

A multicommodity EU policy framework incorporating public good criteria into the direct payment system in agriculture

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Abstract

For decades the CAP has been the major influence in shaping EU agriculture and food production. The economic and policy environment in the EU is now very different from that which prevailed in the earlier decades. The future economic, social and geographic diversity of the EU will be further increased by enlargement. Agricultural policies and the related operational frameworks will inevitably change to accommodate this added diversity and the changing societal and consumer values. This paper evaluates how the current shape of EU agriculture has been influenced by the reforms to date. It also attempts to focus on where EU farming may be, or wish to go, over the next decade. The evaluation is restricted to the beef sector as it has been to the forefront in the policy reforms of the last decade and because the adjustments were inevitably complex due to the scale of the oversupply problems, the biological and market intricacies involved. This evaluation concluded that the current EU beef policy is severely constrained with poor targeting of the income supports, high production costs, based on an administratively complex and expensive control system without any clear benefit to either society or taxpayer for a rather large expenditure. In the past, agricultural policy in the EU was primarily driven by the need for a secure food supply and with the objective of sustaining the economic and social needs of farmers. But, in the well fed and affluent EU society of the 21st century, agricultural policy will be mainly driven by the economic and social goals which are rapidly changing. This society places a declining value on extra units of food production, but an increasing value on any public goods consumed in the production process. As a consequence, the mix of agricultural production and public goods that this society is prepared to support financially is changing rapidly. The level and components of farm incomes in the EU in the 21st century will reflect these changes. Farm revenue will likely consist of a mix of payments for conventional agricultural products and public goods. The public good payments will be conditional on the level and type of inputs used, farming practices, types of products produced and a societal vision of the role of farming. This will affect production costs, scale of operation and the future configuration of agriculture and rural society. To meet this evolving situation the paper also develops and outlines a multi-commodity framework by which the EU could reorient its direct payment (DP) system to incorporate a range of public good values to the mutual benefit of consumers, taxpayers and farmers.

Keywords: CAP reform, direct payments for public goods, animal welfare, environment, food safety, production methods, extensive production, economic, social and geographic diversity, future role of farming, an administrative framework.

Introduction

The original CAP used the principle of high commodity prices to support farm incomes and increase food supply. This resulted in the intensification of EU agriculture which eventually led to severe structural surpluses for most commodities and this precipitated severe international trade difficulties for the EU. A major CAP reform was introduced for cereals and beef under the MacSharry agreement in 1992. Under the recent Agenda 2000 agreement the reform was further deepened for beef and cereals and tentatively extended to include milk, but at this stage additional reform seems inevitable. As a consequence of these reforms, the annual value of EU commodity based direct payments (DPs) to farmers has rapidly increased from a low base to almost €30 billion. An increase in expenditure of this order of magnitude will ultimately change the way farmers undertake their activities. But the transparency of the expenditure is bound to raise questions about its future function and value to society. Adjusting to the reformed CAP structures of the last decade has provided a major challenge for farmers, input suppliers and output processors. For beef, the adjustment process was seriously compounded by the continuing fallout from the BSE crises of 1996 and 2000. The eventual consequences of BSE for farming in the EU are only now beginning to emerge. It is the authors' contention that this will eventually lead to a redefinition of acceptable food production practices and the role of farming in the EU.

Growing the farm business

Farmers, like all members of society, continuously strive to increase their income. For a solution to their income problem, farmers in the past generally focused exclusively on their farming activities. This was normally based on a combination of personal choice and circumstances both on-farm and in the wider economy. The solutions usually consisted of some mix of:

- a switch to farm enterprises with higher margins per hectare
- increasing the intensity of all enterprises
- enlarging the farm size either through land rental or purchase.

The options for changing the farm enterprise mix are now severely constrained by developments in the CAP such as:

- milk quotas
- the "eligible land" requirements for cereals
- the DP premia entitlements for cattle and sheep, and
- the ever tightening compliance criteria for DPs.

The possibilities for increasing and intensifying production are rapidly disappearing due to:

- declining product prices, both institutional and market
- increasing production costs
- increasing reliance on DPs with related compliance criteria, especially the stocking density requirements
- the financial attractiveness of other direct payments and agri-environmental measures despite somewhat restrictive compliance standards.

