classified on the basis that income itself depends on the difference between costs and revenue, and in the longer run that income per head of the farm population (or per farmer) depends not only on the trend of aggregate farm income but also the number of people over whom it must be shared. Policies to stabilise farm income are in large part implemented by adjusting the income-level policy instruments to counter the effects of instability. Influencing the distribution of income are policies that discriminate among farm groups and those that alter the pattern of ownership of farm assets.

Policies which are designed to influence the level and stability of prices are in one sense covered in the above classification of income policies, since they affect the level of producer receipts and hence profits if costs remain the same. But price and income stability are not the same if output varies, and a fixed price level may operate in conditions where profitability is not an aim of policy. It is therefore convenient to consider price policies under a separate heading, even at the expense of some overlapping.

(a) Farm income policies: lowering costs.

A straightforward way of raising farm income in the short run is to lower the cost of purchased inputs. This is often done directly, through input subsidies of which a subsidy on fertiliser is perhaps the most common. More indirect subsidies include concessional credit terms and the favourable tax treatment of farm businesses. More indirect still are the policies which aim at increasing productivity, and those which improve the management of the farm business through education and extension activities. All these policies are relatively easy to administer, and their cost can be controlled and monitored. It is not so easy to judge their effectiveness. In some cases, such as the provision of credit, the investment in research and development, and the dissemination of management information, the government activities supplement and to a certain extent replace those of private firms. But even where they are not strictly 'necessary', these policies are generally accepted and raise few problems. Direct input subsidies have the disadvantage that some of the benefit is likely to accrue to the providers of such inputs, especially if they can manipulate their own prices. This is true of capital grants as well as subsidies on current purchases such as fertiliser. The

premise that these inputs were being underutilised once provided a rationale for such subsidies, but this is unlikely to hold in advanced economies. As an income-raising device they are not popular with legislators, and are generally used only when there has been an exceptional rise in the price of a particular input. Tax relief policies are also coming under more scrutiny in many countries, as the feeling spreads that the benefits are reflected in higher land values rather than management and labour incomes.

(b) Farm income policies: higher revenue.

Rather more policies aim at raising farm revenue. The ways are numerous, but the following devices are widespread in developed country farm policies. Supply limitation, to take advantage of an inelastic market demand, and market differentiation to use the different nature of sub-parts of the market to increase sales revenue, are two important ways of raising revenue. In addition, the total size of the market for domestic output can be increased by taxing imports, or by subsidising exports. In some cases, market size is increased by sales promotion, and by the discouragement of substitutes. Payments to producers (and to consumers) in the form of direct subsidies raise revenue without having to manipulate market conditions. These policies are generally more difficult to administer than input subsidies. Supply control, whether working directly through output or indirectly through control of land use, requires a degree of detailed regulation and information that puts a considerable burden on policy administrators. Information on market conditions needed for supply control may not itself be 'observable', and the agencies concerned are likely to come under criticism for the way they exercise their judgement. Policies that operate through manipulation of the conditions of international trade raise different questions. Import controls are administratively easy, and, like supply limitations, do not involve a direct budget cost. Export aids are generally less popular, mainly because of their financial consequences, and in addition run the risk of attracting countervailing measures in some import markets. Product promotion is considered a more positive alternative in principle, but in practice runs into the problem that food consumption volume is not notably responsive to advertising effort. Taxing non-farm substitutes has often been tried, but is not popular with urban-dominated legislatures. In spite of the problems, these revenue increasing measures often make up a large share of the expenditure of both money and effort on farm programmes.

(c) Farm income policies: influencing trends.

The simplest way to raise individual farm incomes over a period of years might seem to be to reduce the number of people in the industry. If those with below average productivity leave, then this process could be successful. The provision of pensions, the promotion of job mobility in rural areas, and the improvement of standards in rural education are an important adjunct to farm policies. But their administration and financing is often a part of general economic and social policies, and their impact is greatly influenced by macro-economic conditions. Few countries have made policies of this type central to their agricultural programmes, even though it is likely that there would be considerable political sympathy from non-farm interests. The short-term commodity price orientation of farm policies perpetuated by agricultural ministries has tended to pre-empt finances that could otherwise have been used to improve longer term income opportunities in rural areas.

(d) Farm income policies: direct payments.

The virtual absence of any major schemes for the direct income support of the farm sector unassociated with levels of output is an indication of the complexity of the motives behind farm policy. Direct income payments have often been suggested, in particular as temporary expedients when major falls in farm price levels are expected as a result of policy changes. But these are unpopular with farming interests, and seem to have attracted little political support. Social welfare policies are now more widely applicable to rural areas, and the need for special programmes may be in doubt. Nevertheless the main reason why direct income support is generally ruled out as an alternative to price policies is again related to the fact that success in farm programmes has been associated with the satisfactory regulation of product markets rather than with the direct welfare of rural families. Some countries do however run policies such as crop insurance, and various equalisation payments, which attempt to recompense farmers more or less directly for sudden changes in incomes.

(e) Farm price policies: raising demand.

Policies to raise farm demand include those already discussed under (b) above, since they also raise revenue for any given output level.

(f) Farm price policies: 'flattening' demand.

There is however another set of measures which act not so much to raise demand as to break the link between output and realised price. They act as price supports when market prices would otherwise fall, but the level of protection is reduced as market prices rise. Such policies are occasionally administered symmetrically, in that prices above the support level are also discouraged. These price guarantee policies make up much of the defensive armoury of agricultural programmes. They include the imposition of variable trade barriers, which maintain domestic prices by import levies or export subsidies designed to ensure that world price variations cannot upset domestic markets. In the same category are deficiency payment schemes which seek to make up the difference between guaranteed prices and the actual level of market returns where this latter falls short of the former. Another device for presenting producers with an 'open ended' market that is not weakened by overproduction is that of support buying. As with any buying policy, the analysis of such a measure must recognise also the ultimate selling of such goods as are bought. Often these floor price schemes dispose of unwanted products with the aid of a subsidy on overseas markets, but they can also perform a storage function and reintroduce the commodity onto the domestic market when conditions are more 'favourable'.

