NESC REPORT NO. 40

POLICIES TO ACCELERATE AGRICULTURAL AND RURAL DEVELOPMENT

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NATIONAL ECONOMIC AND SOCIAL COUNCIL

Policies to Accelerate Agricultural Development

No. 40

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NATIONAL ECONOMIC AND SOCIAL COUNCIL

Policies to Accelerate Agricultural Development

BY SEAMUS J. SHEEHY AND JOHN J. O'CONNELL

(with Section 1.2 contributed by John A. Murphy)

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PREFACE

In order to assess the prospect of achieving a rate of growth in output, productivity and investment, which would provide employment for the projected labour force in the foreseeable future, the Council decided to begin by examining the potential for development in agriculture.

In this Report, which is the fourth in a series of reports on agriculture published by the Council, the consultants put forward a number of recommendations for accelerating the rate of growth in agricultural output.

It is the Council's intention to submit its views, on what it considers to be the most appropriate strategy for developing agriculture, to the Government in the near future.

INTRODUCTION

"Agriculture is so important in the Irish economy and has such potentialities for increased production that primary attention must be given to utilising to the full the contribution it can make to national growth. If this contribution is to be as great as possible, it must take the form mainly of an expanded supply of foodstuffs for which there is a good demand, resulting from the efficient use of manpower, land and other resources. This is the economic ideal. The social ideal is to obtain the increased economic production from the maximum number of family farms. The material well-being of agriculture and of the whole economy is interdependent. In a country, such as Ireland, which is still under-industrialised and in which the agricultural sector provides a relatively large part of output and employment, it is evident that a prosperous agriculture is essential for the national well-being and for economic and social progress."[1]

These sentiments are quoted from the *Second Programme of Economic Expansion*. The rationale underlying them is elaborated in an earlier NESC Report[2]. It has been argued in that Report that growth in an economy can be achieved only by growth in the "goods" sectors of the economy. In the Irish economy, agriculture and the supply and processing industries dependent on agriculture account for 40% to 45% of the "goods" sector. Therefore, rapid growth in the economy as a whole would be exceedingly difficult if agriculture and its dependent industries are growing only at a moderate pace.

Substantial pay-offs in the forms of employment and balance of trade were estimated in NESC Report No. 34[3] from accelerated agricultural

[1] *Second Programme for Economic Expansion* The Stationery Office, Prl. 7239, 1963. Paragraph 28.

[2] NESC, *Prelude to Planning*, Report No. 26, Prl. 5741, 1976, Chapter 4.

[3] NESC, *Alternative Growth Rates in Irish Agriculture*, Report No. 34, Prl. 6236, 1977.

growth. Two rates of growth were studied. One was a rate of 3·0% per annum in Gross Agricultural Output (GAO), which was essentially a projection of past trends. The other was arbitrarily selected at a significantly higher level of 5·5% per annum in GAO.

The employment consequences of the two growth rates after 11 years were studied both on-farm and in-factory. The best judgement that could be arrived at in relation to on-farm employment was that the additional output from the high growth rate would slow down the labour outflow compared with the trend growth, so that after 11 years there would be 15,000 more employed in agriculture as a consequence.

The amount of employment in those supply and processing industries which are dependent on agriculture would vary with the volume of agricultural production, the extent to which agricultural output was processed, and developments in labour productivity. Only in three industries was employment deemed to be significantly affected by alternative rates of agriculture growth; these were dairy processing, cattle and sheep processing and pig processing. Employment was studied in these industries for alternative rates of processing intensity. The increased volume of output from the high growth rate was estimated to be capable of generating between 11,000 and 18,000 extra jobs in factories, depending on the intensity of processing. Intensifying processing, on the other hand, could add between 3,350 and 10,600 extra factory jobs, depending on the level of output.

The additional direct jobs retained on farms or created in factories would in turn give rise to a further number of indirect and induced jobs—possibly as many again as the direct jobs.

The increased agricultural output from accelerated growth would be largely exported. The net additional foreign earnings after 11 years from the high growth projection would be equivalent to almost 60% of the average trade deficit in the period 1973–74–75. This sum would considerably ease the balance of payments constraint on the overall economic development of the country.

Farmers who would have to take the trouble and risks of accelerated growth would receive their reward in the form of increased incomes. Assuming that the increased output would not itself depress prices, an assumption which is justified in Chapter 2 of this Report, the additional aggregate real income generated per year from the high growth rate

would be 1·7%. After allowing for the associated slowdown in the labour outflow, the additional *per capita* real income would be 1·1% per year. This would be cumulative each year, however, so that by the end of the eleven-year period studied in Report No. 34, the additional *per capita* income would have amounted to over 12% in real terms. This average over the entire work-force would of course be concentrated among those farmers who would have contributed towards the accelerated growth.

This Report is concerned with the policies necessary to achieve more rapid growth so that some or all of these pay-offs may be realised. It will be argued in Chapters 1 and 2 that in the absence of any changes in policy, the likely growth over the next decade or so will be that indicated by past trends. In Chapter 2 the market outlook will be surveyed to establish that markets would be available for the increased production from accelerated growth. Chapters 3 and 4 contain a review of present policies relating to agricultural development and proposals for changing these policies to achieve more rapid expansion. Alternative strategies for development in the processing industries are analysed in Chapter 5, and policies are proposed which would encourage more rapid progress.

All proposals for changing policies are made within the framework of the Common Agricultural Policy (CAP) of the EEC. The price support system of the EEC generally determines the level of market prices prevailing—except in times of scarcity when prices can rise above the support levels or in times of acute surplus when the support system may prove inadequate. The future of the CAP and the support levels likely to prevail under it are discussed in Chapter 2. It is accepted that Ireland can influence these prices only in a very limited way by its participation in the EEC decision-making process.

On the other hand, Ireland has very considerable scope for adjusting non-price policy to achieve more rapid growth. Most of the changes advocated in Chapters 3, 4 and 5 are compatible with present EEC legislation. Where this is not the case, a very strong argument can be made—and should be made—for changing the legislation. The special position of agriculture in Ireland as a very large and relatively underdeveloped sector of the economy should underpin this argument.

The aim of the policies proposed in this Report is to secure the maximum growth of Irish agriculture within the EEC framework and without a major increase over the levels prevailing in recent years in the

proportion of State expenditure on agriculture. In general, a co-ordinated development approach is advocated within which existing expenditure would be more directly related to development. To the extent that development would be thus enhanced, additional State expenditure would be involved in financing present schemes such as the Farm Modernisation Scheme and the Advisory Service. It is often argued that agriculture should have a greater call on State expenditure because of its considerable development potential. We have gone further by advocating additional expenditure only where it is directly related to *performance*—not *potential*. In this way we believe that any additional State support required for our proposals is soundly based.

While the time horizon of Report No. 34 and of this study is a period of a decade or so, some of the policies proposed are inherently long-term in their likely impact. This is particularly so in relation to the structural policies advocated in Chapter 4. The changes in structural policy suggested would have a significant impact within a decade, but they would not have the same immediate effects as the proposals in Chapter 3. Effective structural policies are, however, essential for the longer-term rationalisation of the industry.

This Report is about policies rather than commodities. Very little is said about the production problems of the various crop and livestock enterprises. Ireland has at this stage a very good research, technological and administrative infra-structure which is well capable of identifying production problems and finding solutions for them. The main challenge is to translate these solutions into action on farms and in factories. This is not to say that research and technological development is unimportant; without the scientific base already established, the policies we propose could not be very effective.

CHAPTER 1

THE GROWTH OF IRISH AGRICULTURE

There are broadly two schools of thought concerning the rate of growth of Irish agriculture. One school, which embraces agricultural scientists and farming organisations, generally considers that rapid expansion is achievable under favourable circumstances.[1] The other school, which includes civil servants and many economists, tends to believe that rapid expansion is not feasible.[2] The purpose of this chapter is to assess what is feasible on the basis of past experience and current trends.

Since 1958 targets of some sort have been set for agricultural grow... The period 1958 to 1972 spans the First,[3] Second[4] and Third Programmes[5] for Economic Expansion; and the White Paper[6] on the economic effects of accession to the European Communities indicated Government expectations for the period 1970 to 1978.

Unfortunately there is no one indicator of expected growth covering the entire period. The First Programme was virtually devoid of explicit

[1]See Irish Grassland and Animal Production Association, *An Expansion and Investment Plan for Irish Agriculture*, c/o Agricultural Institute, Belclare, Tuam, Co. Galway, 1972. Also Irish Farmers' Association, *Expansion of the Livestock Industry*, The Irish Farm Centre, Dublin 12, 1974.

[2]See the targets of the three programmes for economic expansion discussed below and in particular those of the EEC Accession White Paper (Prl. 2064).

[3]*Programme for Economic Expansion*, The Stationery Office, Pr. 4796 (1958).

[4]*Second Programme for Economic Expansion*, The Stationery Office, Pr. 7239 (1963), Part I and Pr. 7670 (1964), Part II. Also *Agriculture in the Second Programme for Economic Expansion*, The Stationery Office, Pr. 7697 (1964).

[5]*Third Programme for Economic and Social Development, 1968–1972*, The Stationery Office, Prl. 431 (1969).

[6]*The Accession of Ireland to the European Communities*, The Stationery Office, Prl. 2064 (1972).

targets for agriculture, whereas the Second Programme spelled out the targets in considerable detail. The most valid measure of growth is *Gross Agricultural Product* (GAP) at constant prices—the volume of Gross Agricultural Product. This is gross output less all non-factor inputs, and it measures the value added on all farms in the country. Neither the First Programme nor the EEC Accession White Paper had a target expressed in the form of GAP. A proxy for the GAP which is commonly used is *Net Agricultural Output* (NAO); NAO is calculated as gross output less feed, seed and fertilisers. It does not therefore have all non-factor inputs deducted. Nevertheless it has moved over the years in line with the GAP, and assuming this to continue in the future NAO provides a useful guide to the growth in GAP.[7]

Gross Agricultural Output (GAO) is more readily calculated than either NAO or GAP because inputs do not have to be estimated. Because it is more readily calculated, it is more readily available in national and international statistics. For these reasons the volume of GAO is sometimes used as an index of growth.[8] It does however overestimate growth because generally the volume of non-factor inputs increases more rapidly than the volume of GAO so, when the inputs are deducted to give GAP, the GAP will have a slower growth rate than the GAO. Thus between 1958 and 1975 the growth in the volume of GAO was 2·9% per annum whereas the true economic growth rate, as given by the volume of GAP, was only 2·1% per annum.[9]

1.1 Agricultural Growth 1958 to 1977

GAO is the indicator most commonly used in the official targets of the past 20 years. The only omission is in the First Programme in which the only target specified for agriculture related to cow numbers. The overall growth rate in Gross National Product was selected as double the 1949

[7]Curiously in recent years the volume of GAP has grown faster than the volume of NAO. For example, between 1966 and 1975 the annual % growth rate of GAP was 3·66 and of NAO 3·20. This implies that the inputs which are accounted for in the GAP but which are not accounted for in the NAO, i.e. non-factor inputs other than feed, seed and fertiliser, have not increased at all in volume over the decade.

[8]It was used as such in NESC Report No. 34.

[9]All growth rates in this Report are derived by fitting the exponential equation—$Y = Ae^{rt}$—to the data where Y is the volume index, r is the continuous compound growth rate and t is time; the continuous growth rate, r, is adjusted to give a discrete annual value.

to 1956 rate. It would seem that a similar basis for the agricultural target was implied;[10] that target would then have been an annual growth rate in GAO of 2·7% which is double the 1949 to 1956 performance. On this assumption, target growth rates can be identified for the entire 1958 to 1978 period. These are summarised in Table 1.1 and graphed in Figure 1.1.

A number of observations on Table 1.1 are relevant. The level of the targets set was highest in the Second Programme. Even that target—at 3·85% per annum in GAO, which is equivalent to less than 3% per annum in the true economic growth rate measured by GAP—would appear low to many agriculturalists.

TABLE 1.1

Target annual growth rates in the volume of GAO and actual performance, 1958 to 1978

		Target	Actual*
First Programme,	1958 to 1963	2·7	3·5
Second Programme,	1963 to 1970	3·85	2·5
Third Programme,	1968 to 1972	2·7	3·6
EEC Accession,	1970 to 1978	3·6	—
	1970 to 1976	—	2·7
Overall period,	1958 to 1976	3·3	2·8

*Exponential, derived as explained in footnote 9, page 12.

The actual growth achieved exceeded the targets in both the First and Third Programmes. The First Programme outcome is heavily influenced by the abnormally low base year, 1958; if adjustment were made for this, the outcome would be about just on target. The favourable outcome of the Third Programme was facilitated by above normal yields in 1971 and 1972.[11] On the other hand, the actual performance during

[10]See Paragraph 6 of *Economic Development* (Prl. 4803, Stationery Office) and paragraph 139 of the first *Programme for Economic Expansion* (Prl. 4796, Stationery Office).

[11]See NESC Report No. 34, Chapter 3, for trends in yields.

Figure 1.1. Target growth rates, 1958 to 1978 and actual growth rates.
(Volume of GAO with the average of 1957, 1958 and 1959 = 100).

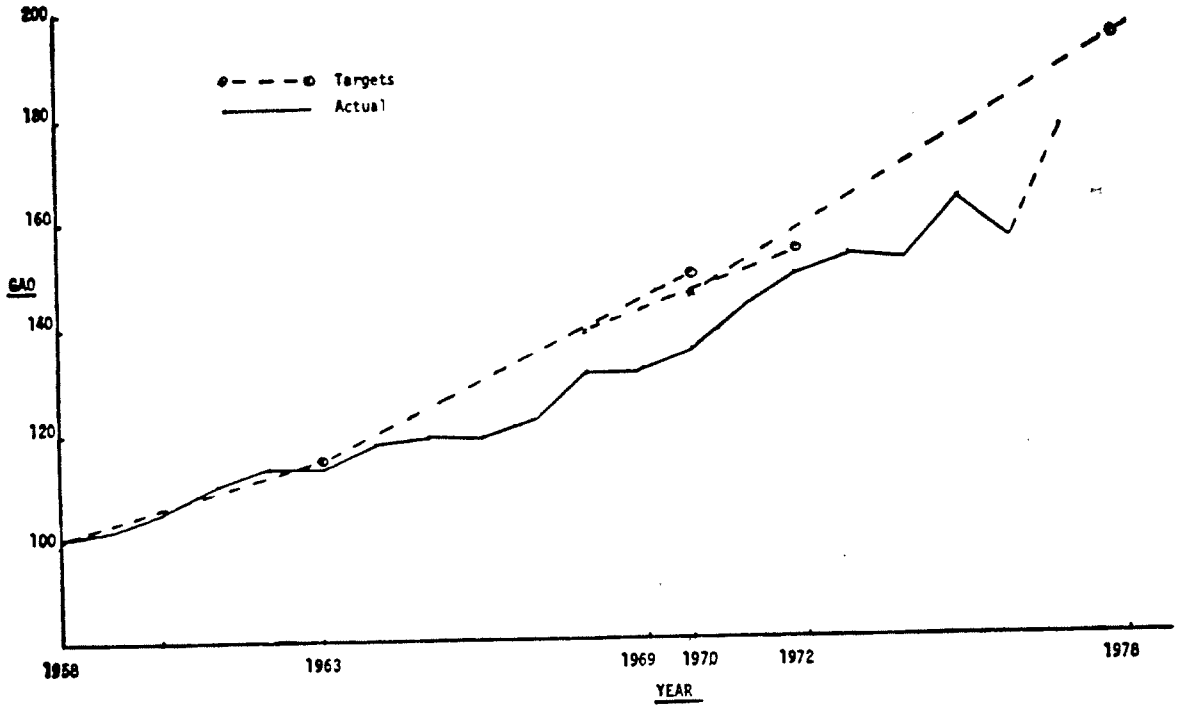


TABLE 1.2

Annual percentage changes in volume of outputs and inputs, 1970 to 1976

	1970–71	1971–72	1972–73	1973–74	1974–75	1975–76
Cattle and calves*	+ 5·0	+8·8	+ 4·5	+ 7·2	+13·0	−18·1
Sheep and lambs*	+19·3	−8·6	+ 3·4	− 4·1	+ 5·1	−14·2
Pigs*	+ 4·7	+0·3	− 7·6	−18·6	−10·2	+19·9
Poultry*	+12·6	−0·2	+10·3	−15·6	− 5·0	+27·7
Eggs	− 0·1	−3·4	− 9·8	0	+ 1·7	+ 0·8
Milk	+ 3·8	+7·9	+10·1	− 2·1	+ 6·9	+ 8·8
Crops	+ 8·1	−6·6	− 8·0	− 0·4	+ 6·8	− 4·8
GAO*	+ 6·4	+3·7	+ 2·5	− 0·3	+ 7·1	− 4·6
GAO—farmyard	+ 5·1	−0·3	− 5·0	−15·4	− 7·1	+19·5
GAO—field	+ 6·7	+4·6	+ 3·7	+ 2·3	+ 9·5	− 7·8
Animal feed	+ 7·2	+1·8	+ 5·5	−13·0	+ 1·8	+12·6
Fertilisers and lime	+12·1	0	+25·2	− 4·0	−20·5	+19·8
Seed	←	−0·7	→	− 2·1	−12·8	N.A.
NAO*	+ 5·8	+4·4	+ 0·2	+ 3·3	+12·3	−10·0
Petrol, oil, etc.	←	+6·3	→	− 3·0	+11·2	N.A.
Repairs to machinery, etc.	←	+4·3	→	+ 3·4	+ 9·8	N.A.
Transport and marketing	←	+2·2	→	+ 9·7	+13·2	N.A.
Other	←	+5·6	→	+ 4·6	− 1·7	N.A.
GAP	+ 6·4	+5·1	+ 0·2	+ 4·8	+11·8	N.A.