Renting or purchasing land to increase the scale of operation offers possibilities for increasing incomes by reducing unit costs. Even this option appears to be shrinking as farmers collectively respond to the CAP policy changes, especially the stocking density criteria for extensification (Dunne *et al* 2000 and 2001). As farm incomes continue to decline relative to non-farm incomes, farmers progressively shift to part-time farming. This restricts land mobility and further constrains the capacity for full-time farmers wishing to scale-up their farming activities.

For all these reasons, getting access to land is becoming more problematic. Consequently, land values and rental charges continue to increase even though product prices are declining. Under the reformed CAP, the main drivers here are:

- the increasing value of the DPs
- the stocking rate requirements for livestock direct payments, especially extensification,
- the shift to modulation targets by either land area, animal numbers or total value for DPs and for agri-environmental payments,
- the increasing availability of finance generated from both farm and non farm incomes, and
- low interest rates.

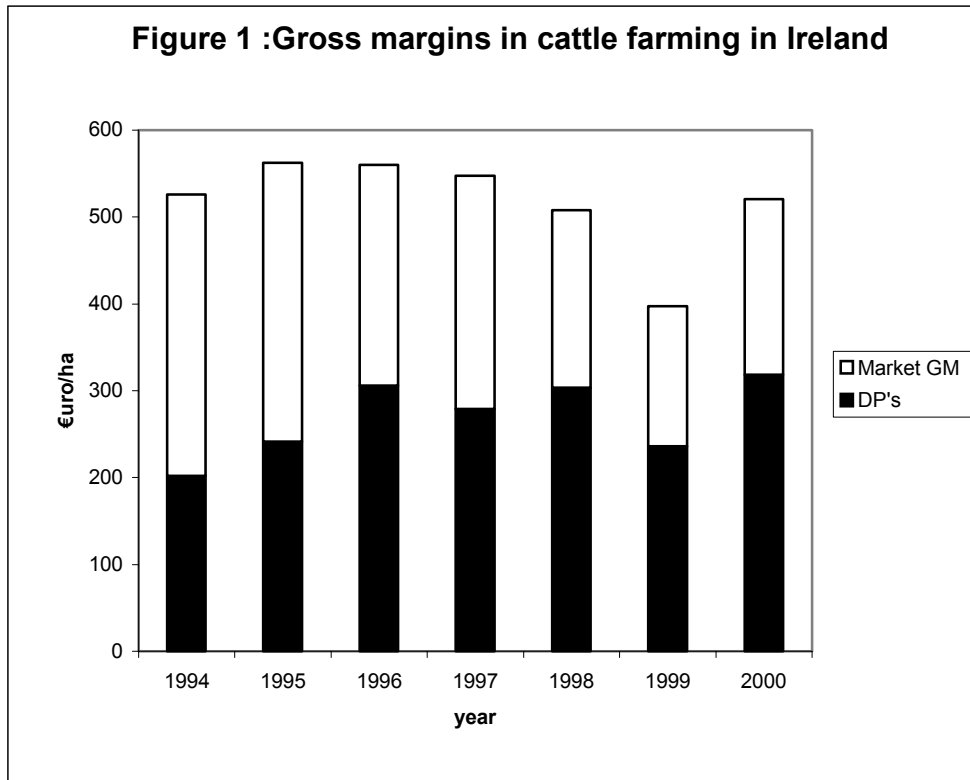
Policy Switch to Direct Payments

In 1992, major adjustments were made to the EU system of supporting the cereals and beef markets and the incomes of the farmers producing these commodities. Support prices were reduced by 30 percent to enable beef to better compete with other meats and to facilitate exports of cereals and meats to third countries. To compensate for the planned lower product prices for cereals and beef, farmers received direct payments (DPs) or “cheques in the post” to maintain their incomes. Cattle farmers, due to the inherent complexities of the cattle enterprise, have the greatest difficulties in adjusting their farming methods to accommodate the new income support system. The outcome in terms of margins and income and the consequences for cattle supply and degree of finish are documented elsewhere (see Dunne *et al* 1999). Somewhat, less severe adjustment problems and consequences also arise for cereals and with further reform for milk probable in the future this sector will be similarly affected.

