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Coping with the Agricultural Financial Crisis in the Industrialized Countries: The Case of the EC

INTRODUCTION

The commercial farm problem has been defined as an excess of farm output over utilization at 'satisfactory' prices. Evidence of farm production in excess of market outlets has been apparent in declining farm commodity prices and net incomes, growing stocks of farm products, or large government cost for price supports, production restraints and surplus disposal. Programmes such as free markets, mandatory production controls, and action to increase exports and the mobility of farm resources have been advanced as possible solutions to overproduction.¹

The content of this quote is highly contemporary, but the date betrays the current problems of the agricultural sectors in the developed world as being at least 25 years old. It should be obvious that the problems admit of no simple and general solutions, otherwise they would have been implemented before now. The characteristics of the problems have changed somewhat over the last 25 years, particularly the conjunction of concerns over budgetary expenditure with monetary and fiscal policy developments leading to restraints on this expenditure and high real interest rates. However, the major underlying problems remain unsolved.

Coping with the financial crisis in agriculture involves a number of different actors and perspectives. On the other hand, farmers, their families, workers and input suppliers are faced with the problem of adjusting their requirements, expectations and realizations to more constrained circumstances. On the other, policy makers are faced with the major problems of adjusting policies to take account of current realities without irreparably damaging the interests of their constituencies, usually seen as the farmers rather than their direct and indirect dependents.

The causes of the financial crisis deserve considerable attention, since there is a distinction between those reactions and responses which seek to delay or mitigate inevitable effects of underlying changes, and those which seek to positively adjust behaviour (including policies) to match new circumstances. There are two fundamentally different perspectives which are worth outlining as part of the background to a discussion of the adjustment process: the policy perspective; the farming community perspective.

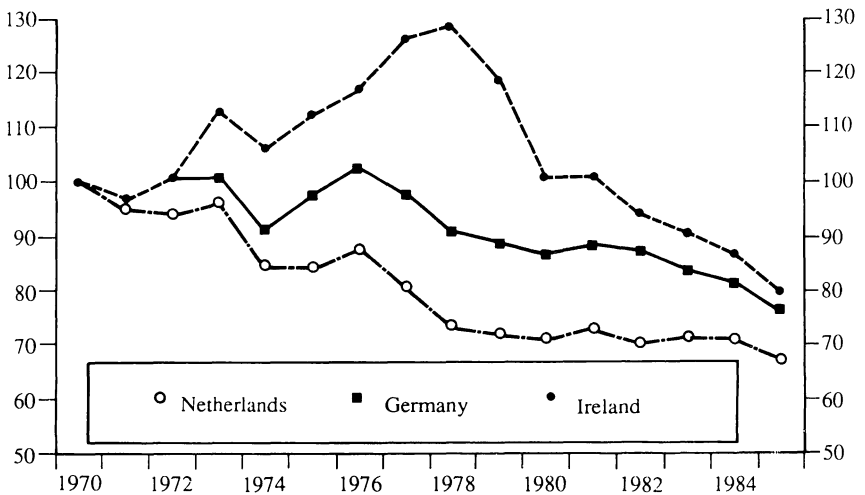
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European Community (EC) policy circumstances have undergone radical change over the last ten years, which are only now being fully appreciated. The major change has been the shift from a predominantly importing country block to the position of being a net-exporter in most of the major temperate commodities. This shift has fundamentally altered the internal financial logic of the Common Agriculture Policy. Policy instruments (particularly border measures – import levies and export refunds) have quite different implications for net-importers than for net-exporters. As the net-importer, the CAP could be more or less relied upon to contribute more to the European budget than it spent. As the Community moved into the position of being a net-exporter, so the role of the EC budget reversed and the financial claims of the CAP on the European exchequers grew. Correspondingly, the pressures for reform of the policy also increased as exports grew.

These pressures have led to some reform of the CAP, particularly in the milk and now the cereals regimes, which have contributed to the pressures facing individual farmers and those associated with them in the food chain. However, the pressures on the industry are of a rather different character. The massive escalation of world commodity prices during the early 1970s, resulting from a rather fortuitous coincidence of a number of natural and policy circumstances, coupled with increasing concerns about the ability of the world to feed itself, led to major expansion of the agricultural sectors in the industrialized world. That growth coincided with a rapid expansion and inflation in the rest of the world economy, and was carried out against a background of rising prices and very low real interest rates (negative in the UK). These circumstances were exacerbated in the three countries (UK, Ireland and Denmark) which were at that time in the process of acceding to the EC's CAP. Expectations of increased support prices, and the associated security of returns, fuelled the expansionary tendencies.

Although entirely forecastable, the subsequent depression of world prices, the appearance of financial pressures on the associated support policies, and the consequent pressures on farm margins seemed to take the industry by surprise. Coupled with increasingly tight monetary policies and high interest rates around the industrialized world and the growth of unemployment, these pressures have led to a requirement for disinvestment and resource release from agriculture which is both common to the industrialized world and is proving difficult to manage. Essentially, the agriculture industry is now faced with the need to readjust its asset portfolio to suit the conditions in the 1990s as opposed to the conditions of the 1970s. Values-added in the traditional agricultural activities are continuing to fall in real terms, rather than increase as was expected during the 1970s. The corollary is that fewer people will be able to earn a full-time living from the industry, whether as farmers, land owners, input suppliers or owners of capital.

Figure 1 shows the range of real producer price trends in the EC and illustrates two important points: first that the 'Common' Agricultural Policy has far from common effects on real agricultural prices throughout the Community; second that since the mid to late 1970s, there has been a sharp decline in real prices throughout the Community. There are four major reasons for the divergence of price trends shown in this figure: (a) in the case of Ireland, the process of acceding to the European Community raised prices considerably for the period following

FIGURE 1 *EC producer price indices in real terms*

Source: European Commission, Green Europe 217, Twenty Years of European Agriculture.