These policies generally go hand-in-hand with those that seek to raise demand. If an import levy fluctuates over time with changes in world prices then it has a stabilising element: if at the same time it is generally of a height that maintains domestic prices above those on the world market then it is also raising demand for the home-produced good. Support buying typically combines protection with stabilisation. It is basically the price level set for the stabilisation scheme which determines the extent to which it includes a protective element. Stabilisation in its pure form has wide non-farm support, and incurs little long-run cost: it is generally the protection effect of such policies which attracts criticism. In particular, the disposal onto overseas markets of products purchased domestically by support agencies is likely to attract adverse attention. The administration of variable trade barriers is relatively straightforward in concept, but may

lead to complications in practice. In particular, trade firms are often hampered by the unpredictable nature of the border tax or subsidy, and as a consequence governments tend to devise ways of pre-fixing such payments at the time when the commercial contract is drawn up. The unpredictable nature of programme costs is also a major source of discontent with such policies, and as a result has led to many attempts to limit expenses under deficiency payment and support buying schemes. One such mechanism is to limit the quantity of produce which attracts the full support or guaranteed price: another is to make the supported price itself reflect the holdings of surpluses accumulated under the programme. These price stability policies do not necessarily stabilise farm incomes. They remove the instability which might otherwise emanate from the world market, and they prevent domestic output variations from weakening the price level. But in doing so they expose farm incomes to the full impact of volume changes in domestic production.

(g) Farm price policies: stabilising supply.

Policies which control output to raise average prices discussed under (b) above can also be used to dampen potential output fluctuations. Additional policies to the same end include water control, where drainage and irrigation are required, farm storage, which prevents the unloading of annual crops onto the market after harvest, and contracting, whereby the amount of production is geared to market needs. All these policies receive general approval when their effect is to make patterns of supply more reliable.

APPENDIX B: Quantification of policy effects

This appendix contains a set of tables illustrating the approximate magnitude of the impact of the major farm policy instruments used in Australia, the EEC, Canada and the U.S.A., on the income of farmers from the sale of wheat, barley, maize, sugar and milk. For each product and country the level of production and the average producer price are given (items 1 and 2) for the years 1968-1974. The addition of any direct payments (or subtraction of taxes) (item 3) not already included in the product price gives the total producer value. The policy transfers were calculated in the following way.

(a) if the policy involved a per unit payment then the impact of the policy was applied over the relevant volume of output. Thus a per unit producer subsidy was multiplied by production and the total listed as a 'transfer' to producers. For a tariff or a levy, the per unit figure was applied to production to give the transfer to producers,

(b) if the data was more conveniently recorded in terms of financial totals such as the cost of subsidies on a particular product, then this was allocated directly. Where the financial data related to trade taxes - i.e. levy receipts - then it was first converted to a per unit figure by relating to trade volume and applying the procedure as in (a) above,

(c) if the policy involved price discrimination, such as the maintenance of higher domestic than export prices through marketing control, then the price difference was calculated. This was then multiplied by production in the high price market and allocated to producer transfer,

(d) if the policy involved trade quotas, then resort was made to the difference between internal and external prices, and treated accordingly. This was the only case where 'world' prices were used explicitly in the calculations,

(e) an input subsidy was allocated directly to producers, as in the case of a price subsidy.

The impact of the transfers was accumulated to give the total producer subsidy value (item 6). The producer subsidy equivalent can then be defined either as a proportion of actual sales revenue (item 7) or as a subsidy per unit of output (item 8).

The source of the tables is a study undertaken by the author for the FAO Secretariat. The full study is reported in a document presented to the 1975 FAO Conference (Agricultural Protection And Stabilisation Policies: A Framework Of Measurement In The Context Of Agricultural Adjustment. C75/LIM/2, FAO, Rome, October 1975) which includes some additional countries and commodities and also measures of consumer subsidy levels. The FAO should not be held responsible for the use of the tables in the present context.

AUSTRALIA - Wheat: Producer Subsidy Equivalents and Values

	Unit	1968	1969	1970	1971	1972	1973	1974
1) Level of Production	mmt	7.5	14.8	10.5	7.9	8.5	6.4	11.9
2) Producer Price[1]	A$ mt	54.07	45.46	43.85	46.30	48.50	49.86	101.00
	US$ mt	60.56	50.92	49.11	51.86	56.99	64.82	148.98
3) Growers Contributions[2] to Stabilisation Fund	A$ mil	-	-	-	-	-	-	-48.0
	US$ mil	-	-	-	-	-	-	-70.8
4) Total Producer Value	US$ mil	454.2	753.5	515.7	409.7	484.4	414.8	1,702.0
5) Policy Transfers to Producers								
a) Guaranteed Export Price[2]	A$ mil	42.9	29.0	27.5	32.1	40.1	12.4	-48.0
b) Domestic Price Support[3]	A$ mil	30.1	34.5	23.6	26.7	31.5	22.3	-152.8
c) Devaluation Compensation	A$ mil	18.1	10.5	-	-	-	-	-
d) Fertilizer Subsidy[4]	A$ mil	(10.9)	(12.5)	(11.2)	(7.7)	(8.0)	(8.9)	(11.8)
6) Total Producer Subsidy	A$ mil	102.0	86.5	62.3	66.5	79.6	43.6	-141.0
	US$ mil	114.2	96.9	69.8	74.5	93.5	56.7	-208.0
7) Proportional Subsidy	%	25.1	13.1	13.5	18.2	19.3	13.7	-12.2
8) Subsidy per unit	A$.mt	13.60	5.84	5.93	8.42	9.36	6.81	-11.85
	US$ mt	15.23	6.55	6.65	9.43	11.00	8.86	-17.48

[1] Producer Price = Average return to growers. 1971-1974 prices are Bureau of Agricultural Economics estimates subject to revision as the seasonal pools are finalised.