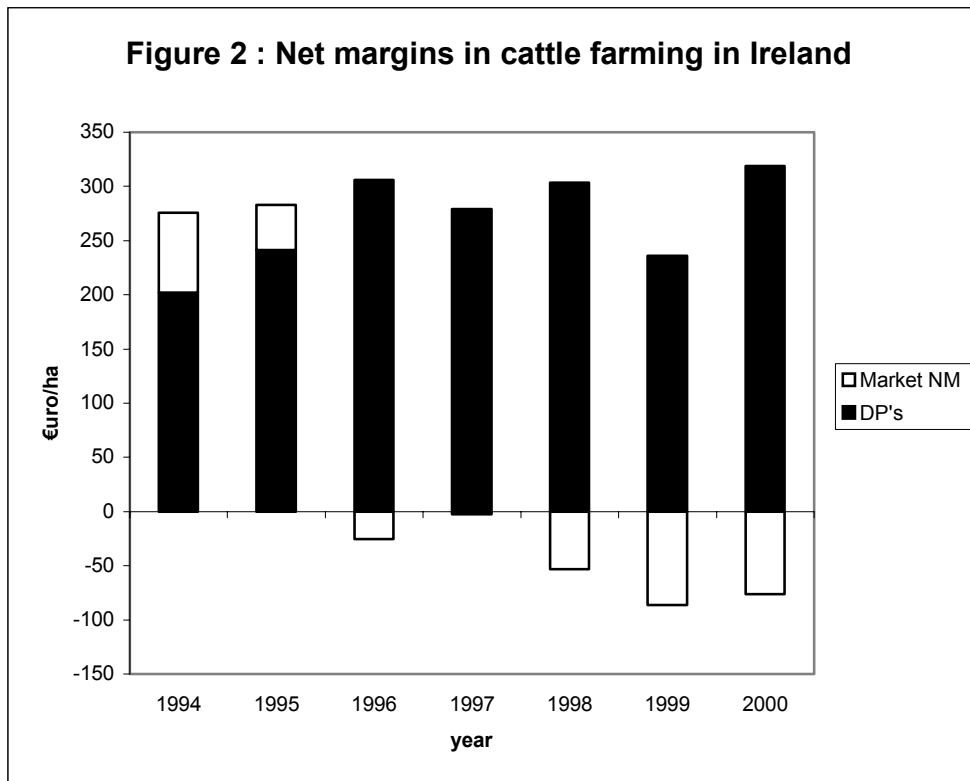
The resulting Benefits and Cost

The following is a brief review of the main benefits and costs associated with the existing DP system as it operates for cattle farming in Ireland. For cattle farmers these payments were and are based on the possession of certain types of animals which have to be “farmed” within specified stocking density limits. The Agenda 2000 agreement is largely an extension of the reforms made in 1992. It is generally accepted that cattle farmers’ incomes in Ireland have benefited greatly from the CAP reform in 1992 and from the recent Agenda 2000 agreement. Why, then, is there so much disillusionment about the future?

The fundamental issue is that cattle production *per se* has become uneconomic and is increasingly being wedged in a cost-price squeeze. As shown in Figure 1, the gross margin from the entire “Irish cattle enterprise” was largely maintained until 1998 but the composition of that margin was becoming increasingly dependent on direct payments (DPs). The market based gross margin (MBGM), which is the value of the carcass less the direct costs, decreased rapidly after 1995 once the price of beef declined. By the end of the decade, the MBGM was small and still declining. The slight recovery in 2000 was due to a recovery in cattle prices from the low level that prevailed in 1999. The deteriorating situation becomes even more acute when the market based net margin (MBNM), which is the value of the carcass less the total cost of production, is examined (Figure 2). The (MBNM) was declining but still positive until 1996 when it became negative. It became increasingly negative in 1998 and 1999 with a small recovery in 2000 due to the increase in cattle prices. But it will resume its negative trend as the Agenda 2000 agreement is phased in and the value of the DPs increase and beef prices decline.



Source:Teagasc National Farm Survey



Source:Teagasc National Farm Survey

The data for Figures 1 and 2 were derived from the Teagasc, National Farm Survey and they clearly show that Irish cattle effectively “die in debt” and collectively Irish cattle farmers have been “paying to get the cheque in the post” since 1996. For the individual cattle farmer, production costs have been increasing due to the additive impact of:

- the quota restrictions on the supply of calves which results in high calf prices the benefit of which accrues mainly to dairy farmers, and
- the ever increasing land base needed to achieve the stocking density limits required to collect the direct payments which have in effect become the only income
- the ever increasing land base needed to collect the higher value extensification premium.