*Including value of changes in livestock numbers.

Source: June *Statistical Bulletins*, C.S.O. and *Agricultural Accounts, 1976*, SOEC.

the Second Programme greatly lagged behind the relatively ambitious target of that Programme. This was attributed to the failure of EEC membership to materialise as early as assumed in the Programme.

The performance up to 1976 was also lagging behind the expectation of the Accession White Paper, but provisional figures for 1977 would indicate that the lag for the full 1970 to 1978 period is likely to be small. The cattle crisis of 1974 and the cost spiral at that time undermined farmer confidence and slowed down the development of agriculture. This is evident from the data shown in Table 1.2 on the year-to-year growth in the various components of output and inputs from 1970 to 1976.

Taking the changes in the value of GAO year by year since 1970 we find a very impressive increase of 6·4% in 1971 over 1970. All sectors except eggs contributed significantly to that performance. The following year's increase of 3·7% was not so impressive. Growth in cattle and milk output was considerable, but the output of sheep and crops declined. The 1973 increase in GAO of 2·5% arose from continued expansion in cattle and milk, offset to some extent by a further reduction in crop output and by declining pigs and eggs output. The fall in GAO in 1974 was brought about by substantial reductions in pig and poultry output as well as a poor milk production season. GAO increased dramatically in 1975 largely because of high cattle output, though sheep, milk and crops also showed good increases. The following year experienced a large decline in GAO and particularly in cattle. The adverse effects of the cattle crisis of 1974 were then showing up in output.

The volume of GAO as published by the CSO includes farmyard enterprises, namely, pigs, poultry and eggs, as well as field enterprises. The factors influencing the growth of these two categories of enterprises are quite different, so it is useful to look at the behaviour of each separately. The volume of farmyard enterprises fluctuated greatly over the period 1970 to 1976. The volume of field enterprises moved more regularly—at least up to 1975. The yearly percentage rates of growth in the field enterprises up to the cattle crisis were +6·7 in 1971, +4·6 in 1972, +3·7 in 1973 and +2·3 in 1974. In 1974 milk yields were abnormally low; if yields had been normal, the growth rate of field enterprises would have been +3·7% instead of +2·3%.[12] Thus the

[12] See NESC Report No. 34, Figure 3.3, page 47, for normalised yields.

growth in output of field enterprises in the boom years of pre-EEC accession and immediately post-EEC accession was in the region of 4% to 5%. The cattle crisis disrupted this pattern and led to a very high increase in output in 1975 followed by a very large drop in output in 1976. The preliminary estimates for 1977 would indicate a strong recovery in the output of the field enterprises.

Whether the 4% to 5% growth of the pre-cattle crisis period would have continued even if there had been no crisis is an interesting question in the context of the present study. While no categorical answer can be given to the question, some relevant observations can be made. First, the nature of agricultural production is such that almost inevitably there will be occasional years of recession. Therefore, agricultural growth will always have to contend with these recessions. However, recessions of the severity of 1974 are not likely to recur very often. But even a more normal recession in 1974 might well have slowed down the pace of expansion of the previous years.

Second, the expansion that took place from 1970 to 1974 had inherent weaknesses in it, and in the absence of any recession these would have been likely to slow down growth. The failure of farmers to expand their feed supply in line with stock numbers—which was a major contributory factor to the 1974 crisis[13]—would have required adjustment after 1974 even if there had been no crisis. The extent to which the expansion of the breeding herd was based on reduced culling rates rather than increased heifer intake also meant that re-adjustment would have been necessary.[14] Such re-adjustment would probably have entailed a slow-down in the expansion of cattle. Indeed, the evidence suggests that this was taking place even before the cattle crisis broke in the autumn of 1974. The June breeding herd (cows plus heifers-in-calf) expanded by 5·2% in 1971, 6·8% in 1972, 9·4% in 1973, but only by 0·4% in 1974.

Data are included in Table 1.2 on changes in the volume of inputs from year to year as well as changes in the volume of outputs. The volume of animal feed has in the past moved rather closely with th.

[13] *Report of the Review Body on Beef Intervention and Cattle Slaughter Premium Systems,* The Stationery Office, Prl. 5769, 1976, Par. 1.4.

[14] L. Killen and J. Connolly, "Achieving Growth Targets in Cattle Sector", *Farm and Food Research News,* An Foras Taluntais, Summer 1977.

output from farmyard enterprises. This has been changing in recent years as more concentrates are being fed to cattle and cows. The main point of interest relating to inputs is the movement in fertiliser use. Fertiliser use increased rapidly in the late 'sixties and up to 1971. In 1972, however, there was no increase despite a 5% increase in cattle numbers. The use in subsequent years was severely affected by the large price increases of 1973 and 1974 as well as by the cattle crisis. In 1977 the annual increase in usage was back at a fairly normal percentage. More nitrogen than ever was applied in that year, but phosphorus and potash were still well below the levels used in 1973.

The volume of Net Agricultural Output (NAO) is the difference between GAO and the inputs of feed, seed and fertiliser. Its movement therefore reflects the fluctuations both in GAO and in these inputs. It has been particularly erratic in recent years, as shown in Table 1.2, but over the full seven-year period it has increased at an average annual rate of 2·2%. As stated earlier in this chapter, NAO is commonly used as an approximation for changes in GAP. Agricultural growth from 1970 to 1977 has therefore been of the order of 2·2% per annum.

1.2 The Effect of Prices on Agricultural Output

The past growth in agricultural output may be seen as the outcome of (a) substitution of enterprises on farms[15] and (b) increased intensity of production in terms of higher yields. In NESC Report No. 34 these developments were documented in detail for the period 1960 to 1976. The main trends which emerged from the changing enterprise mix were (i) an overall switch from tillage to livestock, (ii) within the tillage sector a decline in the acreage of wheat, oats and potatoes, partially offset by an increase in feeding barley and (iii) an increase in the relative importance of cattle in the livestock sector.

Yield increases were in general in the range 1·5%–2·5% per annum for cereals, potatoes and sugar beet; stocking rates on grassland increased by about 2% per annum and milk yields increased by about 1% per annum.

It is of interest to consider the impact, if any, which changing prices have had on the enterprise mix and yields in Irish agriculture. In doing so it is recognised that non-price factors may also have influenced the

[15]This applies mainly to the field enterprises. Increased output of poultry, eggs and pigs can in general arise without a reduction in other farm enterprises.

pattern of development. This may be particularly so in the case of rising yields where research and technology, advisory work, education and the media all have probably played a significant role.

In the case of enterprise substitution, however, it could be argued that the non-price factors, especially technology, have been neutral in their effect. For that reason one could hope to identify associations between enterprise substitution and relative price changes if such associations exist. This is the objective of this section. The analysis is confined to the main field enterprises and is based on developments over the period 1960 to 1976. The findings are summarised below.[16]

It must of course be recognised that where associations are shown to exist, this in itself does not constitute proof that it was the relative price changes which actually caused the enterprise shifts. However, it is the authors' opinion that the findings presented below are in each case a manifestation of a deliberate response to price changes on the part of farmers. These responses could be in relation to product prices, input prices or both. Since gross margins reflect both product and input price changes, the findings are in terms of responses to relative gross margins.[17] Furthermore, all the margins used in the study were estimated on the basis of fixed yields and fixed rates of input use. As such they reflect only price changes.

Tillage versus Grassland

As stated above there has been a clear downward trend in the tillage acreage over the past few decades. As a first step in analysing this decline and its relationship to price movements, it was decided to consider the main commercial tillage crops (excluding horticulture) *en bloc*. Thus the total area under cereals, potatoes and sugar beet was studied. That area declined from 1,398,400 acres in $\overline{1960}$ to 1,036,600 acres in $\overline{1975}$.[18] This amounted to a 26% decline.

Time-series analysis of the enterprise gross margins used in the study indicate that in general the rate of increase in the margins for tillage enterprises over the period from the late 1950s to the early 1970s was

[16]Further details of the method of analysis employed and the results are presented in the Appendix to this chapter.

[17]Gross margin = Total revenue *less* variable costs.

[18]$\overline{1960}$ = average for 1959/60/61 and $\overline{1975}$ = average for 1974/75/76.

considerably less than for grassland enterprises. In 1958 the average tillage gross margin was about 2·6 times the average grassland gross margin.[19] By 1972 the ratio had dropped to 1·4. Some recovery has taken place in recent years and the ratios for 1975 and 1976 were almost 1·9.

The method of least squares regression was used to quantify the relationship between the declining tillage acreage and this adverse movement in the tillage-grassland margin ratios. It was also possible to consider simultaneously the effects of such factors as rainfall, yield fluctuations and the Calved Heifer Subsidy Scheme.

The results of a large number of fitted equations suggest a decline of approximately 350,000 acres of tillage (cereals and potatoes and sugar beet) in response to a unit decline[20] in the gross margin ratio and *vice versa*. Other variables which, according to the regression analysis, had a significant although transitory effect on tillage were the Calved Heifer Subsidy Scheme, spring rainfall, harvest rainfall and cereal yield fluctuations. In general it was found that the changes in the factors listed above, along with the gross margin changes, could account for about 90% of the variation in tillage acreage over the period 1960 to 1976.

Wheat: In 1960 approximately 330,000 acres of wheat were grown in Ireland. By 1975 this had fallen to 125,200 acres. A number of possible explanations for this development were examined. These centred mainly on the changes in wheat gross margins relative to other land-based enterprises.

The results suggest that the decline in wheat acreage was due mainly to an adverse movement of wheat gross margins relative to livestock gross margins. The ratio of these fell from approximately 2·6 in 1958 to below 1·4 in the early 1970s, and the regression analysis would indicate an average decline of approximately 180,000 acres per unit decline in the ratio.

Feeding Barley: The acreage of feeding barley has increased by approximately 250,000 over the past decade and a half. The greater part

[19]The average tillage gross margin relates to cereals, potatoes and sugar beet. The average grassland gross margin relates to dairying, beef and sheep.

[20]For example from 2·6 to 1·6.

of the increase could be interpreted as a switch within the tillage rotation due to the gross margin for feeding barley having increased significantly relative to other tillage crops. In 1958 the feeding barley gross margin was about 60% of the average tillage gross margin and by 1973 it had increased to 78%.

Regression results suggest a response of the order of 110,000 extra acres of feeding barley for each increase of 0·1 in the gross margin ratio. The estimated equations, however, have been able to explain only about 80% of the variation that has occurred in the feeding barley acreage.

Potatoes: Between 1960 and 1975 there was a decline of approximately 130,000 acres under potatoes. No particular price developments were found which might account for this decline. Instead it seems that the fluctuations in potato gross margins relative to other enterprises have served mainly to cause fluctuations in the acreage about the downward trend. The ratio of the potato gross margin to average gross margin for all land based enterprises has fluctuated between 1·5 and 6·5 over the period 1960 to 1975 with no clear trend. The regression results indicate that on average a one unit increase (decrease) in the ratio in any given year has been associated with a 5,000 acre increase (decrease) in the following year. The acreage fluctuations, however, have been dominated by a downward trend of about 8,000 acres per year. In the past a large number of farmers sowed small plots of potatoes for on-farm consumption. With the passage of time this practice has diminished and this probably accounts for the downward trend.

Total Cow Numbers: The total cow population in Ireland increased by 64% between 1960 and 1975. It is logical to examine this increase in relation to the changes that have taken place in the returns in dairying and beef as well as other possible influences such as the Calved Heifer Subsidy Scheme introduced in 1964.

In 1958 the average gross margin in dairying amounted to approximately 122% of the weighted average gross margin for all livestock and tillage enterprises. By 1961 this had declined to 118% but recovered to a peak of 133% in 1972. Over the same period the gross margin for beef in relation to all livestock and tillage increased rapidly from 67% in 1958 to 79% in 1961 and rather slowly thereafter to 84% in 1972. Our analysis indicates a response of approximately 400,000 extra cows

for every increase of 0·1 in the relativity ratio for the dairy gross margin and a similar response to changes in the ratio for the beef gross margin. The changes in these two factors account for about 90% of the variation in cow numbers over the years

Ewe Numbers: The ewe population increased steadily from less than 1·8 million in the late 1950s to 2·2 million in 1964. It then declined to 1·8 million in 1970, increased somewhat over the following two years, but resumed its decline thereafter. By 1976 it had dropped to 1·6 million ewes.

These changes may be interpreted largely as substitution among livestock enterprises. Since 1963 the rise and fall in ewe numbers has been closely in line with the changes in sheep gross margins expressed as a percentage of the average gross margin for all land-based livestock enterprises. The response appears to be a decline of approximately 30,000 ewes for each percentage point decline in the relative gross margin. This response accounts for almost 90% of the movement in ewe numbers since 1963.

Overall Growth in Output: Close study of the past growth in agricultural output indicates that while there has been considerable enterprise substitution, this has not had a significant effect on the level of output. The substitutions outlined above have been mixed—some have been in favour of enterprises with higher than average output per acre and others have been in favour of enterprises with lower than average output per acre. Consequently, the greater part of past growth in agriculture has derived from increased yields[21] rather than from substitution in favour of high output enterprises.

Growth in yields can be seen principally as a response to such factors as feed, fertiliser, technological innovations, advisory work, education, etc. It might be expected that the success rate for such factors should tend to be higher if agriculture prices are favourable. In analysing the relationship here, the ratio of the agricultural product price index to the consumer price index was taken as a measure of whether farm prices were becoming more favourable over time or not.

[21]See: Murphy, J A., "How Real are the Targets for Growth in Irish Agriculture?" *Agricultural Record*, September, 1977. Pages 13–18.

This variable might be considered inadequate because it does not take account of the prices farmers must pay for inputs. Therefore, an alternative variable consisting of the average gross margin for the tillage and livestock enterprises analysed above deflated by the consumer price index was also used in the analysis. For both variables the GAO index in year t was regressed on the average value of the years t-1, t-2 and t-3.

Our statistical analysis failed to establish evidence that prices have had an impact on the upward trend in the GAO index. This absence of a price response can be clearly seen from the graphs shown in Figure 1.2 (a) and (b). The actual index of GAO is reasonably consistent with a constant growth rate curve as shown in Figure 1.2 (a). If a point of acceleration in growth could be identified, it would perhaps be 1966–67. However, neither the real price variable or the real gross margin variable showed a significant improvement around that time. Indeed the opposite would appear to have been the case. Furthermore, when significant improvements in these variables did occur in the 1970s, no acceleration of the growth in GAO was achieved—at least up to 1977. Consequently, it must be concluded that the main impact on Irish agriculture of changing prices has been to promote enterprise substitution rather than influence the growth in aggregate output.

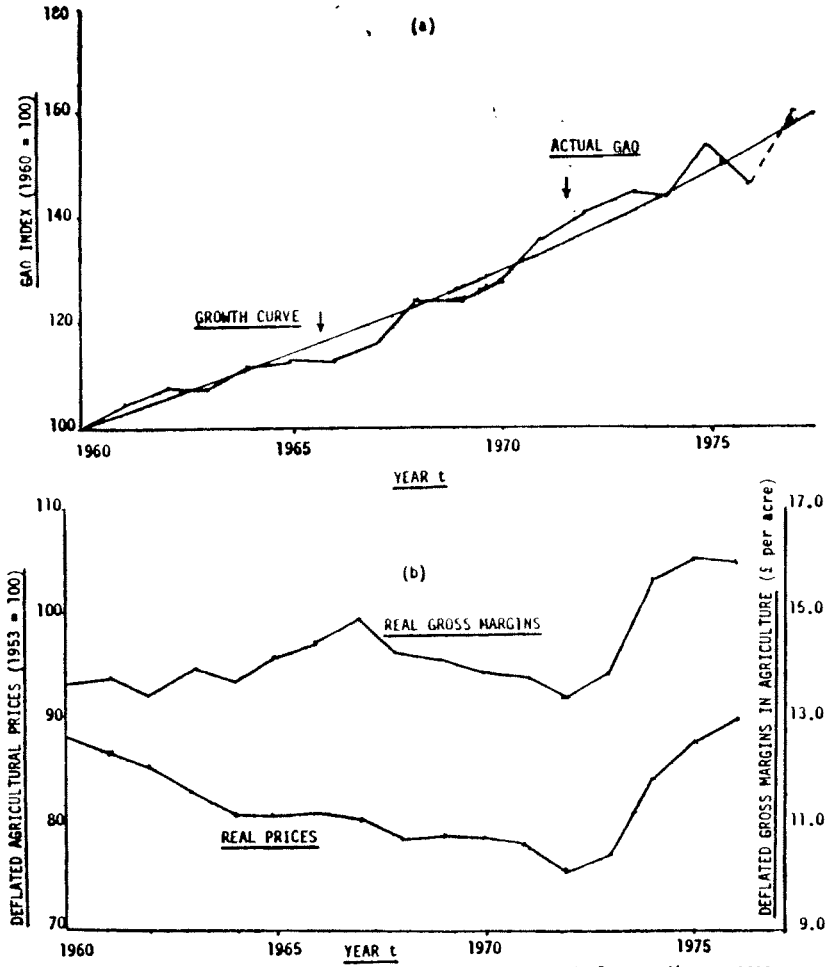
1.3 Rates of Growth in Other Countries

Agricultural growth rates for several countries are summarised in Table 1.3. Thirteen countries with temperate agricultures are included and growth rates in GAO for every 11-year period from 1954 to 1975 are calculated. In all, there are 143 observations though of course the observations within each country are not independent of each other. The distribution of these is as follows:—

Per cent change per annum in GAO	Number of observations
<0	2
0—1	15
1—2	40
2—3	61
3—4	24
>4	1

It is clear that a growth rate of between 2% and 3% per annum has been

Figure 1.2: (a) Volume of Gross Agricultural Output, 1959/60/61 = 100
and (b) Real Prices and Gross Margins in Irish Agriculture.