1972 (also shown to a less marked degree by Denmark and the UK); (b) differential movements in market and green rates of exchange and associated MCAs result in wide differences in internal support prices between member states; (c) different product mixes between the various member states, coupled with different movements of support prices between commodities result in different national average producer prices in nominal terms; (d) differential rates of inflation translate even the same nominal prices into very different real rates. The three countries shown in Figure 1 broadly illustrate the range of producer price changes throughout the Community over this period, and also show that the financial pressure, at least as far as product prices are concerned, has been applied to the European agricultural sector since the late 1970s and is hardly a novel phenomenon.

Associated with these pressures and adjustment requirements at both the policy and the farm level is the increasing volatility and ultimate unsustainability of international agricultural markets. Coincident with these effects, the world market (particularly those developing countries with rapid rates of growth) represent the only major expanding outlet available to absorb the increasing output from developed agricultural sectors. Without access to these markets, commercial agriculture is condemned to remain a declining industry wherever it is located. Continued attempts to avoid the worst of the farm adjustment problems through support of the domestic agricultural markets can only lead to

further isolation of domestic markets from international markets and the continued erosion of the international market base. As this happens, so the cost of domestic support escalates, and the pressures increase for quantitative limits on production, quotas and 'supply management'. The potential of solving all of these problems simultaneously has been recognised in the statements of principle surrounding the current GATT round. The practical difficulties and the details of the adjustment process are, however, ferocious and may yet prevent international agreement or, perhaps worse, domestic acceptance of those agreements.

Against this background, this paper briefly outlines the policy adjustment problem, the farm adjustment problem and then concludes with some suggestions about the possible resolution of these conflicts within the international arena.

THE POLICY ADJUSTMENT PROBLEM

The European Community developed its agricultural policy against a background of high domestic protection rates devoted to encouraging self-sufficiency for countries which were, on the whole, net importers.² As a result, the Common Agricultural Policy began with high support prices and began its development with cereals. High domestic cereal prices, supported with import levies and secured domestically with limited intervention purchasing, were a natural result of bargaining between Germany and France, the former intent on continuing protection of its domestic industry while the latter was keen to develop the German market for her cereal exports, partly as a *quid pro quo* for the opening of the French market to German industrial goods. Once cereal support prices were established at high levels, the pattern was set for other agricultural support prices and the CAP was born. From a financial perspective, the policy was a success, generating funds for other European activities. Not until the early 1970s did the growing domestic production threaten to kill the goose that until then could be relied upon to lay golden eggs in the laps of the finance ministers. Mansholt introduced his famous 'plan' to cope with the problem, but his solution (to reduce the size of the agricultural sector and release labour and other rural resources to other occupations) was seen as a greater problem, not as a solution, and was largely rejected.

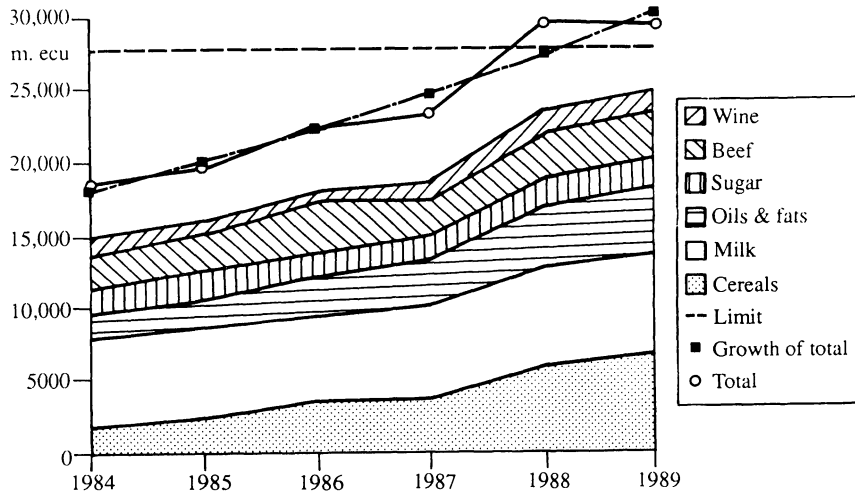
Two factors delayed the onset of financial crisis for the CAP. First, the escalation of world commodity prices during the early 1970s reduced the internal pressure for reform of the policy, although the reversal of the import levy system into export taxes as world prices temporarily exceeded domestic support levels reduced the import levy revenue. Secondly, and more importantly, the accession of a major importer (the UK) to the CAP provided a ready market for European exports behind the common external tariff wall. However, as world prices eased and UK agriculture responded to the security and encouragement offered by the CAP support system, so the chronic problem of over-supply re-emerged. Rapid technological change, encouraged according to theories of induced innovation by the high levels of support and security, assisted the growth in supply at a far faster rate than the increase in domestic demand. Europe turned from being a net-importer to a net exporter, and as she did so contributed to further depression of world prices exacerbating the surplus disposal costs to the European exchequer.

Policy responses evolved through 'prudent prices' (a euphemism intended to cover reduced prices, at least in real terms) and producer co-responsibility levies (designed to take away with one hand what the other was giving but including some creative accounting which apparently preserved the financial integrity of the CAP).³ These proved ultimately ineffective, neutered through member states adjustment of green rates of exchange and the inability of the Council of Ministers to agree sufficiently penal producer taxes in conjunction with realistic setting of support prices. Unable to control the escalating budgetary cost of the policy on the price axis, the EC was forced as a last resort to attack the quantity axis through quotas, at least with milk. The internal logic of the CAP development indicates that this same response will ultimately be forced on other commodity regimes. The only internal brakes on this development are the difficulty European bureaucrats and politicians find in accepting the inevitable and developing the ingenuity to manage supply in an effective and workable form.