The overall system provides very limited scope for the individual farmer to manage costs to reflect the final market value of the beef carcass. There is considerable evidence to support the view that much of the value of the direct payments is being dissipated to the suppliers of land, calves and young animals (Dunne *et al* 1999). This keeps the price of these young animals artificially high and the same applies to land rental charges. The end result is that there is no market return from producing the beef animal itself.

Farmers have less and less control of the margins they can obtain from their animals. The overall revenue in the sector is fixed and a declining portion of it is derived from the market as the value of the carcass declines. Because of the declining importance of the market-based margin, beef producers are becoming progressively isolated from the consumer. But costs are increasing and these increases are mainly driven by the compliance criteria for the direct payments, more expensive calves, and land. Consequently, incomes cannot increase unless the numbers of cattle farmers decline.

But cattle farmers, because of their circumstances, were largely ineligible for the Farm Retirement Scheme. This is still the situation despite some recent modifications to the criteria for the Farm Retirement Scheme. The end result is the farmer has to stay in beef production although there is no profit in cattle production *per se*. **But the farmer needs the cattle to get access to the direct payments which are in fact the income.**

A similar economic situation exists for most cereal farmers in Ireland who wish to scale-up their activities (Dunne and O’Connell 1994). The margin is in the direct payment but access to extra “eligible land” is required to draw down more direct payments.

The major weakness in the existing DP system for cattle farmers is in relation to the inequitable distribution of the payments themselves and the leakage of much of their value into input costs. The main effects are:

- the poor targeting of the payments themselves
- administrative complexities, direct and indirect costs, of the payment system itself
- the knock-on effects of the payment system in relation to:
 - beef production costs and
 - the lack of reward for good animal husbandry practices and for producing quality beef
- the lack of any clear benefit to either society and/or the taxpayer from this rather large expenditure.

With the growing importance of extensification, the Agenda 2000 agreement further increases both the complexity and degree of administrative intrusion into all land using enterprises in Ireland, (Dunne *et al* 2001). Under Agenda 2000, all animals, including dairy cows and sheep, must now enter the equation and the definitional complexities for the animals and the land area has further increased. The substantial revenue derived from the direct payments, and probably all of the income for cattle and cereal farmers, now hinge on very detailed administrative calculations for individual animals and hectares. Cattle farming is increasingly entering an administrative straightjacket with high costs at both farm level and nationally. Because cattle farming is so pervasive in Ireland this inevitably affects most farmers and other farm enterprises where they must coexist. Before advancing an alternative DP system for the future it is prudent to review the likely context in which they must function.

The Drivers of Change

Over the next decade, but particularly over the next few years, there will be continued pressure on the EU through the World Trade Organisation (WTO) for freer trade in agricultural products. While it is unlikely that all EU farm product prices will be reduced to world levels, except for cereals, the move in this direction will continue. The EU move to lower product prices will likely be accompanied by further increases in direct payments (DPs). Under the present WTO agreement, other trading countries accepted that there is an element of supply control attached to the DP system in the EU. But with the value of the DPs increasing, this acceptance may not be sufficient justification for their continued existence in the next WTO agreement. It is, therefore, likely that the EU will have to develop a new role for the DPs if they are to survive the next round of WTO negotiations due for completion about 2003. With the progressive shift of the EU farm income support system from product prices towards DPs, the financial burden also switches from consumers to taxpayers. But a ceiling already exists on the overall size of the EU farm budget and this could become a constraint in the future as the shift to the more budget demanding DPs continues. The budgetary situation is further compounded by the impact of EU plans for enlargement to include a number of countries from Central and Eastern Europe. The original EU plan was that it would not be necessary to extend the DP system to the new countries since they did not have farm product price reductions and, therefore, would not require the DPs as compensation. However, this EU stance appears to have weakened as the negotiations have progressed.

Expanding the farm budget to accommodate the extra DPs could become progressively more difficult to justify in the future unless the purpose of the DPs change. As the product price reductions becomes more distant in time, the idea of paying the DPs as compensation for this adjustment becomes less sustainable. Probably in anticipation of these internal and external pressures, the EU has already begun to redefine the role of agriculture in the Union.

An EU vision for agriculture

The Agenda 2000 proposals outlined a number of non-price issues in relation to the competitiveness, multi-functional nature of EU agriculture and the CAP generally. The most important issues affecting the future CAP objectives could be summarised as follows:

- food safety and product quality which consumers often link to specific production methods or geographic regions
- animal welfare considerations
- environmental friendliness of production methods
- integration of environmental goals into the CAP

- further developing the role of farmers in the management of natural resources and landscape conservation
- preservation of sustainable farming and social cohesion
- maintaining a fair standard of living for the agricultural community and stability of farm incomes
- the creation of complementary or alternative income and employment opportunities in rural areas for farmers and their families.