[2] Contributions of the Australian Government to the Stabilisation Fund in order to support the guaranteed price on export quota wheat. This is calculated on a rate of A$5.51 per metric ton of exports - less farmers' contribution in 1974.

[3] The difference between fixed home prices and average export returns. Thus in 1968, 1969 and 1974 there was one fixed price and the differential was multiplied by total domestic consumption in order to get the policy transfer amounts to producers and consumers. In 1970-1973 the fixed food use price differential was multiplied by food consumption and the non-food price differential multiplied by the consumption of wheat in non-food uses, thus giving the policy transfers to producers and consumers respectively.

[4] Estimates based on a rate of A$12.9 per metric ton of superphosphates used annually by the wheat industry.

AUSTRALIA - Barley: Producer Subsidy Equivalents and Values

		Unit	1968	1969	1970	1971	1972	1973	1974
1)	Level of Production	mmt	0.8	1.6	1.7	2.3	3.1	1.7	2.4
2)	Producer Price[1]	A$ mt	53.48	42.78	37.96	50.54	42.55	59.02	87.47
		US$ mt	59.90	47.91	42.52	56.60	50.00	76.73	129.02
3)	Direct Producer Receipts		-	-	-	-	-	-	-
4)	Total Producer Value	US$ mil	47.9	76.8	72.3	130.2	155.0	130.4	309.6
5)	Policy Transfers to Producers								
	a) Domestic Price Support[2]	A$ mil	9.0	13.7	11.2	11.9	12.4	-1.8	-18.9
6)	Total Producer Subsidy	A$ mil	9.0	13.7	11.2	11.9	12.4	-1.8	-18.9
		US$ mil	10.1	15.3	12.5	13.3	14.6	-2.3	-27.9
7)	Proportional Subsidy	%	21.1	19.9	17.3	10.2	9.4	-1.8	-9.0
8)	Subsidy per unit	A$ mt	11.25	8.56	6.59	5.17	4.00	-1.06	-7.88
		US$ mt	12.60	9.59	7.38	5.79	4.70	-1.38	-11.62

[1] The Producer Price per metric ton on all sales. These figures, applied to the whole country, are those of the Australian Barley Board, the largest of the grower controlled statutory authorities, controlling approximately 33% of the total output.

[2] These figures are also from the Australian Barley Board, and equal the average price per metric ton paid on Australian sales less the average export price. This multiplied by the amount consumed in Australia gives the subsidy to producers and the burden to consumers.

AUSTRALIA - Sugar: Producer Subsidy Equivalents and Values

		Unit	1968	1969	1970	1971	1972	1973	1974
1)	Level of Production[1]	mmt	21.5	18.0	20.1	22.2	21.7	21.8	23.4
2)	Producer Price[2]	A$ mt	80.75	80.80	98.18	100.72	108.61	117.96	130.37
		US$ mt	90.44	90.50	109.96	112.81	127.62	153.35	192.30
3)	Direct Producer Receipts		-	-	-	-	-	-	-
4)	Total Producer Value	US$ mil	253.2	199.2	274.9	315.9	357.3	383.4	538.4
5)	Policy Transfers to Producers								
	a) Domestic Price Support[3]	A$ mil	55.8	58.4	42.3	30.6	23.4	12.5	2.0
	b) Devaluation Compensation	A$ mil	5.9	5.6	5.4	3.4	-	-	-
	c) Fertilizer Subsidy[4]	A$ mil	(2.9)	(3.1)	(2.8)	(2.8)	(2.8)	(3.7)	(4.0)
6)	Total Producer Subsidy	A$ mil	64.5	67.1	50.5	36.8	25.2	16.2	6.0
		US$ mil	72.2	75.2	56.6	41.2	29.6	21.1	8.9
7)	Proportional Subsidy	%	28.5	37.8	20.6	13.0	8.3	5.5	1.7
8)	Subsidy per unit[5]	A$ mt	23.03	30.50	20.20	13.14	9.00	6.48	2.14
		US$ mt	25.80	34.16	22.62	14.72	10.58	8.44	3.16

[1] Production figures break down into

	1968	1969	1970	1971	1972	1973	1974
a) Sugar Cane	18.7	15.8	17.6	19.4	18.9	19.3	20.6
b) Raw Sugar (94%)	2.8	2.2	2.5	2.8	2.8	2.5	2.8

[2] These figures are A$ per metric ton of raw sugar for crop years and are the average returns for both domestic sales and exports. The total producer value is the producer price multiplied by the raw sugar production.

[3] This is the difference between the fixed domestic consumption price and the average export price, F.O.B. raw sugar, multiplied by the domestic consumption to get the subsidy to producers and the burden to consumers. (The figures are for crop years).

[4] These figures are estimated. 28.5% of the amount spent by the government nitrogenous fertilizer subsidies has been attributed to sugar production, equal to the average percentage of other fertilizers used by sugar growers in this period. These figures are for fixed years.

[5] Subsidy per metric ton of raw sugar.