Note: In Figure 1.2(b) the real price and gross margin variables are the averages of years t-1, t-2 and t-3 plotted for year t.

TABLE 1.3

Eleven-year growth rates in Gross Agricultural Output for selected countries 1954 to 1976

	1954–65	1955–66	1956–67	1957–68	1958–69	1959–70	1960–71	1961–72	1962–73	1963–74	1964–75
Canada	3·3	3·3	3·3	3·8	3·5	2·8	2·5	2·2	1·1	0·4	0·6
USA	1·8	1·7	1·9	2·0	1·7	1·6	1·8	1·8	1·8	1·7	2·0
Belgium	2·3	1·8	1·8	1·9	2·1	2·2	2·1	2·2	2·2	2·5	2·3
Denmark	1·9	1·6	1·4	1·3	1·2	0·5	0·1	−0·2	−0·3	0·1	0·2
France	3·0	3·2	3·4	3·5	3·1	2·7	2·4	2·4	2·2	2·4	2·1
Germany, Fed.	2·2	2·1	2·2	2·2	2·0	2·1	1·9	1·9	1·5	1·5	1·7
Ireland	1·7	1·9	2·1	2·4	2·8	2·6	2·5	2·3	2·3	2·7	2·7
Italy	2·4	2·3	2·6	2·6	2·4	2·6	2·7	2·1	2·0	1·9	1·5
Netherlands	2·4	2·1	2·4	2·4	2·3	2·5	2·8	3·2	3·4	4·0	4·1
Sweden	0·5	0·5	0·4	0·7	0·4	0·3	0·4	0·6	0·5	1·3	1·2
UK	3·5	3·6	3·4	3·3	2·9	2·5	2·3	2·2	2·0	2·2	1·9
Australia	3·7	3·8	3·5	3·7	3·0	3·0	2·9	2·6	2·4	2·0	1·9
New Zealand	3·3	3·2	3·1	3·1	3·0	2·8	2·6	2·4	2·0	1·5	1·1

Source: Derived from index numbers of total agricultural production as published in FAO Production Yearbooks.

the most usual. Nearly 90% of the observations fall in the range of 1% to 4% per annum. Only one observation exceeds 4%, namely, the Netherlands in the 1964 to 1975 period. The composition of the exceptional growth rate in the Netherlands has been studied in NESC Report No. 24.

The enterprise mix of Dutch agriculture is roughly similar to that of Ireland if one excludes horticulture. Over the period studied in Report No. 24—1956 to 1973—GAO grew 60% faster in the Netherlands than in Ireland. However, nearly half of this difference was attributable to rapid growth in the horticultural and pig sectors of Dutch agriculture. Omitting these sectors, Dutch agricultural growth was 3·5% per annum compared with 2·6% for Irish agriculture. The biggest single factor in explaining the difference was that Dutch grassland yields increased at nearly double the Irish rate.[22]

It may be concluded that sustained growth rates in the volume of GAO in excess of 3% per annum are very much the exception in the international scene. A growth rate in excess of 4% is unique. Furthermore, that unique experience arose from growth rates in horticulture and pigs which are unlikely to occur in Ireland.

1.4 Feasible Growth Rates in the Future

The records of the past, both for Ireland and for other countries, clearly show that the maximum growth rate in GAO which has been achieved on a sustained basis is around 4% per annum. Such a growth rate would be considered modest by a great number of agriculturalists in Ireland. One of the statements most frequently made by such people is that the industry is operating at only a fraction of its potential. It is implied thereby that the industry could be much more productive. Such statements have been made over the years and continue to be made while the industry develops at only a moderate pace. The apparent potential which appears to so many to be so readily achievable is not being achieved.

[22]Of course comparisons of rates of growth in output do not show anything about the level of output. Dutch output per acre of all products is nine times that of Ireland. A more valid comparison, however, relates to products other than pigs, poultry, eggs and horticulture; for these Dutch output per acre is four times that of Ireland. Grassland yields are estimated to be double those of Ireland, while fertiliser usage per acre is three times that of Ireland with nitrogen use being some six times greater.

The method of measurement of the potential of the industry is not often specified by those who use the concept. Generally it would seem that it is the technical capacity of the land which is envisaged. Thus, if average yields in the industry are only at half the levels of those which have been shown to be feasible by researchers, or which prevail in other comparable countries, it is claimed that only half the potential is being realised. This technical definition of potential has little economic meaning because it is only when the land is combined with management resources and capital resources that it achieves a productive capacity. Potential, therefore, cannot be defined in an economic sense in terms of land alone or in terms of any other resource alone; it must be defined in terms of the combination of *all* the resources required for production. While relatively precise knowledge is available about the potential of Irish soils when combined with good management and adequate capital, the only knowledge we have—and that we can have—about the capacity of Irish soils when combined with average management and average capital is the actual record of production which this combination succeeds in achieving. It is this record which is widely considered to be unsatisfactory.

The improvement of this record is achieved over time by growth. Growth involves basically two types of change in resource use. Existing resources may be recombined in such a way as to increase production; an example would be where a farmer of good management ability with adequate capital but inadequate land succeeds in acquiring extra land from a farmer of poor management ability. Alternatively, the quantity or quality of resources may be increased. This occurs when education succeeds in raising the level of management, or when research succeeds in generating more productive technology, or when savings are allocated to increased investment. In practice, both types of change in resources are occurring simultaneously over time.

The scope for growth must exist in the form of available markets if growth is to proceed. In a free trade environment market availability would be largely a function of competitiveness. For agricultural products, however, a free trade environment has not in general prevailed in the world. On the contrary, agricultural growth in most countries over the past twenty years or so has taken place within the context of domestic market capacities. Where this is the case it imposes a serious constraint on growth because the rate of expansion of demand for food

is low; it is determined by the rate of growth in population and real incomes and has typically been in the order of 2% per annum in industrialised countries. The agricultural growth rates for many of the countries in Table 1.3 tended to be limited by the rate of growth of their home markets. This could hardly be claimed, however, for the six original members of the EEC from the early nineteen-sixties onwards, because it was possible for each of them to expand their share of the EEC market as trade in that market became freer. Only the Netherlands showed much sign of realising that potential.

It will be argued in Chapter 2 that Irish agriculture is likely to function in a free-trade scenario over the next decade. It will further be argued that this scenario could accommodate rapid agricultural growth. But even in this favourable position the nature of the industry itself is not conducive to a ready response. Manufacturing industry can respond rapidly in a favourable environment by utilising existing spare capacity or by building new factories. Agriculture, on the other hand, has to plan new rotations or to breed additional livestock and to provide for their feeding and housing. Such processes are inherently complex.

As outlined above these developments involve all the economic resources, namely, land, management and capital, as well as the interactions between them. Of these three categories of resources, management is undoubtedly the one that is most difficult to influence. The family-centred form of business organisation which prevails in farming means that the rate of turnover of managers is very slow. The average functional life of a farmer in Ireland has been estimated to be between 30 and 35 years.[33] Therefore only a small fraction of the industry acquires new management each year. Furthermore, much of this new management is not well equipped for progressive farming. 30% were over 40 years of age in the 1971 to 1975 period; half had no post-primary education; and 90% were without agricultural college education. Existing management has a high proportion of elderly people—nearly half being over 55 years—and a low education level. These are some of the important management characteristics which must be influenced if progress is to be accelerated

A further factor which is likely to impede rapid growth in otherwise

[33] NESC, *New Farm Operators, 1971 to 1975*, Report No. 27, The Stationery Office, Prl. 5832, Appendix II.

favourable circumstances is the considerable instability associated with agricultural production. The causes of this instability are well documented in most textbooks in agricultural economics.[34] They derive from the dependence of agriculture on environmental influences such as weather and disease; from the decentralised decision-making of management whereby a very large number of farmers make their independent production decisions in the absence of the knowledge and power to control the aggregate consequences; and from the nature of agricultural markets which, if not regulated, are generally not capable of absorbing varying quantities of produce without severe fluctuations in prices. Increasing government regulation of agricultural markets and prices has greatly eased this problem of instability. It has not, however, removed it as was vividly demonstrated by the cattle crisis of 1974.

While rapid growth in agricultural output is not easily achieved on a sustained basis, Ireland in the 1970s has very special advantages in climate, soil potential and market opportunities which suggest the potential for accelerated growth. But the performance of Irish agriculture in the 1970s is not surpassing the performance of the 1960s. It has been shown that in the period 1970 to 1974, when conditions for growth were particularly good, the record for field enterprises was 4% to 5%, but for total ouput it was less—at 3% to 4%. In addition it was argued that these rates of growth were hardly sustainable even if the cattle problems of 1974 had not turned into a major crisis.

Given the market outlook described in the next chapter, we believe that with present policies the best that can be expected of Irish agriculture over the next decade, taking one year with another, is an annual growth rate in GAO of the order of 3%. This is the "low" rate projected in NESC Report No. 34 and is merely an extension of past trends. It was concluded in that Report that such a growth rate would not make a significant contribution to the economy. Alternatively, it was concluded that a growth rate of 5% to 6% per annum, if achieved on a sustained basis, could make very worthwhile contributions as have been outlined earlier in the Introduction.

The question then is: "Can a sustained growth of 5% to 6% be achieved despite the record of the past?". The land resources are available to

[34] See, for example, D. E. Hathaway, *Government and Agriculture*, Macmillan & Co., 1963, Chapter 5.

produce the additional output, as the high projection in NESC Report No. 34 was based on the calculated potential of the land. Capital availability should not be a constraint. We share the view expressed in a previous NESC Report that if accelerated growth is economically attractive, adequate capital would be available from either retained profits or borrowed funds.[25] We further believe that the management ability of Irish farmers could be increased at a rate sufficient to approach if not to attain the high growth rate. As regards market availability, it will be argued in the next chapter that the market environment is likely to be capable of absorbing the additional output from accelerated growth.

[25]NESC Report No. 26. Op. Cit. Paragraph 3.3.

APPENDIX

An Econometric Analysis of the Changes in Agricultural Production in Ireland over the Period, 1960–76.[26]

As stated in the text, the main focus of this analysis was to identify the associations, if any, between the changing combination of enterprises in Ireland and the changes that have occurred in the relative gross margins of these enterprises. Multiple regression analysis was applied for this purpose. Gross margins were used as the "price" variables in all the equations giving the basic response equation:

$$Yt = a + b\ GMR_t^* \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ (1)$$

where Y_t = the scale of the enterprise in year t. i.e., acreage or inventory of breeding stock, and GMR_t^* represents farmers' expectations as to the gross margin ratio(s) likely to obtain in year t. GMR_t^* was constructed as an average of the ratios experienced in the years immediately prior to t. A number of averaging formulae were tested and the best results were obtained from;

(a) an unweighted average of the actual ratios for years t −1, t −2 and t −3, and

(b) a geometrically weighted average of the actual ratios for years t −1 back to t −5.

Since these two methods gave quite similar results, only equations from the first approach are included here.

[26]The authors would like to thank Mr David Tyrrell, M.Agr.Sc. for his assistance in the analysis presented in this Appendix.

The primary purpose in estimating the equations was to quantify the response, if any, to the gross margin ratios. In doing so it was considered desirable to separate out the effects of other factors such as spring and harvest rainfall, fluctuations in cereal yields and the Calved Heifer Subsidy Scheme. Thus a large number of multiple regression equations were fitted, but only a representative selection of the results are presented in this Appendix. In general linear equations were used although log formulations were tried in some cases. The results from the latter, however, were not noticeably better than for the corresponding linear equations.

The first major division of enterprises considered was that of tillage *versus* grassland farming. Only the main tillage enterprises were taken into account, namely, cereals, potatoes and sugar beet. The total acreage under these crops was regressed on various combinations of variables likely to have had a causal effect and some of the results obtained are presented in Table A. The following is a brief explanation of the variables used:

GM Ratio: The ratio of the weighted average gross margin for cereals, potatoes and sugar beet to that of dairying, beef and sheep expressed on a per acre basis. The weights used were current acreages and livestock units. Further details relating to this variable are given in the footnotes to Table A.

CHS Schems: A dummy variable to represent the impact, if any, of the Calved Heifer Subsidy Scheme which was introduced in 1964. This Scheme might be expected to have caused a shift from tillage to livestock. The dummy variable was given a value of 1·0 per 1,000 heifer subsidies paid with a partial lagging of one year.

Rainfall: The total rainfall (mm) in February and March of year t and August and September of year t −1. This variable was also subdivided into rainfall in (February +March)$_t$ and (August +September)$_{t-1}$. Both components proved significant. Apart from equation 5 of Table A, only results using the composite variable are reported here.

Yields: Past variations in yields might be expected to influence farmers' attitudes towards expanding or contracting crop acreages. It was decided to use a detrended series of cereal yields (tonnes/acre) to represent this factor. It was found that in general a three year average of detrended (linear) yields in t −1, t −2 and t −3 gave the most

TABLE A

Selected regression results relating to the acreage under tillage in Ireland, 1960–76

(Dependent variable (Y_t) = acreage of cereals + beet + potatoes ('000 acres))

Equation	Intercept	Independent Variables						$\bar{R}^2$	DW
		GM Ratio (*a*)	CHS Scheme	Rainfall	Yields	Y_{t-1}			
1.	109·9	350·2 •••	−0·34 •	−0·26 •	461·0 •••			0·92	2·13
2.	−126·3	359·4 •••		−0·26 •	657·3 •••			0·90	1·78
3.	651·0	332·3 •••	−0·56 •••	−0·30				0·89	1·48
4.	−91·2	218·9 •••		−0·28 ••	434·9 ••	0·40 ••		0·94	2·72
5.	−222·5	223·5 •••		−0·40(*b*) ••	517·1 ••	0·40 ••		0·93	2·41
6.	413·9	196·0 •••	−0·34 ••	−0·31 ••		0·41 ••		0·93	2·27

Notes: (*a*) The GM Ratio is the unweighted average for t −1, t −2 and t −3.
(*b*) Rainfall in February and March of year t only.
$\bar{R}^2$ Coefficient of Determination adjusted for the number of independent variables.
DW Durbin-Watson statistic. Although some of these proved significant, no adjustment has been made to eliminate autocorrelation.
•••Significant at 1%, ••significant at 5%, •significant at 10% level.

satisfactory results. In other words a sequence of good or bad yields produced a significant acreage response.

Y_{t-1}: The acreage of cereals + potatoes + sugar beet lagged one year. This was consistent with the Nerlovian "partial adjustment" supply model[37] which makes allowance for the likelihood that proposed changes in crop acreages arising out of changes in gross margins or other causal factors cannot be fully implemented in a period of one year. The estimated coefficient for this variable represents 1—g where g is the proportion of the proposed change in acreage which is carried out in the first year; the proportion in the second year being g (1—g) and g $(1-g)^2$ in the third year, etc. Generally in equations relating to the tillage variable used in Table A the value of g was found to be about 0·6. In this formulation the coefficient of the GM Ratio should be interpreted as the short-term "price" response, i.e., the response achieved after one year. Thus the coefficients listed under "GM Ratio" in equations 4, 5 and 6 of Table A are about 60% of the full (long-term) response coefficients.

It can be seen from Table A that in all cases the gross margin ratio proved to be significant at the 1% level. When the same method of analysis was applied to the individual crop acreages, highly significant responses to relative gross margins were also obtained. A sample of these results is shown in Table B. Except where stated in the footnotes, the independent variables are as described above.

Table C contains a selection of regressions relating to the June inventories of cows and ewes in the period, 1960–76. Again significant responses to changes in relative gross margins were found although for ewes a good relationship was obtained only for the post-1963 period.

Finally, it should be noted that this analysis was completed before the release of some revisions to the 1974, 1975 and 1976 crop and livestock statistics by the Central Statistics Office. The equations have not been re-estimated to take account of these revisions. However, it is likely that only very minor adjustment of the coefficients would have been obtained through re-estimation.

[37]See: Nerlove, Marc, "Estimates of the Elasticities of Supply of Selected Agricultural Commodities". *Readings in the Economics of Agriculture*, Allen and Unwin Ltd., London 1970.

TABLE B

Selected regression results relating to the acreage under individual tillage crops in Ireland, 1960–76

Equation	Dependent Variable	Intercept	Independent Variables					$\bar{R}^2$	DW
			GM Ratio(*a*)	CHS Scheme	Rainfall	Time(*b*)	$Wheat_t$		
1.	Wheat ('000 acres)	7·8	159·1 ***		−0·354 **			0·68	0·90
2.	Wheat ('000 acres)	−3·1	168·7 ***	−0·445 ***	−0·327 **			0·80	1·31
3.	Feed barley ('000 acres)	−587·7	1,395·1 ***					0·72	0·92
4.	Feed barley ('000 acres)	−241·0	1,006·8 ***				−0·387 *	0·76	0·93
5.	Oats ('000 acres)	−553·1	975·4 ***		−0·42			0·88	1·26
6.	Potatoes ('000 acres)	200·9	5·68 ***			−8·21 ***		0·97	1·27

Notes: (*a*) The following gross margin ratios were used: Eqs. 1 and 2—wheat relative to the average margin for livestock. Eqs. 3 and 4—feeding barley relative to the average for tillage (cereals, potatoes and sugar beet). Eq. 5—oats relative to the average for tillage and livestock. Eq. 6—potatoes relative to the average for tillage and livestock. In equations 1–5 the unweighted average ratio for t −1, t −2 and t −3 was used. In equation 6 the ratio for t −1 only was used.

