

# CHANGING IRELAND

## Enterprise Substitution in Irish Agriculture: Sheep production in the 1980s

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Agriculture in the European Community in the 1980s has been beset by a number of problems which have resulted in significant changes at both the macro level in the operation of the Common Agricultural Policy and at the micro level in the choice of enterprises on individual farms. The difficulties extend from local to international geographical scales and include overproduction of farm products such as beef, milk, and cereals, diminishing competitiveness of European agricultural products on world markets, and increasing political pressure from within Europe to alter the proportion of the Community budget expended on agriculture. The response of the EC has been a set of measures which have imposed quantitative restrictions on output, greater price restraint, less open-ended and more selective intervention and the extension of co-responsibility levies. The impact of these changes in policy has probably been most severe in Ireland given the product mix in 1980 in which cattle, milk and cereals accounted for 76% and 62% of Gross Agricultural Output in the Republic and Northern Ireland respectively. It is against this background that one must consider the increase of 130% between 1980 and 1989 in the number of sheep in the island to a total of just over ten million. In fact, sheep production was the only enterprise to show any growth (Table 1).

The increasing significance of sheep production in both parts of Ireland is illustrated by a number of indicators, (Table 2). The doubling in sheep numbers up to 1988 was achieved by a combination of modest gains in the number of farms keeping sheep and considerable expansion in average flock size with the latter factor being more important in the Republic. Nonetheless, mean flock size remains approximately 30% less than in Northern Ireland with significant inter-regional differences ranging from an average in 1987 of 76 in the northwest to 175 in the southeast. The proportion of total livestock units (based on Attwood and Heavey coefficients, 1964) represented by sheep, increased to one-sixth in the Republic and almost one-quarter in Northern Ireland. Despite these significant increases in the volume of output, the

relatively low prices for sheepmeat have restricted the contribution of this sector to gross agricultural output to just under five and six per cent.

These changes have occurred as a result of the interaction of a number of factors. The initial stimulus to expansion came in December 1977 in the form of a bilateral agreement between the governments of the Republic of Ireland and France under which producers in the Republic were granted levy-free access to the French market for 100 tonnes of lamb per week. The securing of this market was extremely important in that it removed the uncertainty and low prices which producers had experienced in previous years when the French market was closed to imports for lengthy periods (21 weeks in 1976). The decline in the total flock which had commenced in 1974 continued until 1980, probably largely due to the higher returns which could be obtained from other enterprises in lowland areas. Farmers in Northern Ireland benefited indirectly from the new trade agreement by exporting live sheep to meat processors in the Republic who were unable to procure sufficient quantities of lamb to satisfy the lucrative French market.

The most important factor, however, in the expansion of sheep numbers was the setting up in 1980 of a common organisation of the market in sheepmeat for the European Community. The regulations establishing the new system provided for: the removal of barriers to trade in sheep and sheepmeat between Member States, the limitation of imports from countries outside the Community, and a premium to be paid to producers as compensation when the market prices fell below the Basic (Guaranteed) Price which is fixed annually. The response to the new market situation was particularly rapid in Northern Ireland where the total number of sheep increased by over 173,000 (16.3%) up to 1982 compared with an increase of 280,000 (8.8%) in the Republic.

A further factor contributing to the expansion was an improvement in the profitability of sheep relative to other enterprises. Of critical importance to this improvement was the role of the ewe premium introduced in 1980 and the system of Headage Payments which were made available under the Disadvantaged Areas Scheme in 1975 (Gillmor, 1977). It has been estimated that in 1980 sheep headage subsidies accounted for 30% of the gross

Table 1: Change in Agricultural Production 1980–1988

	Republic of Ireland		Northern Ireland	
	1980	1988	1980	1988
Total Cattle (000s)	6908.9	6604.1	1507.4	1439.2
Sheep (000s)	3291.5	6656.3	1060.6	2073.1
Pigs (000s)	1030.5	979.0	691.4	619.1
Poultry (000s)	9903.3	8940.9	11389.0	10331.1
Horses/Ponies (000s)	68.5	53.1	68.0	n.a.
Tillage area (ha)	553.9	437.1	80.4	67.9

Sources: Central Statistics Office, Dublin; Department of Agriculture Northern Ireland, Economics and Statistics Division, Belfast.

margin per ewe but by 1986 the headage payment plus ewe premium amounted to 80% of the average gross margin from Scottish Blackface flocks, (Fingleton, 1987). In 1987 direct subsidies for sheep production were equivalent to about two-thirds of the total value of output from sheep and lambs so that the gross margin per hectare from mid-season lamb production is significantly greater than the margins from cattle systems and all tillage crops apart from winter wheat and sugar beet. As a result of price restraint measures and levies the total area of tilled land in 1988 was almost 130,000 hectares less than in 1980.