AUSTRALIA - Milk: Producer Subsidy Equivalents and Values

		Unit	1968	1969	1970	1971	1972	1973	1974
1)	Level of Production	mmt	6.8	7.0	7.5	7.2	7.1	7.1	6.9
2)	Producer Price[1]	A$ mt	54.99	55.28	54.77	59.28	65.48	63.51	61.92
		US$ mt	61.59	61.91	61.34	66.39	76.94	82.56	91.33
3)	Direct Producer Receipts		-	-	-	-	-	-	-
4)	Total Producer Value	US$ mil	418.8	433.4	460.1	478.0	546.3	586.2	730.2
5)	Policy Transfers to Producers								
	a) Support for Liquid Milk[2]	A$ mil	(92.7)	94.7	97.5	104.7	114.6	118.3	125.3
	b) Domestic Price Support[3]								
	(i) Butter	A$ mil	45.7	48.1	50.7	52.6	43.2	48.1	46.4
	(ii) Cheese	A$ mil	11.0	11.8	10.6	14.1	12.6	20.3	17.1
	c) Government Bounties[4]								
	(i) Butter[5]	A$ mil	24.1	23.2	23.6	37.2	32.7	24.5	18.0
	(ii) Cheese	A$ mil	2.9	3.8	3.4	4.3	7.1	4.0	-
6)	Total Producer Subsidy	A$ mil	176.4	181.6	185.8	212.9	210.2	215.2	206.8
		US$ mil	197.6	203.4	208.1	238.4	247.0	279.8	304.9
7)	Proportional Subsidy	%	47.2	46.9	45.2	49.9	45.2	47.7	41.8
8)	Subsidy per unit	A$ mt	25.94	25.94	24.77	29.57	29.61	30.03	29.96
		US$ mt	29.06	29.06	27.74	33.12	34.79	39.04	44.19

1/ Average Producer Price; milk used for all purposes (inclusive of bounty payments).

2/ "Support for Liquid Milk" is in principle the differential between the price received by producers for milk used for manufacturing and that used as whole milk, multiplied by the volume of milk consumed in liquid form. Since historical series of producer prices for milk according to use are not available, this differential was derived by applying percentage differentials - 22 per cent for manufacturing milk and + 182 per cent for whole milk, to the series of producer prices for all milk.

3/ Both butter and cheese supports represent the difference between the fixed higher domestic prices and estimated world prices, which multiplied by home consumption give the subsidy to producers and the cost to consumers.

4/ Bounties have been paid by the Australian Government on the production of butter and cheese and distributed through factories to milk producers. They were phased out by 30 June 1975; likewise the bounty on processed milk products which has not been included here.

5/ The 1974 figures apply to butter and cheese.

CANADA - Wheat: Producer Subsidy Equivalents and Values

		Unit	1968	1969	1970	1971	1972	1973	1974
1)	Level of Production	mmt	17.7	18.6	9.0	14.4	14.5	16.5	14.2
2)	Producer Price[1]	C$ bu	1.70	1.57	1.67	1.60	1.76	2.87	3.75
		US$ mt	57.96	53.59	58.85	58.20	65.32	105.46	137.79
3)	Direct Deductions[2]	C$ mil	-134.8	-141.9	-68.8	-109.8	-110.6	-128.5	-111.1
		US$ mil	-125.1	-131.8	-66.0	-108.7	-111.7	-128.1	-112.4
4)	Total Producer Value	US$ mil	900.7	865.0	463.6	729.4	835.4	1,611.9	1,844.2
5)	Policy Transfers to Producers								
	a) Feed Freight Assistance	C$ mil	2.1	5.1	6.6	5.5	(6.0)	(6.0)	(6.0)
	b) Export Credit[3]	C$ mil	(6.0)	(8.7)	(8.6)	(8.9)	(8.0)	(5.0)	(2.0)
	c) Wheat Reserves Act[4]	C$ mil	55.9	(71.3)	62.1	30.8	17.5	-	-
	d) Domestic Food Price Maintenance	C$ mil	16.8	(27.8)	20.7	103.9	91.2	28.8	25.0
6)	Total Producer Subsidy	C$ mil	80.8	112.9	98.0	149.1	122.7	39.8	33.0
		US$ mil	75.1	104.9	94.0	147.6	123.9	39.8	33.4
7)	Proportional Subsidy	%	8.3	12.1	20.3	20.2	14.8	2.4	1.8
8)	Subsidy per unit	C$ mt	4.56	6.07	10.89	10.35	8.46	2.41	2.32
		US$ mt	4.24	5.64	10.44	10.25	8.55	2.41	2.35

[1] 1968-1973 are the total prices received for sales to the Canadian Wheat Board. The 1974 figure is the final price.

[2] 1968-1972. The deductions are at the rate of 20.75 cents per bushel comprising:
5 3/4 cents handling charges
15 cents transportation
= C$ 7.62 per metric ton

1973-1974. The deductions are:
6 1/4 cents handling charges
15 cents transportation
= C$ 7.81 per metric ton

[3] Estimated figures.

[4] Wheat Reserve Act was terminated in 1973-1974 season.

CANADA - Barley: Producer Subsidy Equivalents and Values

		Unit	1968	1969	1970	1971	1972	1973	1974
1)	Level of Production	mmt	7.1	8.2	9.0	13.1	11.3	10.2	8.6
2)	Producer Price[1]	C$ mt	11.98	10.77	15.98	14.68	19.35	22.43	103.34
		US$ mt	11.12	10.00	15.32	14.53	19.54	22.41	104.60
3)	Direct Producer Receipts		-	-	-	-	-	-	-
4)	Total Producer Value	US$ mil	78.9	82.4	138.8	190.4	220.6	229.1	899.7
5)	Policy Transfers to Producers								
	a) Barley Pool Deficit	C$ mil	-	-	57.0	(53.0)	-	-	-
	b) Feed Freight Assistance	C$ mil	6.2	8.6	6.8	6.1	(6.0)	(6.2)	(6.0)
	c) Tariff[2]	C$ mil	24.2	28.1	30.9	44.7	38.5	34.9	29.3
6)	Total Producer Subsidy	C$ mil	30.4	36.7	94.7	103.8	44.5	41.1	35.3
		US$ mil	28.0	34.1	90.8	102.8	44.9	41.1	35.7
7)	Proportional Subsidy	%	35.5	41.4	65.4	54.0	20.4	17.9	4.0
8)	Subsidy per unit	C$ mt	4.25	4.48	10.52	7.92	3.94	4.03	4.10
		US$ mt	3.94	4.16	10.09	7.84	3.98	4.03	4.16

[1] The Producer Price is derived by dividing the Producer Value, i.e. the total cash receipts to barley farmers, by the total production, except the 1974 figure which is the final payment to barley producers.