(*b*) A trend variable = 0 in 1960, 1 in 1961, etc.

TABLE C

Selected regression results relating to the June inventory of cows and ewes in Ireland, 1960–76

Equation	Dependent Variable	Intercept	Independent Variables						R^2	DW
			GM ratios (*a*)			CHS Scheme	$Cows_{t-1}$	$Ewes_{t-1}$		
			A	B	C					
1.	Total cows ('000)	−318·6	1,299·1 •••	800·8					0·92	0·90
2.	Total cows ('000)	−5,761·5	3,358 2 •••	4,045·3 •••					0·88	0·79
3.	Total cows ('000)	−2,463·4	1,503·9 •••	1,567·4 ••			0·62 •••		0·96	1·45
4.	Ewes ('000)	942·7			1,323·1 ••				0·32	0·46
5.(*b*)	Ewes ('000)	−35·8			2,722·7 •••				0·82	1·14
6.(*b*)	Ewes ('000)	−567·1			1,406·6 •••	−0·76 ••		0·78 •••	0·93	2·37

Notes: (*a*) A = ratio of dairying to the average for tillage and livestock except in Equation 1.
B = ratio of beef to the average for tillage and livestock except in Equation 1.
C = the ratio of sheep to the average livestock gross margin.
In Equation 1 the dairying and beef gross margins are expressed relative to the average for sheep and tillage.
(*b*) Equations 5 and 6 relate to the period 1963–76.

CHAPTER 2

THE MARKET ENVIRONMENT

Proposals to accelerate the development of Irish agriculture must be based on the expectation of market outlets for the increased production at satisfactory prices. Irish agricultural output is sold on the domestic market, the British market, on the other EEC markets and on markets outside the EEC. It is therefore necessary to review the market environment likely to prevail for Irish agriculture over the next decade or so.

2.1 World Outlook[1]

The total market for farm production changes over time mainly in response to trends in population and purchasing power. There are broadly two types of population trends in the world: relatively rapid increases of 1% to 3% per annum in the majority of underdeveloped countries, and relatively slow increases of less than 1% in most developed countries. More people to feed in very poor countries does not have much impact on commerical food markets because these people do not have the wherewithal to compete in the market place. Thus, the effect of population on food demand is confined to the developed countries where an increase in population gives a proportionate increase in demand.

In most of these countries population growth has been fairly modest and has been decelerating as shown by the following data on percentage natural rates of increase:

	1970	1975
USSR	0·9	0·9
USA	0·8	0·6
Japan	1·2	1·1
EEC	0·5	0·2
UK	0·5	0·1
Ireland	1·0	1·1

[1]For a more detailed analysis reaching similar conclusions see, *Study of Trends in World Supply and Demand of Major Agricultural Commodities*, OECD, Paris 1976.

Ireland's population increase of around 1% per year is relatively high while some countries such as West Germany, Belgium and the United Kingdom have had negative population growth rates in recent years. The growth rate in the EEC as a whole was only about 0·2% per annum in 1975 and it subsequently declined further to something close to zero.

Rising real incomes affect demand for food by shifting the quality of food demanded towards animal products and away from grains, and by increasing the demand for convenience foods which incorporate more post-farmgate services in the form of processing and packaging. The extent of these effects depends on the rate at which real incomes are rising and on the actual level of real incomes already achieved. Real incomes in most developed countries increased rapidly after World War II up to 1973. Since 1973, however, the world has experienced a serious recession and the rate of increase in standards of living has been greatly reduced. Some recovery is being experienced in 1976 and 1977, but there are indications that this recovery is not very strong and could well peter out in 1978[2]. The overall state of the world economy would therefore point towards lesser rates of gain in living standards over the next decade than have been experienced over the past generation. This is also the outlook within the EEC countries and particularly so in the UK, Ireland's major food market.

A further point in relation to real incomes is that their effect on demand for food tends to diminish as the level of incomes increases. This is a natural phenomenon; at low income levels people will allocate a significant portion of any additional income towards improving their diet; at higher income levels, as people become relatively well fed, additional income has less and less impact on food demand. Such effect as it does have tends to be concentrated on additional marketing services which do not increase demand at farmgate for farmers' produce. The situation now reached in advanced countries is probably such that increased purchasing power has very little impact on farmgate demand.

With a static or slowly growing population and ineffectual changes in purchasing power, the overall demand for farm produce is not likely to increase very much over the next decade in the developed world including the EEC. However, some less developed countries have now reached a sufficient stage of development that their increasing populations and purchasing power are of some consequence. Examples are Japan, South Korea, Taiwan, the Phillipines, the oil-rich Arab countries, the U.S.S.R. and Eastern European countries. These countries between them have a population which is as large as all the existing developed countries combined; furthermore, their population and their living standards are growing rapidly. They already have had a significant impact on food markets in recent years. In particular, the substantial purchases of wheat and other grains by the U.S.S.R. in 1972 and 1973 was an important factor in pushing up feed-grain prices in those years. Over the next decade these countries offer the main prospect of increasing the demand for food.

The overall trends in demand vary somewhat from one category of food to another. For grains, the increased demand comes from two separate sources: as direct demand for human consumption in underdeveloped countries and as derived demand for animal feed in the developed countries.[3] The combination of these forces caused a steady reduction of accumulated stocks of grain during the 'sixties and led to serious shortages in the 1972 to 1975 period. In the case of meat and vegetables, rising populations and living standards in the developed countries provide a relatively strong positive demand effect. In the case of milk, however, demand increases only slightly, if at all, as populations and living standards increase.[4] Therefore, over the next decade, with populations and living standards likely to rise relatively slowly in the highly developed countries, the demand for meat and vegetables can increase only slowly and the demand for milk and dairy products could well decline. The prospects for animal products in the newly developing countries is highly uncertain, but some increase should occur and this might be substantial.

A major factor impinging on certain food markets in recent years has been the development of competing substitutes.[5] The longest established substitute is vegetable fat which for many years has been displacing

[2]OECD, *Economic Outlook* Paris, July 1977.

[3]Brown, L. R., "The World Food/Population Problem: An Overview", Chapter 1 in *Alternatives for Balancing World Food Production Needs*, Iowa State University Press, 1968.

[4]See for example the projections for milk and meat in "Restoring Balance on the Milk Market—Action Programme 1977–1980", *Bulletin of the European Communities*, Supplement 10/76.

[5]OECD, *Unconventional Foodstuffs for Human Consumption*, AGR (75) 8, Paris, 1975.

animal fat in human diets, particularly in the form of margarine. Others of more recent origin are vegetable proteins which are now being substituted for animal proteins, and isoglucose which is replacing sugar. Each of these substitutes has made and is making inroads into conventional markets and they can be expected in the future to continue to do so.

Overall then, the outlook for food demand in the years ahead does not look encouraging for farmers and farm production. The consequences for farm incomes cannot be assessed until supply and costs are also taken into account. The factors causing food supplies to increase over time are not as clear-cut and are not as well understood as in the case of demand.[6] The major elements are the availability and the adoption of improved management and technology on farms. The post-war era up to 1972 was characterised by supplies generally outpacing demand even though demand was reasonably buoyant. Governments in most developed countries were forced over this period to intervene in food markets to support farm prices and incomes and in some cases to restrict production. The scarcities of grain and several other food commodities in 1972 and 1973 interrupted the long period of over-supply and gave rise to some speculation that a new era of scarcity might be dawning.[7]

Such indeed might have been the case if demand continued to expand at the pace of the 'sixties. However, the energy crisis at the end of 1973 plunged the already unsettled world economy into the deepest economic recession since the 1930s. This disruption of the world economy has still not been rectified, and only an optimist would expect a return to the stable and substantial growth rates of the 'sixties.[8]

The energy crisis and its consequences could adversely affect supply as well as demand. Most new technology has a high energy content whether it is mechanisation, fertilisation or chemical control of pests and diseases.[9] There is little evidence of such a supply effect at this stage.

[6]Allen, G. R., "Some Aspects of Planning World Food Supplies", *Journal of Agricultural Economics*, Vol. 27, No. 1, January 1976. Pp. 97–120.

[7]Allen, G. R., "Agricultural Policies in the Shadow of Malthus". *Lloyds Bank Review*, July 1975.

[8]McCracken, P. *et al.*, *Towards Full Employment and Price Stability*, OECD, Paris, 1977.

[9]Spedding, G. R. W. and J. M. Walsingham, "The Production and Use of Energy in Agriculture", *Journal of Agricultural Economics* Vol. 27, No. 1, January 1976. Pp. 19–30.

Farmers have been more or less compensated through higher product prices for the increased cost of energy, and technological progress is continuing.

The supply-demand outlook is therefore probably one of renewed over-supply of markets with occasional short-term scarcity which may occur more frequently in the future than over the past generation. Even if economic growth could be restored to the level of performance of the 'sixties, demand expansion on the developed countries would be less than in the 'sixties because of the declining impact of incomes and because of a probable slower growth in population. There could, however, be a considerable increase in demand from the newly developed countries such as Japan, and the U.S.S.R. At the same time, sustained economic growth could lead to further pressure on limiting resources such as energy and the environment, and that pressure might retard technological progress. A combination of rapidly increasing demand in newly developed countries with a slow-down in technological progress could give more balanced markets or even food scarcities. While this combination of events is possible, it is not probable. This means that for the next decade food markets are likely to be generally over-supplied as in the 1960s, and farmers' prices and incomes are likely to come under pressure.

2.2 Markets and Prices since EEC Accession

We have speculated above on probable developments in the future on a world-wide basis. But Ireland's future is within the EEC, and EEC agricultural markets are well insulated from world developments. Therefore, the position of EEC markets and of Ireland within those markets must be examined.

EEC markets are already well supplied with most foods. The levels of self-sufficiency for selected items of importance to Ireland were as follows in 1976: beef—99%, milk—110%, pigmeat—99%, sheep—64%, cereals (all)—87% and sugar—105%. The EEC is practically self-sufficient for all Ireland's major products and is chronically over-supplied in some, particularly milk and sugar. Furthermore, the outlook would suggest little liklihood of this situation changing [10]. World markets may

[10]See, *Communication from the Commission to the Council on the Updating of the Outlook for Agricultural markets*, COM (77) 380, Brussels, 28 July 1977. Also *Restoring Balance on the Milk Market—Action Programme 1977–1980*, Op.cit.

occasionally provide profitable outlets for some EEC production, but this will not be the usual situation. In addition, the forces of demand and supply would indicate continuing over-production within the EEC itself.

Ireland is likely therefore to have to operate in an EEC environment of over-production rather than scarcity. This is the environment that has generally prevailed since accession to the EEC in 1973. A review of how Ireland has fared in the past should provide us with some insights as to how it may fare in the future.

At the end of 1977 Irish agriculture completed the five-year transition period towards full EEC membership. The period has been characterised by great economic instability. It began in 1973 in an economic boom and then sunk in 1974 and 1975 into a major recession from which the world is now haltingly emerging. Associated with these developments there was an acceleration of inflation which led to the abandonment of fixed exchange rates and a resort to floating rates for many currencies. The inflation was aggravated by the energy crisis, the results of which quickly worked their way through the economic system in 1974 and 1975. In 1977 inflation was moderating, but the world faced an uncertain future after the disturbances of recent years.

EEC membership has provided Irish agriculture with relatively favourable product prices and with reasonably stable outlets for most farm produce. The basic market mechanism of the CAP provides a guaranteed outlet for most of Irish farm output either in the marketplace or into intervention. This system of market regulation has generally worked smoothly. There have, however, been two significant disruptions, namely, the cattle crisis of 1974 and the operation of the system of border taxes and subsidies introduced to offset currency fluctuations.

The cattle crisis has been studied and reported upon.[11] It was attributed to (i) a rapid build-up of cattle numbers, (ii) a shortage of winter feed, (iii) inadequate factory capacity to slaughter the animals, (iv) the multistage structure of beef production in Ireland which tends to amplify fat cattle price instability back through the other stages of production to the calf, and (v) market difficulties because of a general economic recession and because of mismanagement of the market by the EEC.

[11] *Report of Review Body on Beef Intervention and Cattle Slaughter Premuim Systems*, Op.cit. Also R. O'Connor and P. Keogh, *Crisis in the Cattle Industry*, Broadsheet No. 13, ESRI, June 1975. And A. G. Conway *et.al.*, *The Beef Market-Methods of Support and Short Term Outlook*, An Foras Taluntais, September 1975.

Monetary levies have arisen on agricultural trade because of the failure of the Council of Ministers to adjust the exchange rate controlling this trade in line with the market exchange rate controlling all other trade. The disparities between the two exchange rates have to be bridged by levies to avoid trade distortion. The levies are called Monetary Compensatory Amounts or MCA's. They apply as taxes on exports from a country with a devaluing currency and as subsidies on imports to such a country; they operate in reverse for a country with a revaluing currency, namely, as taxes on imports and subsidies on exports. Because Ireland has had a devaluing currency since accession, MCA's have operated most of the time as taxes on agricultural exports and subsidies on imports. These taxes represent a net loss to Irish producers and to the balance of payments.

In 1972 and 1973 most product prices were above the support level of the CAP, and farm incomes in all EEC countries were buoyant during this brief period of food scarcity. In 1974 the energy crisis and the recession were combined with a three-fold increase in the price of raw phosphates to bring about a serious price-cost squeeze on farmers' incomes; even with a supplementary price review in October of that year, real farm incomes in most Member States declined. Farm incomes subsequently recovered, but they have recovered more in Ireland than in any other Member State[12].

Prices received by Irish farmers rose by 163% from 1972 to 1977. They have risen for three main reasons: the common level of price supports throughout the EEC has been raised at the various price reviews; the level of support prices in Ireland has been raised towards the full common level as the transitional period has progressed; and support prices have increased through the mechanism of the £ green. The overall magnitude of these three components is shown in Table 2.1 for four important commodities representing over 70% of agricultural output.

The common prices throughout the EEC have been raised in the five-annual reviews since 1973 and in the supplemental review of 1974. The accumulated magnitude of these increases for the commodities shown in Table 2.1 ranged from 25·5% for barley up to 53·2% for cattle. Surprisingly the differences among the commodities do not reflect any clear relationship with the balance of supply and demand on the market.

[12] *Agricultural Incomes in the Community*, COM (78) 64, Brussels, 9 March 1978.

During the period in question, milk was the most seriously over-supplied of the four commodities, yet its support price was raised well ahead of barley and not greatly behind beef. The weighted average increase of the four commodities was 46·8%, or 8·0% per annum.

The increases in support prices arising from the alignment of Ireland's starting prices with full EEC prices range from 10·8% for sugar beet to 29·0% for cattle. The average was 22·2% or 4·1% per annum. These figures underestimate the true original gap between Irish and EEC prices because cattle prices were relatively high in 1972 so that the starting price negotiated by Ireland on accession was high, similarly, milk prices had been raised by 23% in 1972 over 1971 partly in anticipation of EEC membership.

The combined effect of increases in the common prices and the transitional adjustments varied from nearly 50% for barley to nearly 100% for cattle. The average for the five-year period was 79·4%, two-thirds of which was attributable to common price increases and one-third due to transitional adjustments.

TABLE 2.1

Percentage increase in the components of Irish support prices [1] for selected commodities, 1972–73 to 1977–78.

	Cattle	Milk	Barley	Sugar beet	Average [2]
1. Common price	53·2	40·1	25·5	43·8	46·8
2. Transitional [3]	29·0	12·1	18·4	10·8	22·2
3. (1) × (2)	97·6	57·1	48·6	59·3	79·4
4. £ green [4]	77·5	77·5	77·5	77·5	77·5
5. (3) × (4)	250·7	178·9	163·8	182·8	219·4
6. Other [5]	−15·0	—	—	5·1	—
7. (5) × (6)	198·1	178·9	163·8	197·2	189·4

[1] The support price of cattle is taken as the intervention prices; for milk it is the gross creamery price derived from the intervention prices of butter and skim milk powder; for barley it is the intervention price, and for sugar beet it is the minimum sugar beet price.

[2] The weights used to calculate the average were those in the Output of Agriculture for 1972 as given in the June Statistical Bulletin of 1973.

[3] The full transitional adjustments are accounted for including those which took effect on January 1, 1978.

[4] From a reference rate of 2·4 UA's/£ in 1972 to 1·3519 UA's in 1977/78.

[5] "Other" for cattle involved a reduction in the level of coefficients used in deriving the Irish intervention prices; for sugar beet it arose from the agreement to use derived support prices in Ireland which are higher than basic EEC prices.

The third source of price increases has been the £ green. The £ green is a colloquialism to describe changes in the special exchange rate called the reference rate, applying to the supported agricultural commodities under the CAP. This "green exchange rate" operates side by side with the market exchange rate. It is altered not by money market forces but by political decision in the Council of Ministers. When the "green exchange rate" of a Member State is changed, it has the effect of changing support prices in that Member State and simultaneously changing the level of MCA's applying to trade with that State.

Since Ireland negotiated EEC membership in 1971 and 1972, the reference rate has been changed from 2·4 UAs per £ to 1·3519 UAs per £. This has had the effect or raising support prices by 77·5%. In other words, £ green adjustments for the four commodities taken together have been just as important as the combined common price and transitional adjustments in raising farmer prices over this period; for milk, barley and sugar beet, £ green adjustments have been considerably more important than the other two adjustments. Furthermore, if the period in question had not been the transitional period and Ireland's prices were raised only by common adjustments and £ green adjustments, the latter would have been one and two-third times as important in causing price increases as the former. It follows then that any discussion about the future development of agricultural prices in Ireland must take possible £ green developments into consideration. This will be done later in this chapter.