The final major influence on expansion was the introduction of the milk quota system throughout the EC in 1984 in order to adjust the imbalance between supply and demand of milk products and at the same time to protect the income of milk producers. Consequently, the total number of dairy cows and heifers in-calf declined by 183,000 over the next four years and the number of other cattle was reduced by 84,000. In Northern Ireland there was a decline of over 67,000 in the total number of cattle. The combined effects of these trends was an opportunity for a considerable amount of enterprise substitution on individual farms. The hypothesis that the expansion of the sheep flock resulted from substitution rather than intensification is supported by the fact that the density of livestock units per 1000 hectares of land related to livestock has increased only marginally (by less than 2% in the Republic and about 6% in Northern Ireland) since 1980.

The geographical patterns of change in this enterprise are illustrated on Figure 1. For the Republic the principal data sources are the 1980 agricultural census enumeration and the annual surveys conducted by the Central Statistics Office which cover approximately 25 per cent of the area of the State. The results from these surveys are published for five regions. In addition some estimates at county level are available from the 1987 Farm Structure Survey, also conducted by the C.S.O. on a sample of 19,000 holdings, (approximately 8.8% of the total). The estimate of the size of the total sheep flock from this survey was some eleven per cent (634,000) less than a revised estimate based on the annual 25 per cent sample survey which was published by the C.S.O. in December 1988. In order to estimate the distribution of the sheep flock by county for 1988 the regional estimates from the 1988 survey were disaggregated among the counties within each region according to the proportions identified in the 1987 Structure Survey. In other words, it was assumed that little change had occurred between 1987 and 1988 in the proportional distribution between counties in each region. While undoubtedly there is scope for some error in this procedure it may not be serious when relatively broad classes are used to cartographically represent the data. More accurate information at county level will not become available until after the next complete census enumeration in 1991. For Northern Ireland there are less severe problems since a complete farm census is taken on an annual basis by the Department of Agriculture.

Table 2: Significance of Sheep Production in Irish Agriculture

	Republic of Ireland			Northern Ireland		
	1980	1988	% change	1980	1988	% change
Total sheep (000s)	3291.5	6656.3	+102.2	1060.6	2073.1	+ 95.5
No. of farms with sheep	43.6	49.0	+ 12.4	8.4	10.6	+ 26.2
Mean flock size	76.0	136.0	+ 78.9	126.0	196.0	+ 55.6
Total livestock units percentage	8.7	16.5	+ 95.6	12.9	22.8	+ 76.7
Sheep Output (£M)	57.6	150.8	+161.8	20.1	47.2	+134.8
Gross Agricultural Output (per cent)	3.3	4.8	+ 45.5	3.7	5.9	+ 58.9

Sources: as for Table 1.