[2] The tariff level is C$ 3.41 per metric ton.

CANADA - Maize: Producer Subsidy Equivalents and Values

	Unit	1968	1969	1970	1971	1972	1973	1974
1) Level of Production	mmt	2.1	1.9	2.6	2.9	2.5	2.8	2.8
2) Producer Price[1]	C$ mt	12.70	20.21	19.25	20.09	23.81	36.33	NA
	US$ mt	11.79	18.78	18.46	19.89	24.05	36.29	NA
3) Direct Producer Receipts		-	-	-	-	-	-	-
4) Total Producer Value	C$ mil	24.3	35.0	47.4	58.6	60.8	101.8	NA
5) Policy Transfers to Producers								
a) Tariff[2]	C$ mil	6.4	5.8	8.0	9.2	7.9	8.7	8.1
b) Feed Freight Assistance	C$ mil	0.6	0.2	0.1	-	-	-	-
6) Total Producer Subsidy	C$ mil	7.0	6.0	8.1	9.2	7.9	8.7	8.1
	US$ mil	6.5	5.6	7.8	9.1	8.0	8.7	8.2
7) Proportional Subsidy	%	26.7	16.0	16.5	15.5	13.2	8.5	(5.0)
8) Subsidy per unit	C$ mt	3.34	3.16	3.12	3.12	3.16	3.10	2.89
	US$ mt	3.10	2.93	2.99	3.14	3.19	3.10	2.93

[1] The Producer Price is derived from the Producer Value (i.e. the total cash receipts to maize farmers) divided by the total maize production.

[2] The tariff level is C$ 3.12 per metric ton.

CANADA - Sugar: Producer Subsidy Equivalents and Values

	Unit	1968	1969	1970	1971	1972	1973	1974
1) Level of Production[1]	mmt	0.9	1.0	0.8	1.1	1.0	0.9	0.7
2) Producer Price[2]	C$ mt	17.60	17.60	18.10	16.80	21.50	24.70	NA
	US$ mt	16.35	16.35	17.36	16.63	21.72	24.68	NA
3) Direct Producer Receipts		-	-	-	-	-	-	-
4) Total Producer Value	US$ mil	14.7	16.4	13.9	18.3	21.7	22.2	NA
5) Policy Transfers to Producers								
a) Deficiency Payments[3]	C$ mil	5.7	2.7	1.0	-	-	-	-
b) Tariff[4]	C$ mil	0.8	0.8	0.6	0.9	0.7	0.7	0.6
6) Total Producer Subsidy	C$ mil	6.5	3.5	1.6	0.9	0.7	0.7	0.6
	US$ mil	6.0	3.3	1.5	0.8	0.7	0.7	0.6
7) Proportional Subsidy	%	40.8	20.1	10.8	4.4	3.2	3.2	(2.0)
8) Subsidy per unit	C$ mt	7.22	3.50	1.96	0.90	0.70	0.77	0.86
	US$ mt	6.70	3.25	1.88	0.89	0.71	0.78	0.87

1 Domestic production of sugar beet converted to the following raw sugar equivalent:

Canadian domestic production of raw sugar equivalent - million metric tons

1968	1969	1970	1971	1972	1973	1974
0.135	0.134	0.106	0.149	0.125	0.114	0.104

2 1968 and 1969 figures are guaranteed prices. As the market price of sugar moved above this guaranteed price after 1969, the 1970-1974 figures are calculated on the basis of total producer receipts.

3 Calculated on the differential between the guaranteed producer price plus an estimated refining margin and the New York Spot Price Fob Caribbean Ports raw sugar, multiplied by domestic production of raw sugar. These payments finished in 1970.

4 Tariff level of 28.7 Can. cents per cwt. multiplied by the domestic production and imports of raw sugar (taken as the difference between domestic consumption and domestic production assuming stable stock levels) to obtain the P.S.E. and C.S.E. respectively.

CANADA - Milk: Producer Subsidy Equivalents and Values

	Unit	1968	1969	1970	1971	1972	1973	1974
1) Level of Production	mmt	8.3	8.5	8.3	8.1	8.0	7.7	7.6
2) Producer Price[1]	C$ 100 lb.	3.84	3.95	4.05	4.42	4.76	5.46	6.63
	US$ mt	78.56	80.90	85.63	96.47	105.99	120.25	147.92
3) Direct Producer Receipts	C$ mil	110	87	67	100	101	131	NA
	US$ mil	102.1	80.8	64.2	99.0	102.0	130.9	NA
4) Total Producer Value	US$ mil	757.2	768.3	774.9	878.1	953.4	1,052.9	1,124.9
5) Policy Transfers to Producers								
a) Support								
Butter	C$ mil	110	120	112	61	49	75	NA
Cheese	C$ mil	82	91	94	127	130	140	NA
Skim Powder	C$ mil	98.7	84.4	94	84	91.5	(54.0)	NA
Sub-Total	C$ mil	290.7	295.4	300	272	270.5	269.0	(275)
b) Increment	C$ mil	156	165	171	166	151	204	NA
c) Marketing Boards	C$ mil	153	164	169	160	158	154	NA
d) Direct Payments	C$ mil	110	87	67	100	101	131	NA
6) Total Producer Subsidy	C$ mil	709.7	711.4	707.0	698	680.5	758	
	US$ mil	658.6	660.9	678.0	691.0	687.3	767.1	(767.1)
7) Proportional Subsidy	%	87.0	86.0	87.5	78.7	72.1	72.9	(72.9)
8) Subsidy per unit	C$ mt	85.51	83.69	85.18	86.17	85.06	98.44	(98.44)
	US$ mt	79.35	77.75	81.69	85.30	85.90	99.62	(99.62)

[1] 1974 figure is the average of 8 months.