'Stabilizers' are the latest effort by the Community to come to terms with the financial pressures brought about by excessive support of the agricultural sector. It is a cheap but fatally indicative remark that stabilizers are 'E' numbers, artificial European additives designed to preserve the policy beyond its natural life and likely to produce unwanted and harmful side-effects. Certainly few commentators regard the latest commitment to these stabilizers as either a long-term cure for the policy insolvency or a major improvement in the stability of signals provided to producers. It is more than possible that the operation of the cereals and oilseeds stabilizers working in conjunction will lead to an increase rather than a reduction in the cereals surplus. Maximum Guarantee Quantities are really little more than Guarantee Thresholds under another name, with little sign that the associated support price reductions will be any more effective once the Council of Ministers has finished its negotiations about the basic price which is to be adjusted. The single most important addition to the mix is the specific involvement of the Community's Finance Ministers in the annual CAP price negotiations coupled with a further affirmation of a ceiling on CAP spending. It is at least possible that this will lead to more fiscally responsible price setting in future. Figure 2 shows the extent to which the fiscal responsibility is being urged on the Community by the target level of spending on the CAP.

Although the Mansholt plan has not yet re-emerged as a solution to fit the 1980s, in spite of the fact that the exodus of people from the industry has been practically as great as Mansholt envisaged, a modest step in this direction has been taken with the introduction of a 'set-aside' scheme for cereals. Once again, the political logic of the Community has led to a scheme which pays producers over the odds to produce cereals with one hand and then seeks to pay them not to produce with the other. The financial appeal of the set-aside scheme to the Community is buried in the fact that member states will bear most of the cost of this scheme, their share increasing as the payments for the set-aside area are increased. It amounts to a backdoor re-nationalisation of the CAP, at least as far as the payment for the policy is concerned. The 'cure' is almost certain to prove more costly (in total) than the disease. The payment necessary to persuade the major cereal producers to idle land seems likely to be greater than the cost of

FIGURE 2 EC CAP (guarantee section) spending



Source: European Commission; Agricultural Situation in the Community, various.

disposing of the surpluses, unless combined with the unlikely step of simultaneously reducing support prices by a substantial amount.⁴

Two emerging pressures on the CAP may force the policy in new and untried directions. The first of these is the internal pressure from the environment lobby. Intensive agricultural practices are causing increasing environmental damage in the form of pollution, erosion, monocultural landscapes and loss of natural habitats. Environmentally Sensitive Areas are being defined within which special payments are made to farmers to refrain from the most intensive practices and encourage the preservation and conservation of the countryside. Penalties and quantitative limits on fertilizers and chemicals are being discussed and have been implemented in certain parts of the Community (for example, in Germany). There is, however, a serious danger that the environmental concerns will become confused with concerns over the financial state of the CAP, illustrated by the set-aside debate. Set-asides can be seen as either an attempt to limit surplus production and/or limit surplus disposal expenditure (which need not be the same thing, as already pointed out) or as an attempt to divert environmentally sensitive areas out of commercial agricultural production. The criteria and implementation details for the set-aside scheme are likely to be quite different depending on which of these objectives is being sought. Although the current version of the European set-aside seems to be targeted towards limiting surplus production, much of the discussion of the appropriate design of the scheme is concerned with the other possible objectives. Such confusion is likely to become more common as the internal pressures on the CAP increase. This does not augur well for any improvement in the logic or consistency with which the CAP develops.

There is a further point to be made in connection with the environmental pressure. It is possible, if not likely, that some of this 'green pressure' is being fuelled by the existence of surpluses and the growing cost of surplus disposal. If solutions were found to these problems, what would be the effects on the strength and direction of the environmental lobby's pressure? Would the forces for change return to the pattern set in the late 1960s and early 1970s or is the strength of current environmental concerns independent of the existing financial and surplus production crises affecting the industrialized world?

The second major pressure on the CAP comes from the international arena, concentrated in the current GATT round. Other papers in this conference are dealing with these issues. All that needs to be said here is that the GATT discussions are lending additional weight to the arguments in favour of more economically and commercially sustainable agriculture within the EC, connected with reduction in support and more competitive trading relationships with the rest of the world. To date, these pressures have been muted within the EC, being argued almost solely by the UK and the European Commission, with some assistance from the Netherlands and others. It is possible that international pressures will lead to these directions becoming more acceptable within the EC in the future. This point will be returned to in the concluding section of this paper. On a related issue, internal competition within the EC is currently the subject of transformation under the Single European Act, which implies elimination of MCAs and green rates of exchange in input and resource costs. High cost/high price countries (Germany) are faced with the prospect of losing their ability to defend their domestic markets from the pressures of competition from the rest of the EC, while low price/low cost countries stand to gain. More work needs to be done on this issue before any reliable comments on the likely effects can be made.

To conclude this section, the irresistible forces for CAP reform within and outside the EC are currently locked in conflict with the immovable objects of farmer resistance to changing the *status quo* and the politicians' unwillingness to contemplate radical change. It is hard to believe that a policy which appears to benefit only some 8 per cent of the population at the expense of the overwhelming majority is politically sustainable in the long term within Western democracies. The reasons for the continuation of farm policies in the face of this political arithmetic remain unconvincing but are apparently real and strong. They range from the effects of policies per head of the affected population, which through the calculus of public choice are able to preserve inequitable transfers and policy consequences, through the observation that the rapid exodus of people from the agricultural sector over the recent past has left a significant proportion of the non-farm population with old-fashioned and romantic connections with the industry and a residue of political support for the industry, to a continued if now rather obsolete social perception of the benevolence and worthiness of agricultural activity.⁵ The result of the conflict to date has been a form of 'crisis management' which seems likely to lead to further entrenchment and greater emphasis on supply control with limited progress on the environmental front. The stalemate has already generated rather more heat than light, in spite of the laudable intentions expressed in several Commission documents⁶ and European support for international statements of objectives such as the Punta