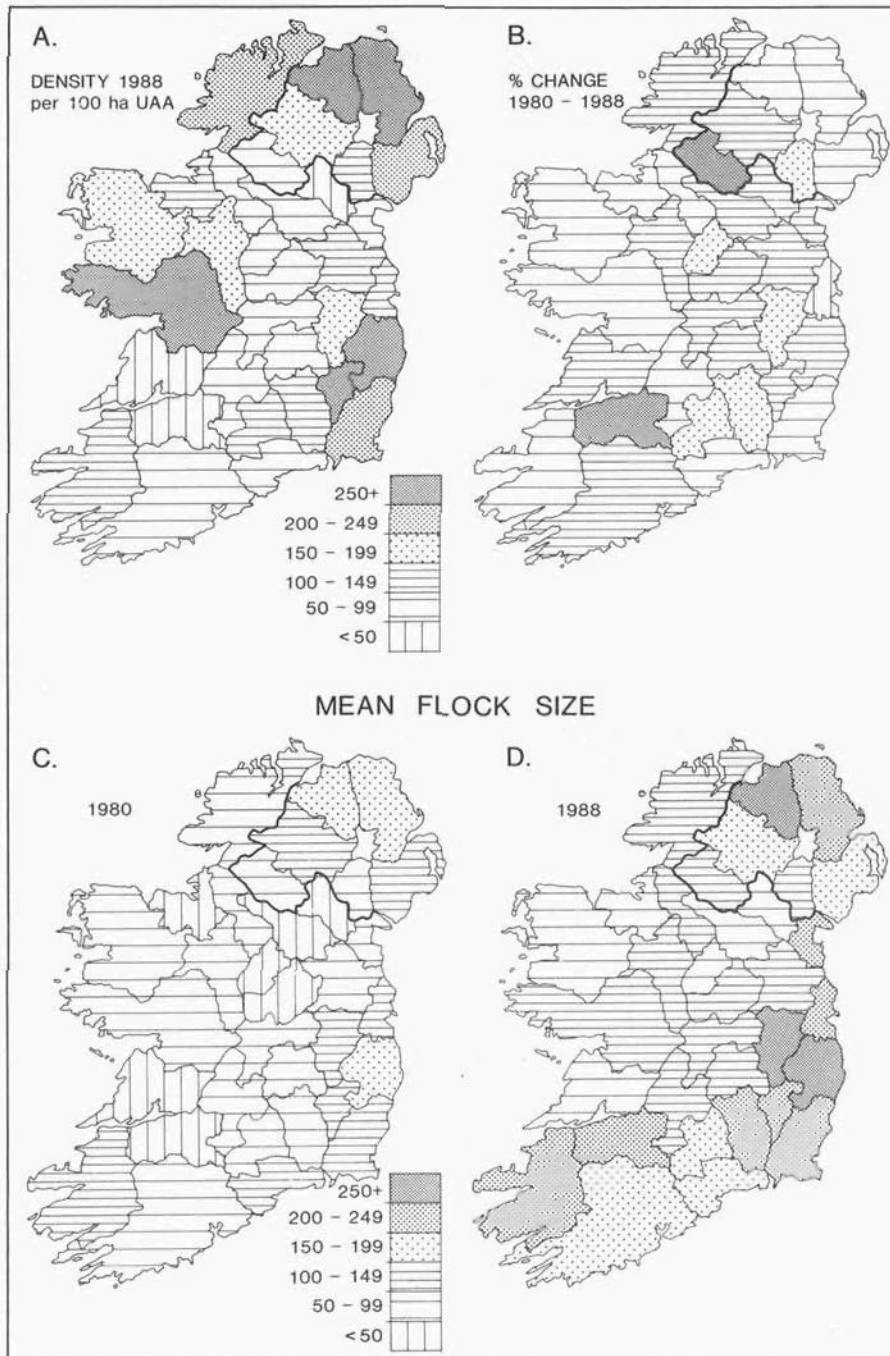


Figure 1: Sheep Production in the 1980s.

The density of sheep per 100 hectares utilised agricultural area (UAA) averaged 135 in the Republic and 204 in Northern Ireland. Densities in excess of 200 occur on the dry lowland areas of the south-east and east Galway and also on the extensive uplands in counties Wicklow, Antrim, Down, Derry and South-

west Donegal. Densities are low throughout most of the Midlands and on the wet soils of the north-west and mid-west, a pattern which was established in more detail for 1980 by Horner, Walsh and Williams (1984). The map of change since 1980 reflects the differential regional impacts of the factors which have influenced

the expansion of the total flock. Some of the smallest rates of increase occurred in the counties where upland rearing is dominant. The potential for expansion in these counties is limited as a result of continuous growth in these areas (in contrast to the remainder of the country) over the previous two decades, and also the limited scope for substitution of sheep for other enterprises which are restricted in their distribution by the physical environment. By contrast some of the largest increases were in counties where intensive dairying is the dominant enterprise. The very high percentage increases in Limerick and Fermanagh relative to other counties are probably largely due to the comparatively small numbers of sheep in these counties in 1980, (14,600 and 17,900 respectively). Their shares of the total flocks in the Republic and in Northern Ireland in 1988 were just under one per cent and a little over four per cent. The overall outcome of the differential rates of change among counties was a reversal of the trend towards increasing spatial concentration established over the previous two decades, (Gillmor, 1987). A similar pattern of expansion from core areas in Northern Ireland between 1974 and 1985 was noted by Edwards (1987). The distributions of mean flock size (Maps C and D) show that in 1980 the largest flocks were mainly in upland areas but that since then most of the enlargement has occurred among lowland flocks in parts of south Leinster and west Munster. In addition to the factors encouraging enterprise substitution in these areas, another important consideration leading to the enlargement of flock sizes is that the financial returns from lowland sheep production have fallen in real terms in contrast to the experience among upland producers.

The future prospects for Irish sheep production are inextricably linked with the evolution of the Community sheepmeat situation. There is still considerable scope for expansion of production given that the level of self-sufficiency in the EC is about 80 per cent. Major productivity gains can be made in Irish sheep production since the levels of performance

currently achieved on most farms are well below what is technically feasible (Nolan *et. al.*, 1977). However, the extent to which the potential might be realised will be strongly influenced by recent revisions to the operation of the Common Market for sheepmeat. While the mechanisms introduced in 1980 have ensured a more orderly organisation of the market there is an increasing level of concern over the costs of the system to the EC which by 1987 were more than three times the level in 1981. The main proposals from the 1987 review which were adopted by the Council of Ministers in July 1989 involve retention of the basic mechanisms of premium payments and voluntary restraint agreements with third country suppliers in order to restrict imports. However, in an effort to contain expenditure at current levels there will be measures to curb the level of premium payments and an imposition of a ceiling on the number of ewes eligible for payments. These measures could result in a significant loss of income for all sheep farmers and, more importantly, a loss of confidence so that the capital investments which are necessary for more intensive production may not be undertaken. Another area of concern must be the extent to which the Irish sheepmeat industry is dependent on the French market, which was the destination for 88 per cent of the total sheepmeat exports between 1978 and 1987. In the immediate future the weakening value of sterling could make sheepmeat from the United Kingdom more competitive in this market. Competition between the United Kingdom and Ireland for markets in other Member States is likely to become more acute in the years ahead since consumption in the United Kingdom has been falling over recent years while production is increasing. Allied to these developments is the likelihood of an increasing emphasis on quality which may leave upland producers at a disadvantage. The trends described indicate the extent to which institutional and international factors influence decision making by individual farmers whose ability to adapt to changing circumstances is highly variable from one region to another.

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