E.E.C. (The Six) - Wheat: Producer Subsidy Equivalents and Values

	Unit	1968	1969	1970	1971	1972	1973	1974
1) Level of Production	mmt	30.0	28.5	26.5	30.5	32.2	32.2	34.9
2) Producer Price[1]	ua mt	96.16	93.91	98.53	98.54	101.66	110.68	119.70
	US$ mt	96.16	93.91	98.53	98.79	110.37	131.91	143.64
3) Direct Producer Receipts		-	-	-	-	-	-	-
4) Total Producer Value	US$ mil	2,883.3	2,678.6	2,615.8	3,013.2	3,554.0	4,247.5	5,013.0
5) Policy Transfers to Producers								
a) CAP[2]	ua mil	989.4	1,104.7	1,021.8	1,249.3	796.3	-1,512.4	(-1,223.9)
6) Total Producer Subsidy	ua mil	989.4	1,104.7	1,021.8	1,249.3	796.3	-1,512.4	(-1,223.9)
	US$ mil	989.4	1,104.7	1,021.8	1,252.5	864.6	-1,802.5	(-1,468.7)
7) Proportional Subsidy	%	34.3	41.2	39.0	41.6	24.3	-42.1	(-29.3)
8) Subsidy per unit	ua mt	32.98	38.76	38.56	40.96	24.73	-46.97	(-35.07)
	US$ mt	32.98	38.76	38.56	41.06	26.85	-55.98	(-42.08)

[1] Producer Price = Market Price which is the average of two German prices, two French prices and one for each of Belgium, Italy, Luxembourg and the Netherlands. The 1974 price is the average of six months between August 1974 and January 1975.

[2] The CAP is calculated as the difference between the Netherlands market price and c.i.f. import price of U.S. No. 2 Hard Winter ordinary, in units of account per metric ton. (P.S.E. = C.A.P. x Production and C.S.E. = C.A.P. + denaturing premium x consumption).

E.E.C. (The Six) - Maize: Producer Subsidy Equivalents and Values

	Unit	1968	1969	1970	1971	1972	1973	1974
1) Level of Production	mmt	9.7	10.6	12.8	14.1	13.6	16.3	14.4
2) Producer Price[1]	ua mt	85.90	87.28	86.62	85.46	89.61	101.55	126.60
	US$ mt	85.90	87.28	86.62	85.68	97.29	121.03	151.92
3) Direct Producer Receipts		-	-	-	-	-	-	-
4) Total Producer Value	US$ mil	833.2	925.2	1,108.7	1,208.1	1,323.2	1,972.8	2,187.6
5) Policy Transfers to Producers								
a) CAP[2]	ua mil	431.1	400.7	360.2	586.4	432.9	85.4	12.1
6) Total Producer Subsidy	ua mil	431.1	400.7	360.2	586.4	432.9	85.4	12.1
	US$ mil	431.1	400.7	360.2	587.9	470.0	101.8	14.5
7) Proportional Subsidy	%	52.0	43.1	32.3	48.7	35.4	5.2	0.7
8) Subsidy per unit	ua mt	44.44	37.80	28.14	41.59	31.83	5.21	0.84
	US$ mt	44.44	37.80	28.14	41.70	34.50	6.24	1.01

[1] Producer Price = Market Price which is the average of six prices, one for each of the six countries. The 1974 figure is the average of six months - August 1974 to January 1975.

[2] The C.A.P. is calculated as the difference between the Netherlands market price and the c.i.f. import price of U.S.A. Yellow Corn III, in units of account per metric ton. (P.S.E. = C.A.P. x Production; C.S.E. = C.A.P. x consumption).

E.E.C. (The Six) - Barley: Producer Subsidy Equivalents and Values

	Unit	1968	1969	1970	1971	1972	1973	1974
1) Level of Production	mmt	15.4	15.9	14.1	16.1	17.9	18.9	18.6
2) Producer Price[1]	ua mt	84.45	83.45	89.04	87.71	92.75	99.98	117.50
	US$ mt	84.45	83.45	89.04	87.94	100.70	111.90	141.00
3) Direct Producer Receipts		-	-	-	-	-	-	-
4) Total Producer Value	US$ mil	1,299.1	1,324.6	1,255.5	1,413.4	1,801.0	2,112.2	2,629.2
5) Policy Transfers to Producers								
a) CAP[2]	ua mil	509.7	705.6	406.5	710.8	433.3	-24.9	(-257.9)
6) Total Producer Subsidy	ua mil	509.7	705.6	406.5	710.8	433.3	-24.9	(-257.9)
	US$ mil	509.7	705.6	406.5	712.6	470.4	-29.7	-309.5
7) Proportional Subsidy	%	39.2	53.3	32.4	50.4	26.1	-1.3	-11.8
8) Subsidy per unit	ua mt	33.13	44.45	28.83	44.23	24.23	-1.3	-13.83
	US$ mt	33.13	44.45	28.83	44.34	26.30	-1.57	-16.59

1 The Market Price is the average of two German prices and one from each of the other five countries. The 1974 price is the average of six months (August 1974 to January 1975) in the same way as in previous years.

2 The C.A.P. is calculated as the difference between the Netherlands market price of Barley and the C.I.F. import price of U.S. Barley III, in units of account per metric ton. This figure multiplied by the production and consumption equals the P.S.E. and C.S.E. respectively.