Input prices like product prices also reflect the high inflation of the transitional period. There is no official aggregate index of input prices available, so an index had to be compiled. This was done as shown in Table 2.2. The overall increase resulting is estimated at 160·5% so that input prices generally increased nearly as fast as the 163% increase in total product prices.

Farmers' incomes are determined by price developments and by trends in the quantities of output and of inputs used. Trends in the volume of output and inputs have been examined in detail in Chapter 1. They have contributed to increased farmers' incomes over the transition period. Farmers' incomes are compared with industrial incomes in Table 2.3.

Since farmers' incomes had already increased in 1972 partly in

TABLE 2.2

Percentage increase in farm input prices, 1972 to 1977.

Input	Basis of Calculation	1977 over 1972 % increase	1972 Value £m.
Feeding stuffs	CSO wholesale price index	190·2	65·4
Fertilisers and lime	CSO wholesale price index	196·3	30·8
Seeds	CSO wholesale price index	145·0	5·9
Machinery repairs and depreciation	CSO wholesale price index for "transportable" capital for use in agriculture.	162·2	31·0
Petrol, oil, etc.	CSO consumer price index for "fuel and light"	155·5	10·8
Transport and marketing	CSO consumer price inoex for "transport"	126·5	7·0
Wages	Minimum agricultural wage	123·9	27·1
Rates, Land Annuities and Other	CSO consumer price index for "services"	115·5	38·4
All	Weighted by 1972 values	160·5	216·4

TABLE 2.3

Farmers' income relative to industrial workers, 1970 to 1977.

Year	Farmers' income (1) £/week	Industrial wages (2) £/week	Ratio (3) (1) ÷ (2)	Ratio index 1970 = 100 (4)
1970	14·43	17·74	0·81	100
1971	16·60	20·64	0·80	99
1972	23·10	23·74	0·97	120
1973	31·30	28·55	1·10	136
1974	28·04	34·02	0·82	101
1975	41·82	44·26	0·94	116
1976	48·81	53·06	0·92	114
1977	67·00	62·33	1·07	133

Note: Farmers' income is calculated as "income from self-employment and other trading income" as published in June Statistical Bulletins divided by an estimate of farm family workers derived from the published series on "number of persons at work in agriculture, forestry and fishing". Industrial wages are taken as the weekly earnings of all industrial workers in all transportable goods industries. The 1977 data are estimates.

anticipation of EEC membership, the comparisons are made over the 1970 to 1977 period.

The absolute comparisons in Columns (1) and (2) of the table are arbitrary because they depend on the particular income measurements and worker groups selected. The trend in the relative incomes is a more reliable indicator. The trend is shown in Column (4) of the table. The ratios prevaling in 1970 and 1971 were typical of those throughout the previous decade or so. From 1972 on, the ratio improved significantly for farmers with the exception of 1974. Farmers' incomes in 1977 relative to industrial wages have improved by an estimated 33% compared with the pre-EEC situation. This development has of course been in line with what was expected. However, it is considerably less of an improvement than was foreshadowed in the EEC Accession White Paper.[13] In the White Paper a doubling of aggregate real incomes was anticipated between 1970 and 1978; the increase that is now in prospect is about two-thirds of that estimate. Most of the short-fall is accounted for by less favourable input-output price ratios than were assumed in the White Paper; the remainder is explained by a smaller increase in volume than was projected.

2.3 Prices over the Next Decade

Since agricultural prices in Ireland are largely determined by the CAP, their future levels will depend on the evolution of the CAP. The CAP has been subjected to continuous criticism since its institution in 1964.[14] This is not surprising considering the great conflicts of interest between producers and consumers and among Member States which the CAP has had to reconcile. Producers have criticised the CAP for not adequately raising farmers' incomes, especially the incomes of smaller farmers. Producers have also been critical of the on-going management of markets such as the cattle market in 1974.

Consumers have a longer list of complaints. The most obvious one is the CAP's influence in supporting prices at higher levels than would otherwise prevail, while at the same time hoarding surpluses in intervention or disposing of them through concessionary sales often outside

[13] *The Accession of Ireland to the European Communities.* Op. cit.

[14] For a review of criticisms between 1968 and 1973, see R. Fennell, *The Common Agricultural Policy: A Synthesis of Opinion*, Wye College, 1973.

the EEC. It has further been argued by consumers and economists that these support prices are so high as to retain surplus resources in agriculture and thereby slow down the adjustment of the industry towards greater efficiency. The budgetary cost of the CAP support system has also been categorised as excessive.

Criticisms such as these have led to recurring reviews of the CAP by the EEC authorities. The Commission has carried out two major examinations since Ireland's accession to the EEC. The first was reported in October 1973[15] and the second in February 1975[16].

The Commission's proposals for improvement of the CAP in 1975 were similar to those outlined in 1973. They (i) included a statement of intent to make greater use of *ad hoc* consumer subsidies to dispose of short-term surpluses, (ii) emphasised the desire that farmers should share directly in the financial responsibility for structural surpluses, (iii) suggested a price freeze to restore equilibrium in the dairy market, (iv) stated that intervention for beef should be made more flexible, (v) indicated that the price relativities among cereals should be such as to avoid the necessity to denature wheat, and (vi) emphasised that procedures should be agreed for the regular adjustment of reference rates to keep MCA's within acceptable limits.

These proposals involved relatively minor adjustments in the CAP. There is no suggestion in them of any fundamental changes. The Council of Ministers gave their reaction to the Stocktaking exercise in November 1975.[17] In general they concluded that "the CAP is and must remain an indispensable factor in European integration". On specific proposals they agreed to disagree.

Thus, while criticism of the CAP has been widespread and continues to be so, there is no indication of any fundamental change in the policy. The support system in the cereal sector was modified to eliminate the need for denaturing of wheat; a co-responsibility levy on milk was introduced; consumer subsidies were increased in the dairy sector; and

[15] "Memorandum, Agriculture, 1973–1980", *Bulletin of the European Communities*, Supplement 17/73.

[16] "Stocktaking of the Common Agricultural Policy", *Bulletin of the European Communities*, Supplement 2/75.

[17] "Analysis of the Stocktaking of the CAP", *Newsletter of the Common Agricultural Policy*, January 1976.

proposals were made to modify intervention for beef. However, no progress has been made in phasing out MCA's.

The prospect is for a continuation of such adjustments to the CAP. Pressure to moderate the level of common price increases will also continue. With a rapidly growing consumer lobby, this pressure may gradually become more effective. On the other hand, farmers will be insisting on maintaining their relative income position, and they will continue for a long time yet to be a powerful political lobby. Over the next decade, therefore, increases in the common support prices may be less than in the past, particularly in the more chronically over-supplied sectors of milk and sugar beet.

As already outlined, Irish farmers during the transition period have experienced price increases from three sources, namely, transitional adjustments, common price increases, and £ green adjustments. The relative magnitudes of each of these has been shown for the key commodities supported by the CAP. The transitional adjustments ceased after 1 January, 1978. These averaged 4% per annum with most of this concentrated in the beef sector; the average annual percentage transitional increase was 5·2 for beef, 2.3 for milk, 2·4 for barley and 2·1 for sugar beet.

The termination of the transitional increases and the possibility of a moderation of common price increases should slow down the rate of price increases which Irish farmers will experience over the next decade. However, the extent to which this will be so will depend heavily on the future course of £ green adjustments. If the UK inflation rate—and consequently the Irish inflation rate so long as the currencies of the two countries are linked—should approach the level of the EEC countries whose currencies are in the Snake[18], and especially to that of West Germany, then the £ sterling would presumably maintain its present parity with the Snake currencies and little or no scope would arise for £ green adjustments. If, on the other hand, the UK and the Irish inflation rates were to continue at significantly higher levels than the countries in the Snake, the £ sterling would continue to be devalued and £ green adjustments would continue in the future. However in so far as

[18] Currently West Germany, Denmark, and the Benelux countries.

such adjustments would only compensate for the higher rate of inflation, they would be of little consequence in real terms.[19]

The impact on growth of the likely reduced rate of price increases can be assessed on the basis of the econometric analysis reported in Section 1.2. It was concluded from that analysis that prices have had more of an impact on substitution of enterprises than on inducing growth. It was also shown in NESC Report No. 34 that a combination of past trends in acreages, livestock numbers and yields would result in a 2·0% per annum growth rate in NAO for the period 1974 to 1985. Of this growth rate, however, only about one-tenth would be accounted for by the continuation of trends in substitution among land-based enterprises. The remainder would derive from the continuing improvement in yields and from the farmyard enterprises. Only in the event of a very substantial shift towards tillage and milk, and away from beef and sheep, could enterprise substitution make a major contribution to growth.

The future movements of market price changes are unlikely to produce such a shift in the enterprise mix. Milk prices may increase less rapidly than agricultural prices generally and this could retard milk production somewhat. If at the same time, however, beef prices are raised more rapidly than the general increase, this would tend to encourage beef production by encouraging increases in both beef and dairy herds. Furthermore, the prospect of increasing milk yields as projected in Report No. 34 should help the profitability of milk relative to other enterprises. Sugar beet production could also be adversely affected by unfavourable relative price increases. Against this, if accelerated growth were achieved, it would involve increased tillage generally and this in turn would tend to operate through rotations to sustain present production of sugar beet or to increase it.

Apart from the impact of prices on enterprise substitution, the econo-

[19]There is some evidence that Irish farmers by 1977 had been more than fully compensated for high inflation compared with farmers in EEC countries with strong currencies. To the extent that this may be the case, it reflects the fact that the £ sterling had fallen in *real terms* relative to the strong currencies over the transition period. There is no guarantee that such an outcome would materialise over the next decade. Indeed, the availability of North Sea oil in the UK could have the reverse effect of stabilising the £ sterling even though UK and Irish inflation may be higher than competing countries. In that event £ green adjustments would not fully compensate Irish farmers for high inflation.

metric analysis showed little if any price effect on inducing overall growth. It appears that the critical factors in influencing the rate of growth relate not so much to prices but to the motivation of farmers to adopt new technology. The prices prevailing must of course be such as to make such adoption profitable. The degree of profitability is a function of the efficiency of production as well as the prevailing price situation. The efficiency of production can be raised by the provision of adequate education and advice. The strategy therefore underlying our recommendations in Chapters 3 and 4 is based on increasing the motivation and the education of farmers.

2.4 Markets for Increased Production

The likely future state of both EEC and international markets has been described as being normally one of adequate or over-supply with occasional periods of scarcity. On the basis of this outlook it might be concluded that accelerated growth in Irish production would be foolhardy. However, within the CAP framework the problem of market imbalance must be solved, if at all, on a Community-wide basis. Neither slowing down nor accelerating Irish development would make much difference to the problem. Even a static Irish agriculture over the next decade would not significantly alter market balances for two reasons: (i) Irish production is a relatively small portion of total EEC production and (ii) the pace of Irish agricultural growth through the competitive system would tend to have some counter-effect on the growth of our competitors.

Irish production as a percentage of total EEC production in 1974 is shown in Table 2.4 for selected commodities. Also shown is the relative importance of the quantities of output by 1985 under trend growth and high growth models I and II taken from NESC Report No. 34. Beef is the commodity with the greatest EEC market share—at 5·1%. The highest growth in beef would raise that share to 6·9% in 1985. Similarly, the high projection for pigmeat does not involve a major increase in its market share. For barley, the market share is not of as much consequence as for the other commodities because in all cases the home market would remain in deficit; in other words, markets would be secured by import substitution rather than by export.

Milk is the commodity where market availability would appear to provide the greatest challenge. The trend projection would increase

TABLE 2.4

EEC production in 1974 and 1985 in comparison with alternative levels of Irish production.

	EEC		Irish as a % of EEC			
	1974	1985 [1]	1974	1985 trend	1985 high I	1985 high II
	million tonnes					
Milk	91·4	102·0	3·9	6·4	8·9	9·3
Beef	6·3	7·4	5·1	5·6	6·9	6·5
Barley	34·4	42·0	2·8	3·5	4·2	4·6
Pigmeat	8·3	12·2	1·7	1·3	2·0	2·0

[1] Milk production projected to increase per annum at 1%, beef at 1·5%, barley at 2·0% and pigmeat at 3·5%.

Source: EEC data from *Situation of the Agricultural Markets, 1976* COM (77) 50 final, 11 February 1977, Parts I and II and *The Agricultural Situation in the Community 1975 Report*. COM (75) 601 final, 10 December 1975, Parts I, II and III. Irish data from NESC Report No. 34.

the EEC market share from 3·9% to 6·4%. This rate of advance has already been recorded during the transitional period. The high growth models would raise the market share to around 9% by the mid-eighties. Bearing in mind that this is an increasing share of a fairly static market, it could come about only by substantial encroachment on our competitors' markets. This would pose the greatest marketing challenge of accelerated growth, but the Irish dairy industry is relatively well geared to meet this challenge.

Such market penetration may be considered by some to be unfeasible. In this context it is worth noting that a rapidly increasing market share is taken for granted in national industrial policy. The argument is simply made that if Irish production were cost-competitive, market penetration would not be a problem at the prevailing international trade prices. Our argument relating to agricultural expansion is similar: if accelerated growth is profitable on farms at prevailing EEC prices and if farmers can be helped and enticed to cash in on that profitability in a planned manner then the marketing of the increased production would not be an obstacle

to expansion. The record of An Bord Bainne since EEC accession in achieving a rapidly increasing market share for Irish dairy products is clear evidence of this.

We are led to conclude that greatly accelerated growth such as indicated by high growth Models I or II could be absorbed within the EEC market. Irish farmers would have to be willing to produce and capable of producing these extra quantities in the price environment ordained by the EEC. Even if that price environment should prove more favourable than we anticipate, we can find no evidence that price increases alone will be sufficient to bring about accelerated growth. A fundamental reorientation of non-price policies is also necessary. Proposals to achieve this are outlined in the following three chapters.

CHAPTER 3

ACCELERATING GROWTH WITH EXISTING FARM STRUCTURE

Agricultural policy in recent years has been dominated by the process of EEC accession. Irish policies have had to be adapted to the requirements of the Common Agricultural Policy. This has been an *ad hoc* process with medium-term or longer term planning not being very evident. The justification for this in the economy in general was that the uncertainty of international developments was such as to make such planning impossible.[1] Whatever the merits of this argument for manufacturing industry, it was clearly spurious in relation to agriculture. Since 1971 a favourable environment has existed for rapid agricultural development, but the necessary co-ordinated developmental approach has been absent.

The overall growth of agriculture is the sum of the performances of all the individual farm units within the industry. The great variety of farms within farming not surprisingly leads to a great range of performances among farms. This has been quantified by size of farm and region of the country from samples of farms in farm management surveys. The results are shown in Table 3.1.

The growth rates shown are for groups of farms. Within any group there would have been variation about the group average with some individual farmers doing better than average and others doing worse. The range in growth rates is from −4·2% per annum to +4·1% per annum. In terms of growth rates in GAO, only the single group of farms with the 4·1% rate achieved the equivalent of 5% to 6% in GAO. This group is the 100 to 200 acre farms in the South and represents one-eighth of the total crops and pasture area of the country.

[1]See *Budget 1974*, page 13, *Budget 1975*, page 20, *Budget 1976*, page 36. The Stationery Office.

TABLE 3.1

Estimated annual percentage growth rate in the volume of Net Product per adjusted acre 1966–68 to 1972–74.

Size group of farms (acres)	Region		
	East and Midlands	South	North and West
5—15	−4·2	−3·3	+1·3
15—30	−2·8	+1·8	−0·3
30—50	−0·1	+1·0	+2·1
50—100	+2·3	+1·1	−0·7
100—200	+1·6	+4·1	−0·7
200 +	+3·3	+3·1	−0·9

Source: A. G. Conway, "Inter-farm Differences in Growth of Output". Paper read at An Foras Taluntais Conference, November 1975.

The data in Table 3.1 can be aggregated to national level by weighting each group by the total acreage of crops and pasture it represents. When this is done, the average growth rate for the entire country comes out at 1·4% per annum. The annual percentage growth rates for each of the three regions were: 1·1 for the East and Midlands, 2·2 for the South, and 0·3 for the North and West. It can also be estimated that farm groups representing 26% of the land of the country had a negative growth rate over the period, 34% had a positive growth rate of 2% or less, while 40% had growth rates of more than 2%.

While data of this nature cannot be conclusive, they do suggest that considerable regression took place on many farms side by side with considerable progress on many other farms. Some variation in growth rates among farms would be expected in view of the normal family cycle[2] associated with farming: newly established farmers tend to develop rapidly, while the development of farms operated by older retiring farmers would tend to be static or declining. The extent of the latter category in Ireland is, however, abnormally high. Over one-third

[2]Symes, David—"Farm Household and Farm Performance—A Study of Twentieth Century Change in Ballyferriter, South-West Ireland". *Ethnology*, Vol. II, pp. 25–38, 1972.

of all farmers are in the "contraction" phase of the family cycle and these operate nearly one-third of all the land of the country; a further quarter are in the "transition" phase and these operate one-quarter of the land; only 43% are in the "expansion" phase of the family cycle, operating less than half of the land.[3]

Accelerating growth involves improved performance from some or all of this land. The proportion of farmers who can be induced into more rapid development by new policies is unknown. It will of course depend on the type of policies and the method of implementation. Under any set of policies there will still be many farmers who will not respond. Some of these are already well developed and are not interested in further development; nor will they be induced into retirement so that new management might proceed with development. Many, however, are quite undeveloped, but they lack the motivation to develop. Others may be handicapped by lack of resources—often poor management ability and sometimes inadequate land.