In policy formation in a modern economy there are many other aspects to the role of agriculture and related trade implications to be considered. A more complete description and discussion of the multifunctional role of farming, the EU model of agriculture and its significance in rural development can be obtained in other reports, (Cahill, Blandford, Harvey, Latacz-Lohmann and Hodge, Laurila, Mahe, OECD, Tarditi, Thomson).

The focus in this paper is not on the relative importance of these individual issues but rather on developing an operational framework by which they could be incorporated into EU policy formation. While most of these multi-functional aspects of the CAP were not explicitly incorporated in the final Agenda 2000 agreement, these issues will likely shape the role of EU farming in the future. Already under Agenda 2000, the existing less-favoured area (LFA) or “headage” payments have been decoupled from animals and linked to land management to prevent environmental degradation. But they are also linked to its continued use for agricultural production *albeit* at a very low level. In Finland, as in Ireland and many other regions of the EU, these LFA allowances are central in maintaining viable rural communities in sparsely populated regions of the EU, (Laurila).

Many of the operational schemes under the Agenda 2000 agreement, have already included some of the above issues either directly, like the environmental compliance criteria for the general DPs, or indirectly through the requirement of “cross-compliance”. Member states are also allowed to develop national schemes based on the principle of “modulation”. Within certain limits, this mechanism can be used to scale payments according to the labour force or the prosperity of the farmer and refocus the payments saved towards more suitable or equitable objectives. In the future the DPs could be made conditional on a range of compliance criteria for the entire farm and these would most likely include minimum and maximum stocking density limits. Other compliance criteria could incorporate public good and consumer values in relation to food safety, landscape, environment, animal welfare, production technology and possibly even a “homestead” maintenance requirement. Such changes would incorporate a number of “Public Goods” into farming methods and these are product attributes of growing value as affluence increases. These public good values are becoming a “marketable entity” in an increasingly affluent society like the EU and in sophisticated markets around the globe.

Farmers’ response

The new EU vision of the multifunctional aspects of the CAP raises very fundamental issues in relation to the nature and purpose of farming in the EU of the future, and the methods that might be used to deliver this. In the early decades of the EU, the high product prices encouraged scientific advances and the application of new technology to intensify animal production. In this situation, the individual farmer then tries to incorporate technological advances and the direct economic incentive is to accommodate only those costs that are directly related to the profitability and long term sustainability of production systems and the need to comply with regulatory standards. For the farmer, all other costs are external and these external costs or “public costs” tend to be ignored in the standard analyses of economic and technical efficiency in agricultural production. If, in the future, many of these public costs are to be

included in the production systems, as outlined in the EU vision for the CAP, then farmers will quickly adjust their farming methods in response to any extra revenue they may receive or penalties they may incur. Before outlining a possible reward system, the following sections discuss the nature of these public costs, the market for public goods and the methods available to value and regulate them.

Public Goods: the costs and benefits

The traditional “productionist” view of farming involves the optimum use combination or consumption of natural resources to supply food and fibre for consumers at the lowest cost and the process is largely regulated through the medium of product price. However, this perception of farming only takes into account private costs to the farmer and the private gains or value that the consumer of the food ultimately derived from the natural resources used to produce that food. The unrelenting drive in livestock farming, to improve technical and economic efficiency has a number of indirect costs. There are increased pressures on the biology of the animals themselves, the plants used to feed them and the overall biological diversity of the region where the production occurs. Also, the exploitation of economies of scale has both direct and indirect impacts on the environmental landscape, nutrient balances and water quality of the region and these have consequential impacts for the rural population and society in general who also consume these public goods to varying degrees. Ethical issues also arise about the inputs and production techniques used in farming and their possible effects on product safety, animal welfare and the environment. Included here are items such as recycled animal products, feed additives, hormones, growth promoters and housing conditions. The negative impacts on the environment, animal welfare, food safety and even ethical issues, individually and collectively, are normally referred to as “public costs” since they do not directly affect the farmer. But these costs accrue to society as a whole and arise from the deterioration or even loss of the “public value” placed on these goods by society as a whole. However, the new EU vision of the multifunctional aspects of the CAP is an attempt to include these public good values as part of the costs of agricultural production in the EU of the future.