E.E.C. (The Six) - Sugar: Producer Subsidy Equivalents and Values

	Unit	1968	1969	1970	1971	1972	1973	1974
1) Level of Production[1]	mmt	51.9	50.7	49.0	53.0	54.4	58.7	55.5
2) Producer Price [2]	ua mt	17.40	16.80	16.80	18.00	18.50	19.30	18.80
	US$ mt	17.40	16.80	16.80	18.05	20.09	23.00	22.56
3) Direct Producer Recipts		-	-	-	-	-	-	-
4) Total Producer Value	US$ mil	903.1	851.8	823.2	956.5	1092.7	1350.2	1252.1
5) Policy Transfers to Producers								
a) CAP [3]	ua mil	1510.7	1342.4	1265.7	1392.1	1133.4	1110.9	-1878.8
6) Total Producer Subsidy	ua mil	1510.7	1342.4	1265.7	1392.1	1133.4	1110.9	-1878.8
	US$ mil	1510.7	1342.4	1265.7	1395.7	1230.5	1324.0	-2254.6
7) Proportional Subsidy	%	167.3	157.6	153.8	145.9	112.6	98.1	-180.1
8) Subsidy per unit	ua mt	29.11	26.48	25.83	26.27	20.83	18.93	-33.85
	US$ mt	29.11	26.48	25.83	26.33	22.62	22.56	-40.62

[1] Level of sugar beet production in the Six.

[2] Intervention Price for beet in the Six member countries for 1968-1972. 1973 and 1974 figures are for the Nine members and 1974 figure is the Minimum Price.

[3] C.A.P. is calculated on the basis of the intervention price (calculated on a raw sugar basis and including the crushing margins given below) less the U.K. c.i.f. import price. The differential multiplied by the production and consumption of raw sugar (given below) equals the subsidy to producers and the burden to consumers respectively. Where the intervention price plus crushing margin is below that of the c.i.f. import price for the U.K., this is taken as a loss to producers and a consumer subsidy.

Crushing Margins u.a. per metric ton.

1968	1969	1970	1971	1972	1973	1974
138.5	144.6	155.8	167.7	180.7	198.7	200.8

E.E.C. (The Six) - Milk: Producer Subsidy Equivalents and Values

	Unit	1968	1969	1970	1971	1972	1973	1974
1) Level of Production	mmt	76.0	75.7	72.5	72.0	74.8	75.2	76.7
2) Producer Price (excluding VAT)	ua mt	96.0	96.5	98.9	106.3	116.0	121.0	124.2
	US$ mt	96.0	96.5	98.9	106.6	125.9	144.2	149.0
3) Direct Producer Receipts		-	-	-	-	-	-	-
4) Total Producer Value	US$ mil	7296.0	7305.5	7170.3	7673.3	9420.5	10844.5	11431.4
5) Policy Transfers to Producers								
a) Support								
Butter	ua mil	1617	1617	1447	745	1321	1596	NA
Cheese	ua mil	644	747	578	457	-134	-45	NA
Skim	ua mil	(349)	328	(314)	-76	106	237	NA
Sub-total	ua mil	2610	2748	2339	1126	1293	1878	NA
b) Increment	ua mil	2292	2374	1895	1078	977	1205	NA
6) Total Producer Subsidy	ua mil	4902	5122	4234	2204	2270	3003	NA
	US$ mil	4902	5122	4234	2210	2465	3579	(3579)
7) Proportional Subsidy	%	67.2	70.1	59.0	28.7	26.2	33.0	(33.0)
8) Subsidy per unit	ua mt	64.5	67.7	58.4	30.6	30.3	39.9	NA
	US$ mt	64.5	67.7	58.4	30.7	33.0	47.6	NA

UNITED STATES - Barley: Producer Subsidy Equivalents and Values

	Unit	1968	1969	1970	1971	1972	1973	1974
1) Level of Production	mmt	9.2	9.2	8.9	10.1	9.2	9.2	6.7
2) Producer Price	US$ bu	0.92	0.88	0.97	0.99	1.18	2.19	2.64
	US$ mt	42.26	40.42	44.55	45.47	54.20	100.59	121.26
3) Direct Producer Receipts	US$ mil	-	46.0	44.8	-	107.2	77.7	-
4) Total Producer Value	US$ mil	388.8	417.9	441.3	459.3	605.8	1003.1	812.4
5) Policy Transfers to Producers								
a) Diversion	US$ mil	-	22.1	18.3	-	-	-	-
b) Price Support	US$ mil	-	23.9	26.5	-	107.2	77.7	-
c) Reseal Loan Storage [1]	US$ mil	3.1	6.0	8.3	8.2	6.8	-	-
6) Total Producer Subsidy	US$ mil	3.1	52.0	53.1	8.2	114.0	77.7	-
7) Proportional Subsidy	%	0.8	12.4	12.0	1.4	18.8	7.7	-
8) Subsidy per unit	US$ mt	0.34	5.65	5.97	0.81	12.39	8.45	-

[1] Reseal Loan Storage payments are allocated in proportion to the annual barley production.

UNITED STATES - Wheat: Producer Subsidy Equivalents and Values

	Unit	1968	1969	1970	1971	1972	1973	1974
1) Level of Production	mmt	42.9	39.7	37.3	44.0	42.0	46.4	48.9
2) Producer Price	US$ mt	45.56	45.56	49.24	48.87	57.69	147.34	164.61
3) Direct Producer Receipts	US$ mil	746.0	855.9	871.0	885.7	858.7	478.3	-
4) Total Producer Value	US$ mil	2700.5	2664.5	2707.5	3036.0	3281.6	7315.0	8094.4
5) Policy Transfers to Producers								
a) Diversion	US$ mil	-	71.6	62.5	-	132.2	103.1	-
b) Marketing Certificates [1]	US$ mil	746.0	784.3	808.5	885.7	726.5	375.2	-
c) Export Subsidy [2]	US$ mil	5.1	188.2	276.8	177.8	591.4	-	-
d) Reseal Loan Storage [3]	US$ mil	38.0	48.9	39.4	27.0	28.3	16.3	9.2
6) Total Producer Subsidy	US$ mil	789.1	1093.0	1187.2	1090.5	1478.4	494.6	9.2
7) Proportional Subsidy	%	29.2	41.0	43.8	35.9	45.0	6.8	0.1
8) Subsidy per unit	US$ mt	18.39	27.53	31.83	24.78	35.20	10.66	0.19

[1] In 1974 the set aside requirements and the domestic certificates were abandoned in favour of a new programme.