It follows from what has been said in Chapter 1 that to approach the acceleration implied by a 5% to 6% annual growth rate in GAO requires the maximum stimulation. Such stimulation can only be achieved by a comprehensive package of policies. These policies must include incentives and facilities for more rapid development of all farmers already developing or considering developing; they must include the means of stimulating farmers who have not up to now had the initiative to develop but who have the resources for development. These are the policies which are analysed in the remainder of this chapter. For other farmers, such as many of those in the "contraction" phase, development policies on their own will not achieve a response. For these farmers policy must aim at the transfer of resources from those unable or unwilling to utilise them to those who will use them. Such policies are analysed in the next chapter. All the policies must of course fit within the Common Agricultural Policy of the EEC as far as possible; seeking the adjustment of that policy in selected aspects should not, however, be ruled out in the overall strategy.

[3]Conway, A. G., "Factors Associated with Growth in Farm Output": paper read to the Agricultural Economics Society of Ireland, June 1976. Farm households with no children and having all males over 45 years of age are classified in the "contraction" phase; farm households with no school or pre-school children but having males under 45 years of age are classified in the "transition" phase; households with children constitute the "expansion" category.

3.1 Expansion Paths

Rapid growth could take place in Irish agriculture along a variety of paths. Two of the many possibilities were studied in NESC Report No. 34. One path would involve rapid expansion in milk output, considerable expansion in cattle, sheep, poultry and pig output, rapid expansion in feeding barley, with a halt in the past decline of wheat acreage. The second path differed from the first in that it envisaged the export of calves and their replacement in the enterprise mix by additional cows and cereals to utilise the land released by the exported calves. A third path, involving a much greater concentration on tillage than paths I and II, is outlined below.

Path III involves increasing the cereal acreage to 1·5 million acres by 1985. This would be equal to the acreage grown in 1948 at the end of the compulsory tillage programme. However, it would still not achieve national self-sufficiency in non-protein feed-grain; some 30% of domestic requirements under this path would still have to be imported in 1985. The additional 345,000 acres allocated to barley, compared with path I, is withdrawn from dairy-beef production. The ratio of dairying to beef is assumed to be the same as the overall national ratio in path I, but the stocking rate on the reallocated land is assumed to be 20% higher than average; this is in recognition of the fact that the swing to tillage would be likely to take place on better than average land which is farmed by better than average managers.

Analysis of these three alternative expansion paths at constant prices indicates relatively small economic differences in the consequences by 1985. The gross output from the three alternatives at 1974 prices would be £1,260 million, £1,272 million and £1,247 million respectively. Net outputs would be £788 million, £805 million and £789 million. Factor incomes generated by all three paths would be fairly similar.

Compared with path I, on-farm employment potential would be in the order of 2,000 more for path II and 1,400 less for path III. In-factory employment at medium intensity processing and assuming the continuation of live cattle exports would be virtually the same for paths I and II but would be 1,900 less for path III. The net trade effects would be +£376 million for path I, +£393 million for path II and +£376 million for path III.

Overall, the economic consequences of these three expansion paths

at constant prices are not very different except for the considerably lower employment content of the high cereal path III. This result does not allow for possible price repercussions of alternative paths of expansion. However, the analysis of Chapter 2 would suggest that market availability is likely to be such as to accommodate the output of any of these three paths of expansion. We conclude that it is the pace of development that is critical for the economy and the direction is secondary. In other words, the important consideration for sustained high growth is that a sufficient range of enterprises are expanding to achieve a large positive result. In the past, growth was retarded to an excessive degree by contraction in some sectors while other sectors were expanding. The most recent example of this was the decline in the output of crops and farmyard enterprises associated with increased output from the grassland enterprises during the period 1970 to 1974.

Growth in a range of enterprises is also desirable from the point of view of market developments. While EEC membership provides relatively good assurance to Ireland on market availability, as discussed in Chapter 2, it is still desirable to have a diversified agriculture lest unexpected market difficulties arise. There is little doubt that a more balanced development of agriculture from 1970 to 1974 would have lessened the cattle crisis of 1974 and the subsequent disruption of agricultural growth.

The variety of circumstances prevailing on Irish farms would also suggest a diversified development plan. Too often assessments of enterprises are made at national level on the basis of average conditions which are not relevant to individual farm circumstances. For example, the single-suckling enterprise has been almost universally condemned in recent years as being too unprofitable. The enterprise is undoubtedly low in profitability relative to others, but yet it may suit certain types of farmer such as farmers with fragmented holdings and poor land, or dairy farmers who may wish to retire from dairying but remain in livestock production, or part-time farmers. Single-suckling for such farmers may be more profitable than dry cattle production while at the same time contributing to growth by adding to the national pool of breeding stock.

The combination of enterprises for accelerated growth should therefore be decided on the basis of market opportunities and individual farmer preferences. Under the present agricultural policy there is no way

at national level of assessing individual farmer preferences. Under the alternative policies proposed below, however, such an assessment would be possible.

3.2 The Institutional Framework

The development of agriculture is now the responsibility of a wide range of people and institutions. These include the farmers, the Department of Agriculture, the County Committees of Agriculture, An Foras Taluntais, the food processing industries, and the food marketing bodies. Each of these agencies is doing a competent job, yet the aggregate effect of their efforts on agricultural development as outlined in Chapter 1 is not satisfactory. In reviewing the situation, one is struck by the lack of overall direction and co-ordination of their efforts. As a consequence, it is difficult for the individual agencies to identify the full scale of their particular roles and to measure the success of their operations. In the absence of clear, measurable national and local targets, each agency can readily justify its own actions, and there is a natural tendency to do so. This environment tends to breed a degree of complacency which is not likely to generate maximum growth.

The essential requirements for accelerated growth are therefore planning and policies. The planning would involve the identification of targets at which to aim, and the policies would ensure that State resources would be firmly linked with developments towards these targets.

The agency which has in the past identified targets in planning was the Department of Agriculture. The Department must remain a key agency in agricultural development, but for that purpose it should be linked in the future in a regular way with the other major agencies involved. The creation of the proposed Agricultural Training Authority will facilitate such an arrangement. The Authority will embrace the advisory and educational functions of the development process and therefore will have a vital role. Neither the Department on its own nor the Authority on its own could provide the co-ordinated approach that we envisage. We believe that the two agencies should be linked in an Agricultural Development Council. Farmers, through their organisations, and An Foras Taluntais should also be on the Council. The chairman of the Council would appropriately be from the Department of Economic Planning and Development.

The Council would identify the targets for growth and the broad

policies required to achieve them. Some of these policies, such as those requiring additional State expenditure, would require Government backing; others, such as the deployment of advisers and research personnel, would be of an administrative nature and would fall within the jurisdiction of the respective organisations represented on the Council. The Council itself should not require a substantial budget.

In identifying the targets and policies the Council should invite maximum local involvement through the advisory services. The planning of agriculture under previous programmes for economic development was particularly weak in this respect. The setting of national targets—even if accompanied by appropriate national policy—is not sufficient to obtain maximum development. These national targets and policies should be translated into local terms by involving farmers and their advisers in the formulation and implementation of planning. At present there is a certain amount of farm planning being practised by the advisory service, but there is no attempt to aggregate and co-ordinate this planning into national targets. Curiously, in former years when there were national targets, relatively little farm planning was practised. The time is overdue for an integrated approach involving local as well as national effort.

We envisage that each adviser would become in effect a development officer for his area. He would assess the resources in the area. He would identify the development that was likely to take place in his area over a period of years. He would further identify constraints on development which might be eased or removed by local or national initiative. Local farmers and advisers would thus be aware of their inputs to national development. They would become much more conscious of the development potential of their areas and the constraints on that development. They would have channels through which their particular knowledge of local problems could be taken into consideration in national planning. At the national level on the other hand, local participation would provide systematic information on what farmers are planning to do and what problems they are encountering. For example, the fodder shortage which accompanied the cattle expansion of the early 'seventies should not recur, because such a problem should be clearly foreseen and action should be taken to forestall it.

The establishment of this co-ordinating network might take some time to bring about. Any delay involved need not delay the launching of a

development plan. Targets along the lines of path I could be selected initially, and these targets could be modified as farmer preferences became better known. The targets should also be modified over time in anticipation of changing market circumstances. The essential objective would be to achieve and maintain an overall high growth rate; thus, if some enterprises were being cut back, alternative enterprises should be expanded to maintain an overall high growth rate. Fixed targets for several years ahead—as were incorporated in the Second Programme for Economic Expansion—while necessary for planning purposes, should not be over-emphasised, even in the relatively stable market circumstances of the EEC.

The Agricultural Development Council would need adequate links with the agricultural supply and processing industries to ensure that these industries were developing in harmony with on-farm production and to avail of the expertise in these industries. The arrangement should be such as to at least avoid a lag such as occurred in providing beef processing capacity in 1973 and 1974. Since the industries involved are diverse, links with them could probably be best established through formal liaison with representative bodies.

3.3 Irish Strategy within the EEC

There are two major dimensions to EEC agricultural policy, namely, price and non-price. In price policy, Ireland's approach since gaining EEC membership has been unequivocally to seek maximum price increases in all commodities. In the short-run, at least, this is clearly good national economics.

Increases in farm prices have three main direct effects:—

1. they raise farm incomes;
2. they raise consumer prices; and
3. they increase the country's external earnings.

With present levels of output, the approximate balance is as follows—of every £3 in gross receipts gained by farmers by increased prices, Irish consumers other than farmers pay £1 and foreign consumers pay the

other £2.[4] Thus the gain in external earnings is double the loss by domestic non-farmer consumers. This balance will shift further in favour of external earnings as output increases.

While the country as a whole gains from increased prices for farm products, there is at the same time a significant redistribution of purchasing power from non-farming people to farmers. This redistribution must be viewed in the context of the relative income position of the two subgroups. If in the light of that position the Government should wish to compensate domestic non-farmer consumers for some or all of their loss, it has the power to do so fully through tax and subsidy policies. Farmers and the country would still be net gainers, so the highest possible level of farm product prices must be in the national interest.

The foregoing considerations are purely short-term; they do not take into account other possible consequences of price levels which may take time to materialise. Thus, high price levels might increase the volume of production on farms, though the analysis in Chapter 1 does not support this conclusion. High consumer prices might increase the wage demands of workers if adequate compensatory policies are not pursued. High prices might aggravate the over-supply already prevailing on EEC markets and thus threaten the future of the CAP. It has been argued, for example, that by pursuing more moderate price policies in EEC negotiations Ireland could squeeze competing high-cost farmers in other Member States out of production, thus leaving more scope for expanded Irish production.[5] This strategy presumes more influence on decisions than Ireland can possibly have. In so far as Ireland has influence, it offers

[4]Sheehy, S. J., "Distribution Effects of Farm Product Price Increases", *Proceedings of the Agricultural Economics Society of Ireland 1973*. pp. 89–115, An Foras Taluntais. Also Sheehy, S. J., "MCA Abolition is a National Problem", *Irish Times*, 20 December 1976.

The balance between external gains and domestic transfers varies enormously from one product to another. For beef the ratio is about +7:1; for dairying it is +1·6:1; but for wheat it is −1:1. In other words higher wheat prices convey less gains to Irish farmers than the losses incurred by non-farmer consumers. This arises because Ireland is an importer of wheat—not an exporter. It may seem on this basis that Ireland should not seek high prices for wheat; but this is not feasible because wheat prices are linked with other grain prices where the national interest is served by high prices.

[5]Dukes, A. M., "The Future of the CAP", paper Read to the Annual Conference of the Agricultural Science Association, September 1977.

a very uncertain gain in the future in exchange for a certain immediate loss. This is not a very attractive proposition. On balance, these longer-term considerations are hardly of sufficient consequence to cancel the clear net gains from high prices.

In relation to non-price policy, there seems to be a tendency to evaluate EEC policy proposals on the basis of their direct pay-off in the form of EEC money rather than from the viewpoint of development. With a clearer view of national objectives, It would be possible to take a more creative attitude towards EEC proposals; we could fight to amend them where desired and possibly seek derogations in certain circumstances. There is, however, ample scope for changes that would greatly enhance development even within the present EEC framework.

3.4 The Farm Modernisation Scheme

The Farm Modernisation Scheme is the focal point of present agricultural development policy in Ireland. The Farm Modernisation Scheme was originally conceived by the EEC as a means of rationalising the structure of farming in conjunction with the Farm Retirement Scheme.[6] However, it is more or less adaptable as a development scheme. Under the Scheme, aids—mainly in the form of investment subsidies for farm improvement—are paid to farmers after they are classified into certain categories. The categories in Ireland are "commercial", "development", and "other". The development category receives somewhat more favourable aids than the commercial and other categories and a development plan is drawn up for farmers in this category. Up to the end of 1977 only 16% of all eligible applicants, or some 12,000 farmers, fell in the development category. There were in addition a large number of farmers who had not applied for aid at all since the scheme was initiated in February, 1974; 73,000 eligible applications had been received, so as many again full-time farm operators had not applied.

There are of course considerably more than 12,000 developing farmers in the country. A study of Farm Modernisation Scheme participants in Counties Clare, South Tipperary and Longford[7] revealed that 63% of those farmers in the "other" category who were under 55 years of age

[6]See the Preamble to Directive 72/159/EEC.

[7]Carey, D., "A Study of Existing and Alternative Criteria for Classifying Farm Modernisation Scheme Participants". Unpublished M.Agr.Sc. Thesis, Department of Agricultural Extension, University College, Dublin, 1976.

(these constitute 85% of all "other" farmers) would like to have the assistance of their advisers in drawing up farm plans. Some farmers have deliberately chosen to remain outside the development category; the relatively small additional benefits available to this category were not sufficient to outweigh what applicants saw as additional burdens such as the keeping of farm accounts. Other farmers have been excluded because of their inability to qualify under the rigorous conditions laid down. In particular, the income criteria are stringent: to qualify for the development category, the labour income per man must be below the comparable figure for non-farm workers but at the same time must be capable of reaching that figure through development.

The income target has been widely criticised as being too high.[8] One reason for this is the deduction of imputed capital charges for owned capital in arriving at the labour income. These charges are in reality part of the farmer's income, so that the actual income available to a farmer earning the target labour income is that labour income *plus* the sums deducted as imputed capital charges. The elimination of these deductions would make it easier to reach the income target and this is desirable.

Such a change in the present Scheme would not, however, significantly widen the band of farmers in the development category—it would merely lower the upper and lower limits and thus move the eligible band down a notch on the income scale. Widening of the band would require further amendment of Directive 159 which is the legal basis for the Scheme.

The level and breadth of the band of development farmers are not in any case the major weaknesses in the Scheme; rather the problem is the relatively weak development content of the Scheme. Even in the case of the "development" farmers, the commitment to development need not be very great. In some cases at least, the development plan is little more than a paper routine to establish eligibility for aids; neither the farmer nor his adviser have any serious intention of pursuing the plan. In other cases there is some commitment but not sufficient to move the farmer forward in his development. Most advisers find it impossible to re-visit the development farmers often enough to advise them and encourage

[8]See for example, P. G. Cox, "EEC Structural Policy and Irish Farming", paper read at An Foras Taluntais Conference, November 1974. Also *Irish Farmers' Journal* editorial, "Changing the Modernisation Scheme", July 23 1977, p. 2.

them along. In the absence of such follow-up service, many farmers are unable to pursue the planned development.

The changes in the Scheme which are required to strengthen its development aspect are therefore two-fold. First, a portion of the aids should be paid subject to performance, and second, all farmers with an interest in significant development should be assisted in planning their development regardless of whether or not they fit the EEC definition of a development farmer. Ireland is quite free under existing legislation to make these changes. In Directive 159 provision is made for paying the aids on investment either as outright grants, as deferred payments, or as interest rate subsidies. Ireland has traditionally used grants, and all farmers have opted for that method of payment in the Scheme. The grant has the advantage to the farmer of being more or less an immediate payment on completion of his investment. The deferred payments and interest rate subsidy, on the other hand, would be annual payments over a period of years. These would have the advantage of being payable as a bonus for satisfactory performance. They would be similar in nature to the payment made under the Small Farm (Incentive Bonus) Scheme which preceded the Farm Modernisation Scheme.

Proposals have been made before for a combination of grant and bonus payments for selected farmers.[9] We are convinced that this bonus payment approach is the one means available under present EEC legislation to achieve greater development from existing State aids. Parallel with this there would have to be a greatly intensified advisory service to provide sufficient on-farm advice and guidance to enable the farmers to carry out their plans. The bonus payment should ideally be sufficient, when combined with the tax and other incentives for development proposed in Chapter 4, to motivate a large number of farmers to develop, while at the same time placing a serious responsibility on the State to facilitate development through the advisory service and other development services.

The bonus payment might extend to include all existing payments under the Farm Modernisation Scheme. This would be the case if the interest rate method of investment subsidy were employed as is the case

[9]For example, *Submission by the Irish Agricultural Advisers' Organisation to the Minister for Agriculture on the Farm Modernisation Scheme*, December 1975. Also *the Fianna Fáil Election Manifesto*, June 1977.

in several other Member States. However, the grant form of subsidy is so established in Ireland that its complete replacement by interest subsidies might be disruptive and might deter some farmers from undertaking development. Therefore, we advocate a combination of a basic grant for all eligible investment supplemented by a bonus payment on the satisfactory achievement of development targets. The bonus payments should be available to all farmers achieving significant development regardless of whether the farmers fall within the EEC development category or not. This proposal is in effect a greatly extended form of the Small Farm (Incentive Bonus) Scheme which has been universally proclaimed a very successful Scheme[10]. It is similar to the Comprehensive Farm Development Scheme proposed in 1970 by the inter-departmental committee which reviewed the effectiveness of State expenditure on agriculture.[11]

The maximum annual bonus payment would depend on the amount of subsidised investment undertaken by the farmer, the proportion of the subsidy paid as grant rather than bonus, the degree of preference for the farmer under the Scheme, and the number of years over which the payment would be phased. The payment period would most logically be the period corresponding to the development plan.