The market for Public Goods

The inherent nature of public goods is that they are very diffuse and difficult to quantify in terms of costs and benefits and hence are difficult to control and regulate. Their value depends on the economic, social and cultural conditions that prevail and consequently varies greatly with the circumstances of the individual and region. Over the years, various societies have tended to define acceptable standards and practices within a regulatory framework. The framework is usually defined in technical terms with advice from a combination of animal, food, public health and environmental scientists. The standards are usually derived from experiments which measure directly and indirectly the biological response of animals and plants to varying degrees of stress or the probability of loss of performance or even death of the animal itself or the consumer of the food product. Normally they are focused on the human as either the consumer or producer but seldom on the welfare of the animal or the environment *per se*. The regulation can vary from outright prohibition to establishing minimum acceptable standards for a range of inputs and management practices. There is extensive and increasing legislation that either prohibits or defines the conditions for use of inputs like land, feeds, feed additives and hormones. A similar situation exists for management practices such as nutrient balances, stocking densities, housing and transport conditions, methods of castration and slaughter.

Probably responding to a growing awareness of public goods and the need to preserve and even market them, the economic literature contains an increasing number of studies which have attempted to measure public preferences in relation to environmental amenities, animal welfare and food safety (Kline and Wichelns, Bennett and Larson, McInerney, Henson). The studies attempt to use “willingness to pay” concept as a measure of the value the individual consumer places on the preservation or incremental improvement of a specific public good. The methods used are revealed and expressed preference. Revealed preference attempts to derive a value for non-market goods based upon actual choices between alternative market goods containing different levels of the desired public good attribute. The expressed preference method, usually contingent valuation, questions individuals directly about the value they place on non-market goods. The findings from these studies indicate that there is a great diversity in the “willingness to pay” for non-market goods. At this stage, the research methods need further development before they could form the basis of the valuation of public goods especially where there are a number of public good issues involved like in the EU vision for agriculture outlined earlier. Economic instruments can also be used by the regulatory authorities to alter the balance between public costs and benefits. Taxes or subsidies on either inputs and outputs could significantly affect the optimum level of intensity of crop and animal production and therefore affect the balance between the private and public costs and benefits. Institutional subsidisation of both inputs and outputs is quite common for livestock production in many countries. But public good considerations generally receive low priority as the aim is usually some mix of protecting farm incomes, increasing food security or encouraging exports. The EU, at the beginning of the 21st century, is in a unique position in that it has an already identified pool of financial resources, in the DPs, that could be reoriented to reward farmers for the provision of public goods.

The Changing mix of Private benefits and Public costs

As affluence increases, society becomes more aware of the external costs involved but it can also afford to place a higher value on public goods like animal welfare, environmental and ethical issues. This intensifies the potential conflict between the degradation of such public goods that are of increasing value and the scientific objective of increasing efficiency and productivity in farming and the lowering of unit costs. As food surpluses in the EU began to accumulate this potential conflict became a reality and, in conjunction with international trade difficulties and escalating budgetary costs, it was responsible for a significant shift in EU policy in 1992. The cost-benefit mix had finally progressed to the stage where it was probable that the sum of the private and public costs was greater than the sum of the private and public gains. It is noteworthy that this occurred in an affluent region of the world where both the human and the animal population densities are relatively high.

The shift to more extensive production

The reform of the CAP in 1992 was confined to beef and cereals, but under Agenda 2000 it was extended to milk and further deepened for beef and cereals. There has been a progressive EU policy shift towards using lower product price support and new and larger direct payments (DPs) as more appropriate methods to improve the market balance, maintain farm incomes and arrest the decline of rural populations and the degradation of the natural environment. The agri-environmental policy changes under the “additional Measures” of the 1992 reform contained a number of public good improvements. For beef cattle as already noted, the actual payments themselves are linked to the possession of certain types of animals which must be farmed within broad stocking density limits but there are even higher payments for more extensive

production. A number of public good benefits exist in this policy shift. The lower product price itself reduces the private gains on the marginal unit of production and unless costs can be reduced the optimum level of intensity will decline. The value of the DP is largely independent of the animal productivity and is supposedly set at a level to compensate for the average loss in income. Also, the enhanced DP where production is extensive further rewards both private and public gain from the reduced intensity. Overall, the DPs are unlikely to fully compensate the very intensive producers who have the greatest impact on the degradation of the value of public goods. When the price and the DP effects are combined there is likely to be an overall gain in the public cost-benefit balance but the extent of this is difficult to quantify.