[2] The total value of export payments (made by the Commodity Credit Corporation) divided by the total export volume = average subsidy per metric ton. This multiplied by the total production and total consumption equals the P.S.E. and C.S.E. respectively. This was reduced to zero in September 1972 and revoked in 1974.

[3] Allocated in proportion to annual wheat production.

UNITED STATES - Maize: Producer Subsidy Equivalents and Values

	Unit	1968	1969	1970	1971	1972	1973	1974
1) Level of Production	mmt	111.6	116.4	104.1	143.3	141.6	143.4	118.1
2) Producer Price	US$ bu	1.08	1.15	1.33	1.08	1.29	2.62	2.92
	US$ mt	42.52	45.27	52.36	42.52	50.78	103.14	114.95
3) Direct Producer Receipts	US$ mil	1165.7	1365.2	1228.1	893.1	1468.9	909.7	-
4) Total Producer Value	US$ mil	5910.6	6635.0	6678.7	6985.8	8660.0	15700.6	13576.1
5) Policy Transfers to Producers								
a) Diversion	US$ mil	651.3	780.3	654.0	-	-	-	-
b) Price Support	US$ mil	514.4	584.9	583.1	893.1	1468.9	909.7	-
c) Reseal Loan Storage [1]	US$ mil	57.8	53.5	35.9	26.2	58.9	(65.6)	(76.5)
6) Total Producer Subsidy	US$ mil	1223.5	1418.7	1273.0	919.3	1527.8	975.3	76.5
7) Proportional Subsidy	%	20.7	21.4	19.1	13.2	17.6	6.2	0.6
8) Subsidy per unit	US$ mt	10.96	12.19	12.23	6.42	10.79	6.80	0.65

[1] Allocated in proportion to animal maize production.
Figures in brackets are estimates based on previous years average proportions of total production used for animal consumption, multiplied by the Commodity Credit Corporation loan rates. These were:

1973 U.S.$1.00 per bushel.
1974 U.S.$1.10 per bushel.

UNITED STATES - Milk: Producer Subsidy Equivalents and Values

	Unit	1968	1969	1970	1971	1972	1973	1974
1) Level of Production	mmt	53.2	52.8	53.8	53.8	54.6	53.0	52.3
2) Producer Price[1]	US$100 lb.	5.24	5.49	5.71	5.87	6.07	7.19	8.29
	US$ mt	115.52	121.03	125.88	129.41	133.82	158.51	182.76
3) Direct Producer Receipts		-	-	-	-	-	-	-
4) Total Producer Value	US$ mil	6145.7	6390.4	6709.4	6962.3	7306.6	8401.0	9558.3
5) Policy Transfers to Producers								
a) Support of								
Butter	US$ mil	409	400	412	243	156	239	196
Cheese	US$ mil	766	965	1029	917	610	963	1637
Skim Milk	US$ mil	173.0	182.9	205.5	175.7	113.6	388.7	-9.1
b) Increment	US$ mil	1910	2271	2370	1797	1159	2009	3380
6) Total Producer Subsidy	US$ mil	3258.0	3818.9	4016.5	3132.7	2038.6	3599.7	5203.9
7) Proportional Subsidy	%	53.0	59.8	59.9	45.0	27.9	42.8	54.4
8) Subsidy per unit	US$ mt	61.24	72.33	76.73	58.23	37.34	67.92	99.50

[1] 1974 Producer and Consumer Price is the average of ten months.

UNITED STATES - Sugar: Producer Subsidy Equivalents and Values

	Unit	1968	1969	1970	1971	1972	1973	1974
1) Level of Production [1]	mmt	44.8	45.7	45.6	46.5	51.5	47.3	43.6
2) Producer Price,								
Beet	US$ mt	15.95	14.94	17.17	17.68	18.39	20.44	NA
Cane	US$ mt	10.62	11.30	11.86	12.43	12.93	16.13	NA
Average Price [2]	US$ mt	14.50	14.42	15.85	16.50	16.98	19.07	NA
3) Direct Producer Receipts		-	-	-	-	-	-	-
4) Total Producer Value	US$ mil	649.4	659.1	722.7	767.1	874.3	902.0	NA
5) Policy Transfers to Producers								
a) Sugar Act Payment [3]	US$ mil	92.0	90.4	82.6	86.2	89.8	86.5	NA
b) Tariff [4]	US$ mil	74.1	69.8	70.3	74.8	79.5	71.6	72.6
c) Sugar Quotas [5]	US$ mil	524.1	362.9	359.9	341.2	75.0	-55.1	-237.2
6) Total Producer Subsidy	US$ mil	690.2	523.1	512.8	502.2	244.3	103.0	-164.6
7) Proportional Subsidy	%	106.3	79.4	71.0	65.5	27.9	11.4	(10.0)
8) Subsidy per unit of beet	US$ mt	15.41	11.45	11.25	10.80	4.74	2.18	-3.78
a) Average subsidy per unit of beet and cane	US$ mt	127.81	102.57	100.55	93.00	42.12	19.81	-31.06

1 Total domestic production of beet and cane.
2 Average producer price equals total receipts to cane and beet producers divided by the total domestic production of beet and cane.
3 The Sugar Act broke down in 1974 and figures are not available for this year.
4 Calculated on the basis of 0.625 cents per lb. at raw value (US$ 13.77 per metric ton).
5 The effect of the Sugar Quota system in maintaining domestic price levels was measured by deriving the subsidy per lb. of raw sugar, i.e. the differential between the New York No.10 Domestic Contract (c.i.f. New York)price and the New York No.11 Foreign Contract (fob Caribbean Ports) plus an estimated stripping cost of 5 cents per lb. and multiplying by domestic production and consumption to get the subsidy to producers and the burden to consumers respectively.