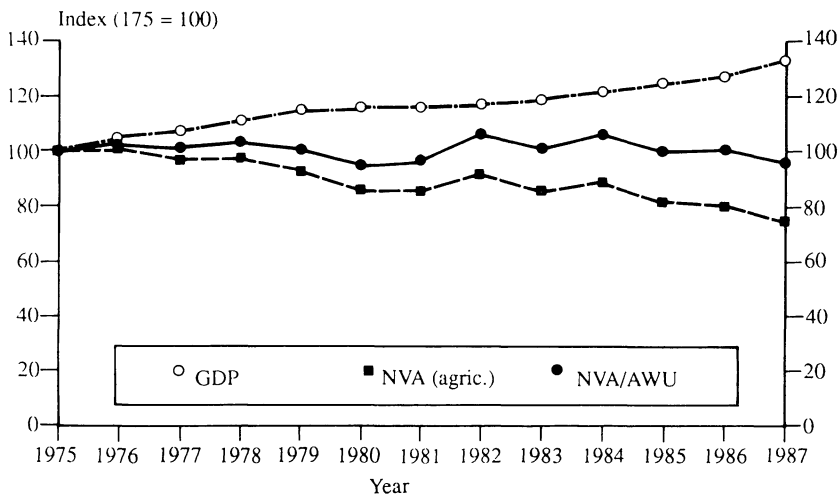
del Este declaration. Actions to date do not live up to these intentions, and the resulting confusion and uncertainty about future policy direction facing the agricultural sector is a contributory factor to the financial pressures of the sector. Ironically, this very confusion may be contributing to a reduction in the rate of expansion of output. Though it is difficult to support this hypothesis with empirical evidence as yet, there is ground for the suspicion that the rates of output growth evident during the late 1970s and early 1980s may not be expected to continue indefinitely under the more straightened circumstances and outlook of the mid-1980s.

THE FARM ADJUSTMENT PROBLEM

The overall picture of net values added in comparison with GDP for the Community as a whole is illustrated in Figure 3.

In spite of continued attempts through the CAP to maintain agricultural incomes, total incomes for the sector in real terms (here deflated by the GDP deflator) have been falling steadily across the community as a whole, although there are variations between the member states, with the larger states (UK, Germany, and France) appearing from the published figures to be faring rather worse than the Community average. The tendency for incomes of those depending on agriculture to fall has been counteracted by a continued reduction in the number of people earning a living from the industry, as illustrated by the trend in net value added per agricultural work unit. The labour force in agriculture has fallen by around 20 per cent since 1975, continuing, although at a slower rate, the trend of earlier decades.

FIGURE 3 *EC trends in value added (in real terms)*



The primary response to falling margins and incomes to be earned from the sector is, therefore, exactly what economic theory would predict – namely an outmigration of people to other sectors. Over the Community as a whole, this outmigration, at least in terms of a standardized Agricultural Work Unit (AWU), has been sufficient to more or less maintain values-added per head within the sector. However, the standards of living (as very crudely reflected in the NVA/AWU figures) within agriculture have continued to fall relative to the rest of the economy (as reflected in the GDP index). The agricultural outmigration rate may have slowed somewhat in the last decade as a result of the increase in unemployment levels in the rest of the economy (more than doubling over the decade in the EC as a whole), though the increase in real incomes among those in work elsewhere in the economy is likely to have offset this effect for some within agriculture.

A further expected effect of falling margins within the industry is that asset values, especially land, also fall. This response has also been commonplace throughout the Community. However, increasing real incomes in the rest of the economy, coupled with increased leisure time, has also increased the demand for rural land for recreation, amenity purposes and for extra living space. In some regions, this rising demand for rural land and buildings for non-agricultural purposes has offset the falling returns from agriculture. Associated with the fall in asset values is the decline in net investment in the sector. Ageing machinery and plant is not replaced so frequently, and capital purchases (often with at least an element of consumption incorporated in the replacement decision) are deferred or cancelled. Buildings are reappraised for their contribution to the agricultural enterprise, and those surplus to farming needs are disposed of to other uses (planning legislation and requirements allowing), either through direct sale to other people or through diversification of the farming business into non-traditional and non agricultural activities, often connected with tourism or rural crafts.

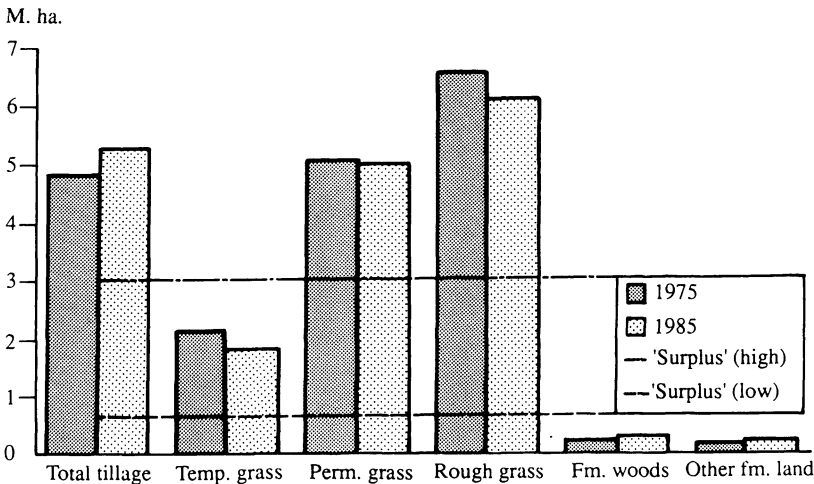
This adjustment of the 'agricultural portfolio' of assets has an interesting and as yet little researched effect on rural communities. The decline in frequent replacement of plant and machinery in agriculture had the potential effect of shifting of employment in the supplying sectors from urban and foreign areas (usually associated with the manufacture of new equipment) towards the rural areas, as the demand for repair and maintenance increases. On the larger cereal-growing farms, especially in the major cereal growing areas, (the Paris Basin, East Anglia) full-time workers employed primarily as machinery fitters are beginning to reappear, at least according to casual evidence, after a period during the 1970s when such employment was largely dispensed with. Similarly, the increasing trend towards diversification of the farm enterprise can often be associated with more labour-intensive activities connected with recreation and leisure as well as further processing of farm products and direct selling. Over and above the reactions at the farm level, the decline in land and fixed capital values in agriculture are encouraging a growing trend of urban-rural migration of the nonagricultural population, particularly in areas within or adjacent to regions of general economic expansion such as the South East of England. This trend is already apparent in population census data in the UK. The trend towards greater rural employment, whether associated with or independent of the agricultural