DPs for public goods

A more direct link between DPs and public goods was proposed by Dunne in 1996. This proposal suggested the switching of a significant proportion of farm income support from product prices to DPs would provide an ideal opportunity to influence private behaviour to voluntarily incorporate the external cost of public goods into production technology. Under this proposal, the societal value of the DPs could be enhanced if the payments were made conditional on the supply of the public goods by using cross-compliance criteria. This would have the added advantages of increasing:

- the economic justification for DPs themselves
- the acceptability of the DPs to EU taxpayers
- the justification of the DPs under WTO rules.

Dunne in 1996 also suggested that de-coupling the DPs from eligible animals and land would have a number of added benefits. The production costs for cattle farmers could then be reduced to reflect the declining value of the carcass, cattle numbers could reflect market balance for beef independent of their ability to collect DPs and DPs themselves could be used to provide a more targeted method of income support. A more generalised form of this proposal for all land using farming activities was presented by Dunne and O'Connell in 1998 and is reproduced in Table 1. The integrated proposal for all commodities, outlined schematically in Table 1, involves full de-coupling of the DPs from eligible animals and partial de-coupling from the land. The proposal recognises the diversity of production conditions within the EU by providing for both common EU and optional National compliance criteria.

For each commodity, this proposal envisaged three tiers of strategic decisions in relation to the overall income support system. These are:

- the price to direct payment ratio at the EU/WTO interface
- the DP allocation mechanism between member states within the EU
- the distribution criteria between farmers within the member states.

In devising this proposal it was assumed that the EU would have to further reduce border protection and its internal support prices for the next WTO trade round. The value of the DPs could then be increased to compensate for the price reduction. This pool of DP revenue could be distributed among member states on the Utilisable Agricultural Area (UAA) devoted to the individual crop and livestock enterprises. The size of the DP per hectare for each individual commodity or enterprise would depend on the mix of price support and DPs which the EU considered desirable to support farm incomes. An additional payment, like an extensification

TABLE 1: An Integrated Consumer Oriented Direct Payment System for Crop and Livestock Producers

WTO/EU		EU Decisions					National Decisions on Commodity Envelope distribution	
Commodity	World Market Price	EU Support Price	COFLEAP ¹ Per ha	UAA ha	Extensification ²	National Envelope (UAA times COFLEAP)	Payment per Farmer ³ (x %)	payment per hectare ⁴ (100-x)
Woodland								
Trees & shrubs								
Crops								
Sheep								
Milk								
Beef cows								
Beef cattle								
¹ COFLEAP Consumer Oriented Food Landscape Environment Assurance Premium ² Extensification paid as “top up” where applicable		¹ COFLEAP Common EU Compliance Criteria for the <u>entire farm</u>: <ul style="list-style-type: none"> • Landscape & homestead management • Nutrient (organic & inorganic) balances • Input protocols (hormones, feeds etc) • Minimum & maximum stocking densities, using all and not just eligible animals • Production practices • Product traceability • Food safety 					National (additional) Compliance Criteria to: <ul style="list-style-type: none"> • Address local weaknesses • Exploit local strengths • Provide the basis of a competitive marketing strategy via product differentiation ³ Per Farmer compensation for the extra overhead costs due to the compliance criteria and for social cohesion. Could be “capped” for farms producing multiple outputs. ⁴ Per hectare compensation for the extra variable costs of the compliance criteria and could be modulated.	

Source: Dunne and O’Connell 1998

premium, could be used to encourage even more extensive production methods and to assist the poorer and more remote regions of the EU. The revenue accruing to each member state would be the product of the mix of land uses (UAA) and the rate per hectare payment (COFLEAP, see Table 1) for each commodity. These “national envelopes” could then be dispersed to reflect the diversity of the economic, social, and environmental conditions. Alternatively, the revenue distribution between member states could be based on the value of the existing DPs for the commodities that have already been reformed under MacSharry and Agenda 2000 agreements. The individual member state could simply distribute the “envelope” on a per hectare basis for each commodity like the “new disadvantaged areas” payment. It might be preferable and more equitable to use a mix of a payment per farmer/household and a reduced payment per hectare. This latter approach would reduce the capitalisation of DPs into assets and costs and would provide for a stronger public good and social dimension to meet local needs especially in the poorer regions of the Union. This mechanism would also be more compatible with the EU vision of agriculture and rural areas outlined earlier.