Under Directive 159 preference would have to be given in the form of higher payments to the EEC category of development farmer. The existing preference for "development" farmers in the Irish Scheme is relatively minor *vis à vis* "other" farmers but is greater *vis à vis* "commercial" farmers. The continuation of the existing scale of preferences would be satisfactory.

The total payment to a farmer should in principle be equivalent in present value to the existing payments in the form of grants. Thus, the value of the aids for farmers who are genuinely developing would be the same as under the present arrangements. The timing of the payments would of course be different. This would mean that a farmer borrowing for development would require a somewhat different financial package than under the full grants system. In effect that portion of the grant payment paid as a bonus, which is now covered by short-term bridging finance, would have to be borrowed in the form of a term loan. This could

[10]Leavy, A., "Assessment of Small Farm (Incentive Bonus) Scheme", *Journal of Department of Agriculture and Fisheries 1976 Vol. LXXIII.*

[11]*Report of the Committee on the Review of State Expenditure in Relation to Agriculture*, The Stationery Office, Prl. 1231, 1970. Paragraphs 7.6 to 7.9.

cost the farmer somewhat more because of higher interest rates on term loans than on bridging finance. This small additional cost could readily be offset by appropriately adjusting the magnitude of the bonus payments.

The estimated expenditure on grants under the Farm Modernisation Scheme in 1977 was £24·5 million, of which 90% derived from the Irish Exchequer. A further £3 million was allocated for expenditure of a similar nature under the schemes which preceded the Farm Modernisation Scheme. There can be little doubt that a sufficient portion of these sums paid as bonuses would bring forth an impressive acceleration of growth, though the actual response is impossible to estimate. The total number of new applicants under the Scheme in the period July 1976 to June 1977 was 16,000. These consisted of about 2,600 "development" farmers, 500 "commercial" farmers, and 13,000 "other" farmers. If it is assumed that most of the "development" farmers would participate in the revised Scheme and that as many again from among the "other" applicant farmers would participate, then the current annual enrolment would be at least 6,000. In addition, there is a large volume of classified people returning for supplementary grants and these would also be brought under the revised scheme. These rates of application might not be maintained, but if they were there would be a considerable number of rapidly developing farmers within a few years.

3.5 The Advisory Service

The launching and supervision of a farm development plan requires intensive advisory work on each farm. Six to eight field visits might be required in the first year of development, but this number would decline in subsequent years. Assuming that the adviser could make 400 visits per year in addition to his office work and other responsibilities, on average about 75 developing farmers could be serviced per adviser. The number would probably be greater where farms are small with only one major enterprise and it would be less where farms are larger and more complex. How many extra advisers would be necessary would then depend on the up-take of the Scheme and the work-load of existing advisers.

The cost of an additional adviser plus all associated resources in 1977 was of the order of £10,000. Obviously the taxpayer should not undertake this expense unless it is likely to pay for itself. Taking average output

values for the 75 developing farmers of £8,000 each or £600,000 in total, and a target expansion of 10% per year, the total increase in output per year that would be realised is £60,000. Some 50% of this, or £30,000, would be added value.

This level of expansion is supported by the results of the Small Farm (Incentive Bonus) Scheme and the Pilot Area Development Scheme. The Pilot Area Scheme was initiated in 1964 in twelve representative agricultural areas in the West. The Scheme involved intensive advice associated with planned farm development programmes and supplementary capital grants of an incentive nature. The following is an assessment of the Scheme after its first five years of operation:—

> "Total gross margins in the twelve pilot areas (at constant prices) increased by 40% during the five-year period. Considering that the gross margin increase in the twelve (Western) counties in the decade 1959 to 1969 is estimated to have been no more than 8% or less than 1% per year, it is reasonable to conclude that the Programme appears to have had a very significant impact on farming in the twelve areas".[12]

Given this conclusion for twelve poor agricultural areas, it is extraordinary that this Scheme was terminated rather than being extended and that ten years later the elements of the Scheme have still to be justified as if they had never been proven.

The Small Farm (Incentive Bonus) Scheme was a similar type of effort initiated in 1968 for small farmers (those under 50 acres or £25 PLV and under a specified gross margin). The Scheme involved payment of an annual bonus on satisfactory achievement of targets within a development plan. This Scheme has been widely praised by the advisory service. A sample of 269 participants which has been studied showed that they increased the rGross Margins (or value-added) by 69% over a four-year period.[13]

Some of the expansion that would materialise from a supervised development scheme such as we advocate would arise even in the absence of any adviser. On the other hand additional farmers would

[12]Scully, John J., *Agrioulture in the West of Ireland—A Study of the Low Farm Income Problem.* The Stationery Office, Dublin Prl. 2017. Page 159.
[13]Leavy, A., Op. cit, p. 70.

be recruited into the development scheme as existing farmers completed their development programmes, so that over time the impact of the adviser would extend considerably beyond the initial 75 farmers. There would therefore be a very good prospect of adequate additional wealth being generated to more than offset the cost of the additional adviser.

Some other services such as land reclamation would also require additional manpower to cater for accelerated development. On the other hand, the administration of the Farm Modernisation Scheme and of other schemes, such as the Group Fodder Scheme, has given rise to an enormous increase in office work for advisers. Clerical and administrative assistance could perform some of this work, thus freeing the adviser for field work. Similarly, some of the routine work performed by advisers, such as soil testing, forage testing and preparation of material for classes and exhibits, could be handled by technical assistants.

The need for a much greater and more concentrated on-farm advisory input is perhaps most obvious in the case of dairying, though of course it exists for all enterprises. The standard of dairy husbandry is still very low on the majority of Irish dairy farms and the rate of improvement is far from satisfactory. Milk yields increased by only 4·2 gallons per year in the 1960 to 1975 period[14] but this has accelerated in recent years; stocking rates have remained static over the past decade[15]; the quality of silage is well known to be poor and there is little evidence of improvement[16]; and 75% of creamery milk suppliers were unaware of the level of their milk yields in 1976[17]. This performance is all the more to be regretted when it relates to the most profitable and stable of all grassland enterprises. If more progress cannot be achieved with this enter-

[14]NESC Report No. 34, pp. 46 to 48.

[15]Forage acres per L.U. from the An Foras Taluntais Farm Management Surveys for "mainly creamery milk" systems were 1·97 in 1966–67, 2·14 in 1967–68, 2·10 in 1968–69, averaging 2·07 for the three years; they were 2·17 in 1972, 2·08 in 1973, 1·92 in 1974 and 2·11 in 1975, also averaging 2·07 for those four years.

[16]See Barlow, M. and Moore, E., "Performance Records of Beef Cattle on Commercial Farms", *Irish Grassland and Animal Production Association Journal,* Vol. 10, 1975. Also, An Foras Taluntais, *Animal Production Research Report, 1976* p. 81.

[17]Kearney B., "The Structure of Dairy Farming and its Future Development" paper read to An Foras Taluntais Conference, November 1977.

prise, then it is unlikely that progress can be made with the less profitable and more unstable grassland enterprises of beef and lamb.

In NESC Report No. 34, annual yield increases of 20 gallons and 30 gallons were projected for dairy cows in the trend and high growth models respectively. Given the evidence of trends up to now, these increases would be unlikely to materialise except with a considerable increase in meal feeding.

To achieve significant progress in both grassland and dairy cow husbandry, a much higher advisory and research input is required. It is all too often assumed that farmers can master these husbandries with little or no technical assistance. The evidence clearly indicates that relatively few farmers have done so. Improvement on past performance will require a much greater and more precise advisory and research input in the future.

We would envisage all developing farmers being visited by an adviser at the critical stages of the production cycle such as at forage-making time and at pre-calving time. The adviser and the farmer should have the necessary data on forage quality, the approximate milking capacity of individual cows, time of lactation, etc. to enable a detailed analysis of the optimum practices for the farmer. Only in this way can the farmer be made conscious of the critical variables in his operations and the means of changing them. There is good reason to believe that given this analysis and advice, the stockmanship to be found in a large number of Irish dairy farmers would enable a reasonably rapid improvement in technical efficiency. The initiation in 1977 by an Foras Taluntais of a Management Information Service is a welcome development which would be complementary to an increased advisory input.

For commercial farmers who have already achieved a reasonable level of husbandry and economic performance, the provision of more specialist advice is a growing requirement. Such advice is difficult to organise within the existing county structure of the advisory service. The proposed reorganised service should, however, be able to accommodate it.

A further aspect of our proposals in relation to the advisory service, is the increased authority that would be given to the adviser by virtue of the function of assessing the progress of farmers for the purpose of bonus payments (as well as other rewards for performance proposed in Chapter 4). It might be argued that the role of the adviser as an arbitrator

of the farmer's eligibility for rewards would not be compatible with his role as adviser and confidant of the farmer. This power of sanction was first given explicitly to advisers in 1968 under the Small Farmers (Incentive Bonus) Scheme. This bonus in 1969 was £75 which in terms of 1977 agricultural prices would be about £250. Our clear impression from discussions with a number of advisers is that such a function greatly enhanced the authority and effectiveness of the advisers and caused no conflicts of interest for the adviser. This is supported by the evidence that the adviser's organisation itself has advocated the restoration of incentive payments in their work.[18] We would accept that, if the payments over which advisers arbitrated became very large, then problems of administration might occur. We do not envisage such circumstances arising from our proposals.

3.6 Education and Training

The low level of education among farmers has been amply documented in recent years. In 1973, only 16% of all farmers had received post-primary education; 32% had taken short courses in agriculture; and only 2% had a year's training in an Agricultural College.[19] This deficient situation is changing rapidly, however, as general education has become more available to everyone and as agricultural education has been improving with domestic and EEC support. Thus a survey of new operators entering farming in the 1971–75 period showed that of those under the age of 30 years, 63% had post-primary education, 35% had taken short courses in agriculture (though this figure was thought likely to be underestimated), and 16% had Agricultural College training.[20] Undoubtedly standards have continued to improve, so that considerable progress is being made on the education front.

The accelerated development of agriculture to be achieved by the policies proposed in this Report would be facilitaed by higher levels of education. Training the farmer of to-morrow is as important an undertaking as training craftsmen or professionals or any other members of

[18]Submission by the Irish Agricultural Advisers' Organisation to the Minister for Agriculture on the Farm Modernisation Scheme, December 1975.

[19]Keenan, P., "Technological Education for Farmers", in *Symposium on Technological Education for Agriculture.* June 1977. The National Council for Educational Awards.

[20]NESC, Report No. 27, op. cit., Section 3.8.

society. Proper training is quite complex because the well-trained farmer is both a skilled operative and a manager of a substantial amount of resources. The process is further complicated by the fact that the older members of the farming community cannot attend formal courses to any extent. They must be helped on their farms with intensive advisory services as already proposed.

Formal courses are, therefore, mainly for the younger generation. The aim for those entering farming should be a primary education incorporating some nature study, a secondary education up to Leaving Certificate standard including subjects such as Agricultural Science or Biology and finally a year in an Agricultural College. Unfortunately, two-thirds of those entering farming finish their secondary education at Intermediate Certificate level[21] and five-sixths never get to an Agricultural College.

Many farmer-fathers would not consider a year's absence from the farm to attend an Agricultural College a feasible proposition for a son. To cater for this situation a variety of part-time non-residential courses are available through the advisory service. The Winter Farm School is one of these. It is a course of 100 to 200 hours for young people who have entered farming but who have not yet assumed managerial responsibility. This is now complemented by courses under EEC Directive 161. The Basic Training Course under this Directive is designed for the young farmer who is assuming or has assumed management control of the farm. Provision for advanced courses has also been made under the Directive. For those farmers who can be persuaded to release their sons for a year, the Agricultural Colleges are available; since a half of their current output does not return full-time to farming, considerable scope exists for better utilisation of the capacity available.

Thus, the framework for a comprehensive education of farmers either now exists or is in the process of being established throughout the country.[22] At a symposium on Technological Education for agriculture in the summer of 1977 it was admitted that difficulty was being experienced in filling the Winter Farm Schools, the Basic Training courses and the Agricultural Colleges. In addition, it was revealed that the Regional Technical Colleges had spare capacity which could be used

[21]Department of Labour, National Manpower Survey—Second Level School Leavers, 1974–75.

[22]See an outline of this system and plans for the future in P. Keenan, op. cit.

for specialised agricultural training, and that the Agricultural Faculty in UCD was producing more graduates than the market could absorb. Indeed, it would seem that in many spheres the limitation at this stage relating to education is one of the demand for the available services rather than supply.

Farmers are still reluctant to seek further education themselves and they are equally reluctant to facilitate and encourage their children to acquire sufficient education. The need at this stage is to co-ordinate the resources that are available and actively to promote the desirability of education among farmers. The appointment over the past few years of Deputy Chief Agricultural Officers in charge of education provides the nucleus of manpower around which this can be done. The educational division of the proposed Agricultural Training Authority should be able to provide the national leadership required. The strong emphasis on performance in our proposals, with the consequence of a greatly increased number of genuinely developing farmers, should foster an increase in the demand for education. The specific education requirement for priority access to land recommended in Chapter 4, Section, 4.3, should be a further stimulus.

As demand for education and training is developed, the need will quickly arise for further resources. Already the advisory personnel in many counties are stretched beyond the point where a satisfactory job can be done. The State has an obligation to provide for farmer training at least an equivalent endowment as is provided by industry through AnCO. At the same time, the more farmers who seek education and training the more likely the State is to respond.

In addition to farmer-training, there is also need for the training of farm managers, technicians, mechanics and other skilled operatives to service farming and its associated industries. We have not been able in this Report to review this entire area. We are aware, however, of the excellent work being done under the Farm Apprenticeship Scheme to train both farmers and farm managers. We are also aware of the considerable employment that is provided in the service areas, and we have argued in Report No 34 that such employment would greatly increase if agricultural development were accelerated. We see our scheme of national planning as providing the means of identifying new needs and opportunities. The framework must also exist under the Agricultural Training Authority to harness all available resources to meet these needs.

The establishment of socio-economic advice under Directive 161 is also necessary. As will be emphasised in Chapter 4, these advisers would have a special role to play in aiding the transfer of farms from father to son by leasing or by other arrangement. In addition, they would advise on leasing arrangements in general and they would counsel older farmers on the options open to them under the revised Voluntary Retirement Scheme outlined in Chapter 4.

3.7 The Role of the Co-operatives

Farmer co-operatives, particularly in dairying, have in recent years taken an increasingly active role in stimulating farm production. The pay-off from their efforts has not in many cases been as great as it should be because of the weak State developmental approach to agriculture.

In the new environment proposed in this Report, the co-ops would have a vital role to play. Their major function in our view should be to bridge the service gaps that would arise with rapid development. The organisation and/or provision of building services, machinery contract services, land reclamation schemes, group water schemes and relief milking are examples where the local co-op can make an essential contribution towards facilitating development. This function would be a concrete expression of the social dimension of co-operative enterprise and should receive far more emphasis than it does now. Hopefully all co-ops would be willing to follow the present leaders in these areas.

Co-ops could also augment the efforts of the general advisory service. They could, for example, supplement the State bonuses for development by additional schemes and prizes of their own. They could also underwrite some physical or staff resources within their region which would improve the effectiveness of the general advisory service. In all these ways we would hope to see more co-ops play a more effective role in the future than in the past.

3.8 Schemes relating to the Poorer Regions

There are two major special schemes in operation for farmers in the poorer regions of the country: the Disadvantaged Areas Scheme and Smallholders Unemployment Assistance, otherwise known as the farmers' dole.

The Disadvantaged Areas Scheme[23] has operated since 1975

[23] *EEC Directive 75/268*, Official Journal No. L.128, 19 May 1975.

throughout the West and in selected mountain areas elsewhere.[24] It consists mainly of headage payments on livestock and supplementary investment aids for selected undertakings. The objective of the Scheme is "to ensure the continuation of farming, the maintenance of a reasonable level of population, and the preservation of the countryside".[25] The expenditure under the Scheme in 1977 was £19·2 million of which 35% was recouped from the EEC. There is a proposal tabled by the EEC Commission to increase the 35% contribution to 50%.

Most of the expenditure relates to livestock headage payments. Also, increased investment aids are available to "development" farmers coming under the Farm Modernisation Scheme, but these are so few in the disadvantaged areas—amounting to less than 5% of all applicants—that the increased aids account for only a small fraction of the total Scheme's cost.

The livestock headage payments are intended under the Directive to compensate farmers for the permanent natural handicaps they experience in production. The maximum payment permitted is 52·5 Units of Account per livestock unit and per hectare. This sum is equivalent to £38·8 with the "green" rate of exchange prevailing in the latter half of 1977. The livestock headage payments which are made in Ireland fall far short of the maximum. They vary in their coverage and their scale between what are termed the "severely handicapped parts" and other parts of the disadvantaged areas. In the "severely handicapped parts" payments are made on all livestock including dry cattle, sheep, beef cows, and dairy cows to a maximum of 10 in any one herd. In the other disadvantaged parts, payments are made only on beef cows and sheep. In all areas the payments are subject to a maximum sum per forage acre and per herd-owner. The highest payment per livestock unit is £16 and the maximum payment per herd-owner is £370.

Unemployment Assistance was first introduced in Ireland in 1933. Up to 1966 it was payable to farmers as to others subject to a means test. This meant that if a farmer increased his farm income he reduced his entitlement to Assistance. There was as a consequence a disincentive to

[24] For a detailed description of the Scheme, see P. G. Cox, "EEC Directive 268 and the Disadvantaged Areas", Regional Studies Association discussion paper, April 1977.