sector, is more difficult to discern from the employment data and is almost impossible to link with existing agricultural diversification, since the data collection techniques and methods remain largely tied to ideas of single sector employment rather than 'pluriactivity'.

There is a growing dichotomy between the policy response to increasing pressure on the farming community and the farm-level response which has, to date, received little attention. At the policy level in the Community, the issue of surplus production appears to be regarded as equivalent to a surplus of land employed in agriculture, with the response that 'set-aside' and land retirement policies are regarded as appropriate. There is a number of studies which have translated the present and projected future surpluses of production, variously defined, into estimates of 'surplus agricultural land'. The arithmetic of such estimates is fairly straightforward. However, the underlying logic is a good deal more questionable. The implication of recent estimates of 'surplus land' in the UK is that between 0.7 and 3 million hectares of land will become surplus to farm production requirements over the course of the next 15 years or so. To put these figures in perspective, the 1975 and 1985 areas of major agricultural land use in the UK are shown in Figure 4, in comparison with the range of 'surplus' land estimates.

It can be seen that total tillage (all land under crops) has only increased by 0.45 m. ha, while the area under temporary and permanent grass has declined by almost the same amount. As a result, the total area under crops and grass has increased by a very modest amount (52,000 hectares or less than 0.5 per cent). Nearly 1/2 m. ha of rough grazings have been lost, mostly to forestry and to

FIGURE 4 UK major agricultural land uses, 1975 and 1985



reclassification following (subsidized) drainage and improvement, while there have been very slight increases in farm woodland and other uses (including such things as camping sites and so on). Changes in land use over the longer term have been equally unremarkable, though generally in the opposite direction. The total arable area, for instance, has declined by only 0.6 m. ha. in the forty years since the war. Given the enormous effort to increase domestic production during the war and the continual erosion of the agricultural land area since then to provide for building, roads and so on, this does not represent a particularly large area.

In the context of historic changes, suggestions of surplus land conjure up a period of remarkable change in the countryside, if they are to be taken as a reliable projection for the future. The most recent discussion of future land use changes in the UK (Agriculture EDC, 1987) is careful not to present estimates of 'surplus land'. Rather, it takes the view that land would leave cereal production and return to other agricultural uses, especially grass. It suggests that around 720,000 hectares could leave cereal production and concludes that, whilst significant changes of use are likely, the overall pattern of land use will not be dramatically different in the mid-1990s from the mid-1980s. Nevertheless, there are likely to be substantial changes on individual farms, since the future pattern will be made up of individual decisions and these will differ according to circumstance. The Minister of Agriculture, however, in his speech at the opening of the conference (Agriculture EDC, 1987), reflected more popular opinion when he said 'there can be no doubt that considerable areas of the countryside will be looking for uses other than conventional agriculture in the years ahead. I looked with eager expectation to see what specific overall figure for the number of hectares likely to become available this report came to, but was not too surprised to discover that even this well qualified group of experts shied away from giving one'.

Similar calculations could equally well be done with the labour force or with the capital investment in agriculture, although for some reason this does not seem to be done with any frequency or high visibility. As an example, however, suppose that the reductions in output necessary for the sustainability of the CAP or the countryside is of the order of 20 per cent (which is the 'target' reduction in production specified in the European Commission's regulations, and is approximately equivalent to a 'land surplus' estimate of about 3.7m ha. for the UK). For the sake of simplicity, it can be assumed that this reduction could be achieved through the release of either labour or capital from the industry, rather than land. In the context of historical changes in the agricultural industry, changes of 20 per cent in the labour and capital employment in the industry are commonplace over relatively short time horizons. The full-time hired labour force has declined by more than 30 per cent in the last ten years, while the total labour force in agriculture has declined by 18 per cent in the same time (HMSO, 1987). Capital investment in the industry, measured as total assets in agriculture excluding land in real terms, has declined by 18 per cent over the same period, after a significant rise during the last half of the 1970s (Johnson, 1987). In other words, in the context of previous patterns of change in the agricultural industry, the release of labour and capital from the industry seems a much more likely response than the release of land. Such a conclusion is reinforced by the economic logic of an industry competing with other uses for its labour and capital

while the competition for land between agriculture and other uses is likely to be much more restricted. As a result, the factor market adjustment for land is likely to occur through changes in its price, as opposed to the quantity adjustment to be expected for labour and capital. Land will only leave agriculture if its returns fall to zero, or if it can earn more in other uses. While there is clearly an increasing demand for rural land for non-agricultural purposes, this demand remains location-specific and relatively small in comparison with the total agricultural area. It follows that attempts to release land from agricultural production are likely to be both more difficult and more expensive than attempts to release more capital and labour. There is no reason to suppose that releasing capital and labour would be any less effective than releasing land as far as curtailing production levels are concerned.