Public Good Criteria

The primary DP per hectare at the EU level would be made conditional on a range of compliance criteria for the operation of the entire farm. This would, as outlined in Table 1, incorporate public good and consumer values in relation to food, landscape, environment, animal welfare and production technology. The criteria would be common across the EU and thereby compatible with the single market requirements. In addition to the common EU compliance criteria, further specifications could be implemented by National governments to address local weakness, exploit strengths, encourage product differentiation and competitive marketing strategies but within an overall EU single market system. An appropriate title for the payment might be **Consumer Oriented , Food, Landscape, and Environment Assurance Premium (COFLEAP)**.

Post Agenda 2000

Under this new post Agenda 2000 system, the main operational control point for the DPs switches from the individual animal or crop to the “entire farm”. This would introduce a whole new dynamic into the entire policy/farming interface. The implementation of the post Agenda 2000 system facilitates:

- better targeting of the DPs towards economic and social goals. This could be achieved by varying the mix of the value of the area and farmer/household payments used to distribute the DP. Table 2 summarises the likely impact of the mix selected on future farm structure and profile of rural areas
- a reduction, by possibly five fold, in the number of administrative control nodes due to the shift of emphases from the details of the individual animals to the farm as an “operational unit”
- a reduction in the “paperwork” for both farmers and the controlling agency. In the post Agenda 2000 system, animals can be traced but without the need for an immediate day to day log of their exact location and premium status.
- a reduction in the number of inspections required to achieve the desired level of compliance. The inspections will relate to the entire farm and it’s operational characteristics rather than chasing individual animals.

- a reduction in the compliance costs for both the farmer and the controlling agency by reducing the day to day management needs for cross checking animals ages, sex, premium status and retention periods. Individual farm inspections may be more complex and take longer but there will be much fewer inspections required.
- farming practices to respond to the fundamental economics of the product being produced. The level of inputs used will better reflect the value of the product sales.
- the volume and type of products produced can now respond to the consumers valuation of these products.

Under the post Agenda 2000 system, the market based margin of sales value less direct costs will determine the animal numbers, type, carcass weights, slaughter dates, stocking densities and the mix of internal and external feed used. This contrasts sharply with the existing system where the overall gross margin, including the value of the DPs and the related stocking density requirements, largely dictate the mix of internal and purchased feeds used and the degree of finish of the animal produced.

Table 2: The impact of the structure of the DP mix on farming and rural areas

A straight area payment would:	A payment with a high farmer/household component would:
<ul style="list-style-type: none"> • favour the larger farmers • encourage restructuring of holdings • facilitate the exploitation of economies of scale • reduce the unit costs of production • be quickly capitalised into land values • encourage out-migration of people 	<ul style="list-style-type: none"> • favour smaller farms • transfer almost directly into a farmer and/or household income • reduce the mobility of land use and ownership • increase the likelihood of part-time farming • increase the incentive to engage in farm enterprises and production practices that are compatible with part-time farming

Under the post Agenda 2000 system, it is difficult to predict the actual scale of the decline in animal numbers, prices and the knock-on effects on the farm enterprise mix. But the expenditure on concentrates and fertilisers will decrease to reflect the decline in animal and crop prices, animal numbers and the changes in the farm enterprise mix. Preliminary estimates for Ireland would suggest that compared to 1999, the expenditure reductions on purchased feeds and fertilisers could be of the order of €190 and €65 million respectively. This would be the equivalent of about one million tonnes of concentrates and about 300,000 tonnes of fertilisers.

Summary

In the past, agricultural policy in the EU was primarily driven by the need for a secure food supply and the objective of sustaining the economic and social requirements of farmers. In the well fed and affluent EU society of the 21st century, agricultural policy will be mainly driven by the economic and social goals of this new society. In this society the value placed on an extra unit of food production is declining and the value of any public goods consumed in food production is increasing. As a consequence, the mix of agricultural production and public goods that this society is prepared to support financially is changing rapidly. The level and components of farm incomes in Ireland and the EU in the 21st century will then reflect these

changes. Farm revenue will consist of a mix of payments for conventional agricultural commodities/products and public goods. The public good payments will be conditional on the level and type of inputs used, farming practices, types of products produced and a societal vision of the role of farming. This will affect production costs, scale of operation and the future configuration of agriculture and rural society.

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