At the farm level, however, it is apparent that farmers see expansion of land area as one, if not the major, way of increasing the income earning potential of the farming business. Conventional neoclassical economic theory is clear that falling product prices and reduced profit margins lead to reduced aggregate supplies of products, and that increasing intensity of production cannot make economic or commercial sense under these conditions. However, this situation also reduces the earning ability of any given size of agricultural operation and farm families intent on remaining in the industry on a full-time basis must increase the size of their business (at the expense of retiring or quitting neighbours) to maintain incomes. The effects of a period of falling margins and asset prices on the ability of farms to expand are contradictory. On one hand, falling asset prices make expansion less costly than otherwise, while on the other, equity and earning potential are reduced and the ability to command and service the capital funds necessary for expansion are constrained. In spite of these contradictions, the average size of farm holding continues to increase, with the largest size groups growing in number and the smaller groups all contracting in number throughout the Community.

At the same time there is evidence of increasing part-time farming within the Community.⁷ Again, such a response would be expected as returns to agriculture come under increasing pressure. The combined effects of a continued increase in the average size of agricultural holding and of increased off-farm employment and activity seem to suggest an increasingly divided agriculture: fewer and larger commercial farms on the one hand; many small and part-time farms on the other. However, it is not necessarily the case that the part-time farms are small. The determinants of agricultural structure almost certainly include the particular characteristics of the farmers and their families (such as education, training, age, number of dependents) which interact with the circumstances of the farm (opportunities for expansion, diversification) to produce specific farm responses to financial and commercial pressures. It seems extremely unlikely that these responses will fall neatly into just two alternatives: get bigger and more specialized (with others getting out) or stay small and diversify. This conclusion is reinforced by the observation that changes in the distribution of property rights over land and capital and the potential for further divorce of the ownership from the operation and use of these resources can allow both tendencies to materialise simultaneously on the same areas of land.

In addition, the development of the structure of the farm sector depends

critically on the fiscal provisions and institutional arrangements for the accumulation of wealth and the transfer of capital between people and sectors and the laws and practices of inheritance. In the European Community, these are still the domain of national rather than European governments. In the UK, the fiscal treatment of capital transfers, for instance, penalizes the transfer of capital from agriculture to other sectors while the differences between income and wealth taxation favour accumulation of wealth. Under these circumstances the growth of farm size is likely to reflect fiscal and financial circumstances much more than any underlying physical input/output relationships and economies of scale. In other words, the explanation of farm size growth is likely to have little to do with economies of scale (or size), even if it can be demonstrated that these exist.⁸

The technological revolutions of the past (the mechanical and chemical revolutions) may have been associated with increasing economies of size and scale, particularly when associated with expansion of the agricultural sector. However, the biochemical, genetic and information revolutions which are just beginning seem at first sight to be less likely to be associated with significant economies of size or scale. In addition, the theories of induced technical change and adoption point to the utilization of these new technologies in more flexible and perhaps less specialized ways than has been the case with the chemical and mechanical innovations.

The general implications of these arguments for the development of the farm sector in response to the current financial and policy pressures is one of expanding opportunities (perhaps associated with increasing risks for individual enterprises and activities). The result is likely to be increased variability and flexibility of response at the farm and business level and perhaps greater integration between the traditional farming and nonagricultural rural sectors. The key ingredient for the realization of these opportunities in many cases is likely to be the flexibility and development of the associated institutional and policy arrangements (such as planning legislation, taxation policy, capital market provisions). As yet, little robust analysis and investigation of these relationships exists on which to base reliable forecasts or prescriptions.

THE INTERNATIONAL ADJUSTMENT PROBLEM: RECONCILIATION BETWEEN POLICIES AND THE FARMS?

The fundamental problem facing the EC is the reconciliation of the twin pressures of financial cost of farm policies and the determination of the political process with Europe to protect the farming community. The line of least resistance appears to be towards quantitative controls and continued high domestic prices/support costs and continued denial of access to off-shore suppliers. This development is sustainable within the EC so long as domestic production is constrained to domestic requirements, with bilateral trade agreements and *ad hoc* arrangements to cope with the inevitable mistakes and unforeseen harvest outcomes. In spite of continual internal quarrels about what domestic requirements and 'sustainable exports' really amount to, the alternative of freer trade and interrelated world markets is much more risky from a political point of view. Politicians need the support of practical and acceptable

policy alternatives. Uncompensated price reductions, albeit against a more secure, stable and higher valued international market, are not sufficient to provide this political security (at least not in the EC). The ultimate issue, then, is the form of compensation and associated policy instruments which can satisfy domestic politicians and their farming constituencies. PEGs (Production Eligibility Guarantees) provide such a mechanism,⁹ involving the principle of limiting commodity support to an overall quantity which is less than would be produced under freer trade, limiting support per farm within the overall limit, and paying this support through exchequer payments. For most practical purposes, such a scheme would 'decouple' support from the incentive prices for consumers and producers. Such a mechanism, if the PEGs at the farm level were tradeable, provides a means of gradually reducing the current levels of support through the purchase of PEG rights by the authorities. Those giving up the rights to support embodied in the PEG are thus compensated at market determined rates for the reduction in support.

In the last resort, policy development is a function of public opinion within democratic societies. A recent report by the European Commission (1988) provides information about the current state of public opinion on European Agriculture. This report is based on a large scale cross-sectional study of European views on agriculture. While up to 36 per cent of Europeans confessed to not knowing or didn't answer a series of 20 questions about agriculture, and only 35 per cent said that they heard or read about the CAP recently, more than 65 per cent indicated interest in agricultural matters and virtually the whole sample considered agricultural matters important. 90 per cent indicated that they pursued activities connected with agriculture and the countryside, and 80 per cent considered farmers to be disadvantaged compared with the rest of society. This is an overwhelming proportion of the population (assuming the survey to be accurate) and strongly suggests that political will to completely 'deregulate' agriculture is an academic economist's pipe dream, regardless of the intellectual and theoretical rigour of the view. There is strong evidence of a deep-seated and very widely held sympathy for farmers in these results, which any serious policy analyst must take into account.

However, the survey also reveals considerable confusion and inconsistency among the general population about the necessary changes in policy. While the general public consider surpluses to be the major problem (in contrast to the farming population which rates the decline in farm incomes as the major issue), 71 per cent of the general public are in favour of defending the European Community's position as the second largest exporter, and 75 per cent consider that agriculture must be protected from foreign imports even if this means higher food prices. The survey reveals that people are willing to subsidise production at home rather than buy supplies from abroad. At the same time, a majority consider food prices too high, while there is only limited support for export subsidies. There is very little support for the apparent political emphasis on curbing agricultural spending. Although the public do think that the European budget is too big, 50 per cent think that current spending on agriculture should be maintained or even increased. They are concerned about the growing gap between large and small farmers (a concern shared by the farming population), and also about the depopulation of rural areas and the state of the rural

environment. There is a clear indication in this report that the general public appreciate the nonsense of paying high prices for food at the same time as increasing the taxpayer subsidies for farming.

Eighty-three per cent think the problems of agriculture are worthy of serious attention, and 75 per cent consider that the problems of EC agriculture are similar to those facing the US (and the Soviet Union!). There is also the view that Europe can make a better contribution to world balance in agricultural production than any of the member states individually. While it would be a mistake to place too much faith in these results (especially since there are some notable differences between countries in the responses), they could be taken as generally supporting the argument that the European public is ready to support realistic policies which tackle these issues and problems, and that there is a real political possibility of changing the *status quo*. However, such an interpretation also suggests that considerable political leadership and a consistent, easily understood policy direction will be required to achieve realistic reform. Is it too naive and optimistic to think that a combination of the GATT negotiations, a PEG type policy reform and the currently relatively buoyant world prices provide an opportunity for such clear political leadership?

NOTES

¹Tyner and Tweeten (1964).

²More detail on the development of the CAP can be found in Tracy (1983).

³The issue and appeal of co-responsibility levies are dealt with in, for example, Hubbard (1986).

⁴Potter (1988).

⁵The interactions between the political and economic aspects of policy development are dealt with, *inter alia*, by Petit (1985), Petit *et al.*, (1987) and Moyer (forthcoming). The costs and benefits of the CAP are identified in Buckwell *et al.*, (1982) and Harvey and Thomson (1984), while the political implications of these are commented upon in Harvey (1984).

⁶For example, European Commission, (1983) and (1985).

⁷See, for example, Gasson (1988).

⁸There is evidence that economies of scale have typically been overestimated in the past because of the exclusion of the 'management' input, at least in the UK; see Dawson (1985) and Dawson and Lingard (1982).

⁹As developed in the recent papers for the International Agricultural Trade Research Consortium symposium, Annapolis, Maryland, 19/20 August 1988.

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DISCUSSION OPENING – JACQUES BROSSIER

Professor Harvey has presented a very rich and balanced text, covering the various aspects, micro and macroeconomic, of the agricultural financial crisis in the EEC countries. He showed the origin of the crisis – European agriculture is victim on one side of its success and on the other of the fact that most industrialized countries protect their agriculture for political reasons. The modern agricultural politics are all protectionist, they rely on the isolation of the internal market, so they are expansionist. As a good scholar, Professor Harvey quotes the important aspects of the question and it is difficult not to agree with his analysis. I will briefly refer to what seems to me to be the most convincing parts of his analysis and then ask him to discuss some interesting propositions that he makes.

WHAT IS STATED IN THE ANALYSIS AND WHAT IS USEFUL TO REMEMBER

Professor Harvey criticizes the strangeness of policies that, on one hand push the farmers to produce more, particularly cereals, and on the other hand seek to pay them not to produce. Protection, expansion and management of the surpluses are the essentials of agricultural policy. So the renationalization of the agricultural policies (have they ever been denationalized?) is for a great part responsible for

the malfunctioning. P. Coulomb and H. Delorme remind us that the costs of agricultural policies is approximately the same (in percentage of GNP) for all industrialized countries.

He also shows that the environmental lobby can force the CAP into new and untried directions. But we can ask ourselves if the main pressure does not come more from the surplus than from ecological lobby (pollution by nitrates, acid rain, preservation and conservation of the countryside). With Professor Harvey we can think that, in a period of slow growth, the main engine is more economic than ecologic. Today, both of them seem to go together and that is a good thing but will this situation continue? It is not certain that the real emphasis on ecology will grow in the future. What should be done to encourage this?

With a touch of irony, the author reminds us that if the Mansholt plan has not yet re-emerged as a solution to fit the 1980s, the exodus of people from agriculture has been practically as great as Mansholt predicted. A recent study made by Tirel (1988) shows the extraordinary evolution of French agriculture during the last 25 years (1960–85): the reality is more than the expectation.

- diminution of the real price of wheat = -2.5%
- growth of area per worker (ha) = $+2.9\%$ year
- growth of capital per worker = $+6.4\%$ year

Today the agricultural worker can be assimilated with the farmer, he manages twice as much land, 4.7 times more capital and he has multiplied his productivity 4.6 times. This evolution is mainly related to the increase of land use.

So, we totally agree with Professor Harvey: the explanation of farm size growth is likely to have little to do with the economies of size (scale). Nine years ago (at Banff) I presented a contributed paper showing the absence of economies of scale in agriculture. The growth is only explained by general economic growth and the underutilization of the human factor and management capacities. As pointed out by the author, the new technological revolution (biochemistry, genetics, information) is still less linked to size than the old ones.

We must remember that the recent evolution shows that farmers have a coherent economic behaviour. Neoclassical theory correctly explains that, still today, the growth of land use per worker remains the safer way to increase incomes.

Original proposals that Professor Harvey could develop

Two ideas really interest me which I would like to ask him to develop further.

First, to reduce surplus production, he suggests that actions on capital investment and the labour force are much more efficient than ones on land use. He shows that over the last ten years the release of labour and capital from agriculture has been very important (-18 per cent for both). In a period when money costs more and is not so readily available, and where there are more and more farmers with financial difficulties, the proposal seems to be seductive. But the Professor does not give us the solution to the problem. Must capital and labour be taxed? If so, how? Identically for all the regions? Must the market be

free? And then this evolution will naturally arrive? Professor Harvey does not take any set position. We easily imagine that he is reluctant in the face of some restrictive political decisions about the labour force and capital, but in the short term, competition from other economic activities is not enough to substantially remove from agriculture labour and capital and thus to reduce production. So there is an obligation to take authoritarian decisions to limit their utilization and reduce production. The idea is seductive, it will be convincing when concrete means have been proposed.

Second, regarding the subject of land, Professor Harvey has a good knowledge of the question. It is certain that farmers will continue to increase their land area to increase their incomes. It is also certain that extra agricultural demand for land is not very high. Land will only leave agriculture, does he say, if its return falls to zero, or if it can earn more in other uses? But this extra-agricultural demand is weak and very location specific. He shows that the determinants of agricultural structure almost certainly include the particular characteristics of the farmers and their families. Furthermore, he thinks that a divorce between ownership of land and use of land is increasing and is good for agriculture. What information allows him to say this? How can the separation between property rights and industry rights be encouraged? In France for example farmers' syndicates do not want to increase land rents to make rentable land investment. They are also against the recurrence of the social power of the owner of land (Coulomb and Delome, 1987).

Differences and diversities: an assessment

David Harvey presents the results of a survey showing the strong positive image of agriculture in social opinion. He has some doubts about his survey, so can we agree with his comment, 'the political will to completely "deregulate agriculture" is an academic economist's pipedream, regardless of the intellectual and theoretical rigour of the view'. I believe that there is an evolution in the social feeling about agriculture and farmers. On several occasions, Professor Harvey mentions the diversity of agriculture, but, in my view, he does not express it with enough strength and he does not go far enough.

Differentiation between the different countries: A recent study by INRA shows the great diversity of EEC production costs. The gaps between average production costs are very big for the most common products (for example, for wheat the ratio between extreme values is 1.9, or even for milk production, 1.7). It is true that the dispersion of the ratio calculated in parity of purchasing power (PPP) is less important (1.3), mainly because each member country has a tendency to specialize in production in which it has a comparative advantage.

The study also shows that the price of products received by farmers are strongly influenced by monetary distortion: with a European average of 100, the gap, calculated in ECU, goes from 85 (Ireland) to 106 (Italy) and 108 (RFA), whereas calculated in PPP, it goes from 84 (DK) and 87 (FR) to 126 (Greece) and 128 (Italy). The study reveals that the great diversity of income variation between countries is, of course, tied to costs and prices but also to a third factor, the size of farm. If the dimension is calculated by the volume of production per family worker it varies from 31 (Greece), 45 (Italy), 123 (FR), 229 (UK) to 300 (NL).

In respect of incomes (in PPP) it ranges from 63 (GR), 75 (G), 101 (FR), 154 (UK), 204 (BL), to 229 (NL).

This differentiation really appears to be linked to national policy. It is true that it is essential to know the national fiscal policies and institutional arrangements for the accumulation of wealth and the transfer of capital between people and sectors and the national laws and practices of inheritance if we are to foresee the future of EEC agriculture. There cannot be actual European policies if these differences are increased by national policies.

It is also and surely more important in connection with monetary policies. Are we all convinced today that Europe is not possible without common money and monetary policies? If so, what proposals can we make to help us to travel in the right direction? I would like to know Professor Harvey's views on this subject.

There is a certain naivety in believing that the unique Act and the great market of 1993 will resolve everything. What could be the solidarity between the old European nations?

Differentiation between farms and farmers in the same region: This differentiation is also a challenge but, we think, more positive and more easy to use. Correctly, Harvey shows that there is a growing dichotomy between the policy response to increasing pressure on the farming community and the farm level response which has, to date, received little attention.

I would like our scientific community to strongly insist on the need to increase knowledge in the microeconomic area. Various works show the great diversity of farms. Concepts exist – farming system, rural farm, family system, – and methods, too, to approach and understand this diversity (for example, the work of systems teams in France (INRA-SAD) and in the world). We must insist on the extraordinary capacity for innovation of farmers and their various responses to the crisis: increasing the land area, capital intensification, labour intensification, direct valuation of the farm products, part-time farming, rural pluriactivities (with off-farm activities in the same farm family). This diversity must be recognized, encouraged and sustained. We must be confident in the ability of farmers. In this connection we must take into account several levels of analysis: field level, system of culture, farm level, etc. We may take as an example Tirel (1988). This analysis points us back to policies. How can we assure the global funding of the farms (less capital per hectare does not mean less global capital for a larger farm)? Must there be introduced a status of rural enterprise? Must there be a local observation system for local agriculture? Should not economists be more involved in prevision work?

Professor Harvey could not speak at length on all the questions but he mentions the various points. I would like to raise a few general questions. In the financial situation of crisis, how can a declining political budget be shared? How can the limitation of products be shared with equity? Who must and who can remain as a farmer? How can the anarchy of world trade, that is transmitting more and more to internal markets be alleviated?

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