[25] *Government Information Service Press Release 73/75*, Dublin, March 1975.

farm development.[26] Because of this, the means test was altered in 1966 from an actual income basis to a notional income basis for small farmers in the Congested Districts. The notional income was calculated as twenty times the Rateable Valuation of the land. This level was held constant up to 1976 despite a four-fold increase in farm money incomes over the period.

In 1976 and 1977 further changes were made in the scheme. The situation in 1977 was that male land-holders in the Congested Districts with land valuations up to £10 received the full benefits subject to a multiplier of 20; for land-holders with valuations between £10 and £15, the multiplier was 20 but the level of benefit was frozen at the 1976 level; for land-holders with valuations between £16 and £20, the multiplier was 30 and the benefits were frozen at the 1975 level; and for land-holders with valuations exceeding £20, the notional assessment no longer applied. Some 26,000 small-holders under £20 rateable valuation shared £20 million Assistance in 1977.

The Smallholders' Unemployment Assistance has been criticised over the years as being demoralising and inequitable.[27] On the other hand, many of its recipients are undoubtedly as deserving of the assistance they receive as any other beneficiaries.[28] Furthermore, the restrictions imposed on the benefits in 1976 and 1977 have removed some of the anomalies which have been the subject of criticism in the past.

In the context of this Report, the question arises as to whether the very substantial sum of £40 million expended in 1977 under the Disadvantaged Areas Scheme (DAS) and Smallholders' Unemployment Assistance (SUA) could be more directly linked to development than is the case now. The very low headage payments under the DAS can hardly be much of an incentive to farmers to increase their numbers of livestock. In effect, the payments are little more than an income supplement to farmers in the specified areas. At the same time, the SUA has

[26] *Report of the Inter-Departmental Committee on the Problems of Small Western Farms*, the Stationery Office, Dublin, Prl. 6540, 1963. Paragraph 67.

[27] McDyer, J., *West Donegal Resource Survey: An Appraisal*, Donegal, 1970.

[28] Curry, J. *"Some Income Problems and Possibilities on Small Farms"*. Paper read at Annual Conference of the Agricultural Economics Society of Ireland, October 1975. Also NESC, *Rural Areas: Social Planning Problems*, Report No. 19, the Stationery Office, Prl. 5376, June 1976. Paragraphs 57–62.

no direct connection with improved farming though some farmers may, of course, invest part of their SUA in their farms.

We believe that the DAS's objective of retaining a viable population in the West must be pursued primarily by economic development. This involves the creation of more off-farm employment and more on-farm employment. We recognise that many farmers in the Disadvantaged Areas have serious handicaps, but we are not willing to endorse a passive attitude towards these handicaps as tends to be the case with current policy. The long-term prosperity of the West—as of the remainder of the country—depends on development, not on welfare. We accept, however, that welfare is necessary for the genuinely needy.

We propose therefore that some of the SUA expenditure be reallocated to the DAS to increase the level of headage payments and the maximum amount that herd-owners can receive. A high level of headage payments would be a significant incentive for farmers to increase their stock numbers. More farmers would also be eligible for the EEC "development" category in which case they would benefit from the enhanced investment grants available in the Disadvantaged Areas.

A reallocation of all SUA expenditure towards headage payments would not, however, be socially desirable. Those who now receive SUA and who have very few agricultural resources would experience a considerable drop in benefits. At the same time they could not increase their stock numbers to offset the loss of SUA. The sum to be reallocated should be the sum saved by the application of a realistic multiplier in determining eligibility for SUA instead of the exceedingly low multipliers now used. A realistic multiplier could be calculated by An Foras Taluntais as the family farm income per £1 rateable valuation in the twelve western counties. Smallholders whose actual incomes were less than this average level could still apply for assistance on a factual income basis. Thus, no hardship would be imposed on SUA beneficiaries by comparison with other people in receipt of unemployment assistance. The genuinely needy would still be taken care of. Indeed, those smallholders with farm incomes exceeding the notional assessment would retain an advantage over all others. Such an advantage has the same merit as the notional assessment for income tax purposes—it provides a significant incentive for intensification.

We do not have available the necessary data to quantify the magnitude of the SUA expenditure that would be reallocated under our proposals.

We believe, however, that it would be sufficient to afford a considerable increase in headage payments. Since the headage payments are part funded by the EEC, the funds available to the Exchequer to increase the headage payments could be increased by considerably more than the actual SUA savings. With the present EEC contribution of 35% towards the headage payments, every £1 re-allocated from the SUA to headage payments would enable £1·54 to be added to headage payments while leaving the Irish Exchequer's contribution constant. If the EEC increases its contribution to 50% as proposed, every £1 re-allocated could be doubled as a headage payment. The gain to the country is a pleasant side-effect of our proposal, while also making the operation of the DAS in Ireland more compatible with the intentions of the EEC.

The headage payments are presently made without any stipulation as to the condition and quality of stock on the farms. With greatly increased payments, there might be the danger of farmers increasing their stock numbers while allowing the quality to deteriorate. This should be prevented by introducing appropriate conditions of payment.

In article 1 of Directive 268 it is stated that "the application of the measures provided for in this system (of aids) should take into account the situation and development objectives particular to each region". Article 6 (2) further states that "Member States may lay down additional or restrictive conditions for granting the compensatory allowance (the headage payments)". We propose therefore that development conditions be attached to the payments. Such conditions might merely stipulate that adequate winter feed be produced on the farm to maintain the livestock carried. We would advocate a more comprehensive requirement, namely, that farmers in receipt of a substantial payment—perhaps those with 15 livestock units or more—would participate in a development plan with their agricultural adviser, if the resources on the farm were deemed by the adviser to permit of significant development.

One of the great hazards of suckling systems which are common in the Disadvantaged Areas is their vulnerability to price fluctuations. This was experienced in extreme form in the 1974 cattle crisis;[29] as a consequence the subsequent reduction in cow numbers has been recorded entirely in the suckling herd. A recurrence of this catastrophe is unlikely, especially under the co-ordinated planning we advocate. However, the

[29] *Report of the Review Body on Beef Intervention.* Ibid. Paragraphs 7.15 to 7.35.

additional insurance of a stabilisation fund is desirable. Such a fund has been proposed previously in the form of counter-cyclical headage payments by the Review Body on Beef Intervention.[30] In effect this would involve the retention of a portion of headage payment when young cattle prices are relatively high and its disbursement in the years when young cattle prices are depressed. The details of the proposal may be found in the Review Body Report.

Our proposals in relation to the DAS do not overcome the fact that DAS payments are in direct conflict with the Voluntary Farm Retirement Scheme which encourages non-viable farmers to retire (See Section 4.1.1). To overcome this problem the DAS payments should be confined to farmers with resources capable of development and who are willing to develop them. Then payments would only be made on livestock of farmers participating in a development plan. Such a condition would hardly be acceptable to the EEC authorities under the present Directive. It should, however, be sought when the Directive comes up for review. It does not serve the objectives of the Directive or the interests of the Irish taxpayer that payments be made indiscriminately as at present to, among others, non-viable farmers who should be encouraged to retire by an adequate Retirement Scheme and part-time farmers who may have good incomes from outside farming.

[30] *Idem.* Paragraphs 7.36 to 7.44.

CHAPTER 4

STRUCTURAL AND TAXATION POLICY

The policy proposals up to this point are aimed at achieving more rapid development on Irish farms as they are currently structured, in the form of their land, labour, capital and management endowments. However, the imbalance between these resources on many farms is such that significant development is unlikely to take place even with our proposals in operation. In particular, the imbalance between management and land is a major national problem. There are many farms with a good land endowment but where the management is such that neither existing policies nor the revised policies advocated up to this point are likely to stimulate development. There are at the same time many other farms where the management is responsive but where land is scarce.

The balance between these resources changes over time as the use of land is reallocated among new managers either by renting or by acquisition. In Ireland the practice of renting is virtually confined to the eleven-months or conacre system; there are very few medium-term or long-term leases which are common in most other European countries. This is shown by the data in Table 4.1. Denmark would seem to be the only Member State of the EEC with a tenure system similar to that of Ireland. But in fact this is not so, because in Denmark owner-occupiers are extremely heavily indebted and the ownership is not at all as rigid as in Ireland.[1] Furthermore, the tenancies in Denmark tend to be medium-term and not short-term as in Ireland. Therefore, the tenure system in Ireland is unique within the EEC.

Because of the preponderance of owner-occupancy in Ireland, the use of land passes to new management mainly by acquisition of ownership.

[1]OECD Agricultural Policy Reports, *Capital and Finance in Agriculture, Vol. II.* Paris, 1970. Chapter on Denmark.

TABLE 4.1

Percentage distribution of total utilised agricultural area according to tenure system in EEC Member States

	Owner-Occupier	Tenancy	Share-Tenancy	Other
Belgium	28·6	71·4	0	0
France	51·8	45·9	2·3	0
Netherlands	51·9	48·1	0	0
United Kingdom	53·1	46·9	0	0
Luxembourg	64·5	29·1	0·9	5·5
Italy	70·0	17·8	8·9	3·3
Germany	77·7	22·1	0	0·2
Denmark	90·0	10·0	0	0
Ireland	92·0	8·0	0	0

Source: Newsletter of the Common Agricultural Policy, European Communities, Directorate General Press and Information, March 1977. Page 1.

This happens when land-holders retire or die and their land passes by inheritance or through purchase to another owner. Farmers do not relinquish management control until they are elderly; the age distribution of farmers who had handed over control during their lifetime in the period 1965 to 1970 was—23% under 65 years, 46% between 65 and 74 years, and 31% at 75 years or older.[2] These ages did not vary significantly by size of farm. Transfers on death occurred at even more advanced ages. The age of transfer may have declined in more recent years, but it is still likely to be quite high.

Information on the characteristics of new operators who came into farming in the period 1971 to 1975 was published in NESC Report No. 27.[3] A new operator was defined as any person who assumed management control of land during the period. New operators therefore included people enlarging their holdings as well as people who assumed

[2]Macra na Feirme, *Farm Inheritance and Succession*, Irish Farm Centre, Dublin, 1973. Table 6.2.

[3]NESC, *New Farm Operators, 1971 to 1975*. Report No. 27, The Stationery Office, Prl. 5832, 1976.

management control in farming for the first time. Four-fifths of this latter category were of the new generation of farmers and one-fifth were of the old generation, typically widows or brothers. The age distribution of the new generation of farmers was 57% under 30 years, 27% between 30 and 40 years, and 16% over 40 years.

The Irish system of land transfer is therefore characterised by very aged withdrawals and moderately aged entrants. The average functional life of managers in farming is estimated to be between 30 and 35 years,[4] so that only some 3% of all land changes management control each year. It has been argued in the past that the advanced age of many Irish farmers and the apparent absence of heirs on many farms would soon lead to accelerated mobility as the older farmers died off and their land came onto the market for sale.[5] In addition, it was suggested that new entrants to farming had greatly diminished and consequently average farm size would increase rapidly.[6] Evidence presented in NESC Report No. 27, however, shows that what is actually happening is that farmer's relatives who previously assisted on farms now acquire secondary education and take up off-farm employment. But when their parents die they inherit the land and they farm it, mainly as part-time farmers. Land mobility is therefore not increasing and the pace of farm enlargement is still exceedingly slow. Unless the age of retirement can be considerably reduced, the turnover of managers will remain a very slow process; and unless the overall land transfer system is changed, the process will continue to be haphazard.

Structural policies are actions of the State which attempt to influence the pace and direction of land transfers over time. Such policies are pursued for both social and economic reasons. Within the Common Agricultural Policy the structural dimension is covered by Directives 159, 160 and 161.[7] Directive 159, as discussed earlier, aims at making certain categories of farmers viable who are not already viable according to EEC criteria; Directive 160 offers incentives to other categories of

[4] *Idem.* Appendix II.

[5] See, for example, Department of Agriculture, *Report of the Committee on the Review of State Expenditure in relation to Agriculture*, the Stationery Office, Dublin, Prl. 1231, 1970, paragraph 7.46. Also J. J. Scully, *Agriculture in the West of Ireland*, Stationery Office, Dublin, Prl. 2817, pp. 37–38.

[6] NESC Report No. 27. Paragraphs 17 to 20.

[7] Department of Agriculture, *EEC Farm Structures Policy*, Common Agricultural Policy Information Series, No. 3, 1977.

farmers to retire and release their land to be reallocated to potentially viable farmers; Directive 161 makes aid available for the education and guidance of both those who are leaving farming and those remaining in farming. Directive 159, in the form of the Farm Modernisation Scheme, is seen in Ireland as more a Scheme for farm development than for structural reform; our proposals to modify the Scheme would orientate it even more towards development. Directive 160 has been implemented by appropriately modifying an earlier farm retirement scheme to give the New Voluntary Retirement Scheme. Directive 161 has already been dealt with in Section 3.6 of the previous chapter.

Rather than deal with structural policy under the headings of the existing Directives, we choose a more comprehensive approach according to the methods of transfer which now operate. These are inheritance, open-market purchase, and Land Commission purchase. It can be estimated from NESC Report No. 27 that nearly 80% of all transfers arise through inheritance; 15% are open-market purchases; and 6% are Land Commission purchases. Even though open-market and Land Commission activity receive by far the greatest attention in public debate, it is evident from these statistics that policies to influence inheritance are likely to have the most widespread consequences.

4.1 Policy Relating to Inheritance

The objective of this policy should be to achieve earlier retirement of farmers so that the new generation of managers can assume control as soon as possible. This should increase the rate of economic development while also enhancing the social opportunities of incoming farmers.

4.1.1 The Voluntary Farm Retirement Scheme

The Voluntary Farm Retirement Scheme is one important component of inheritance policy. It is potentially a useful instrument for lowering the age of retirement. The EEC contribution to this scheme is confined to participants in the age range of 55 to 65 years. Since most retirements in Ireland are close to the upper limit or above it, there is very little EEC contribution; the Scheme is almost entirely paid for by the Irish taxpayer.

Obviously the effectiveness of the scheme depends to a considerable extent on the magnitude of the incentives offered. This is not to say that

social considerations are not also of great importance.[8] The incentives consist of a retirement pension plus a premium on the price of the land in the event of the farmer leasing his land. These incentives are in competition with other State benefits which are available to the farmer who chooses not to retire. Farmers may receive the Old Age Pension and associated non-cash benefits when they reach the age of 66. Farmers in the Western Counties may receive in addition the Smallholders Unemployment Assistance up to the age of 66, and the headage payments under the Disadvantaged Area Schemes regardless of age. Clearly the retirement incentives cannot be evaluated without considering the competing benefits.

Examples of the magnitude of competing benefits are given in Table 4.2. The premium paid under the Voluntary Retirement Scheme (at 10% of the price of the land up to a maximum of £1,500) is not included in the Table. This is considered as a payment to induce the farmer to sell within the Scheme rather than on the open market. The data relate to the "severely handicapped areas" and show that farmers of 66 years or over could lose substantially by volunteering to retire under present payments if their means entitled them to the upper ranges of the Old Age Pension. Furthermore, this could be so throughout the Congested Districts even where the Disadvantaged Area Payments would normally be less than shown in the Table.

Under 66 years of age there is only a small advantage in the retirement pension in the "severely handicapped areas"; the advantage increases as the size of farm increases; the advantage would be greater in the Disadvantaged Areas outside the severely handicapped areas where the Disadvantaged Area Payments would be less than shown; in non-Disadvantaged Areas and non-Congested Districts the advantage would be equivalent to the full retirement payment because neither the Smallholders Assistance nor the Disadvantaged Area Payments would be available.

These comparisons of the absolute levels of benefits do not take into account two other adverse factors relating to the Retirement Pension. This pension has not been increased as much or as regularly as the competing benefits. Between its introduction in May 1974 up to the autumn

[8]See Kelleher, C. and Patricia O'Hare, "Adjustment Problems of Farmers in the Context of Agricultural Development", paper read at An Foras Taluntais Conference, November 1976. pp. 24–25.

TABLE 4.2

Farm retirement benefits compared with other State benefits available to selected non-retiring farmers without children in the "severely handicapped areas" October 1977

£ per annum

Farm Size[1]	Age	Marital Status	Continuing in Farming	Retiring
£10 PLV or 30 acres	55–65	Single	£336 SUA[2] + £148 DAS[3]	£606
		Married	£731 SUA + £148 DAS	£918
	66 +	Single and alone	Up to £694 OAP[4] + £148 DAS + £73 non-cash benefits[5]	£606
		Married with wife of 66 +	Up to £1,284 OAP + £148 DAS + £73 non-cash benefits	£918
£15 PLV or 45 acres	55–65	Single	£145 SUA + £198 DAS	£606
		Married	£475 SUA + £198 DAS	£918
	66 +	Single and alone	Up to £694 OAP + £198 DAS + £73 non-cash benefits	£606
		Married with wife of 66 +	Up to £1,284 OAP + £198 DAS + £73 non-cash benefits	£918

[1]Average per acre rateable valuation assumed at £0·33.

[2]Smallholders' Unemployment Assistance.

[3]Disadvantaged Area Scheme payments assumed at one livestock unit per 3 acres.

[4]Old Age Pension. Since this is subject to a means test, the figures shown are the maximum and would be reduced depending on means.

[5]Non-cash benefits consist of electricity relief and free black-and-white television licence. The electricity component consists of relief from the normal fixed charge on the domestic consumer tariff calculated here at the minimum level of £12·90 per year plus free electricity calculated at the maximum of 1,500 units valued at £41·19 per year.

of 1977, the Retirement Pension was increased twice (May 1976 and May 1977) by a total of just over 50%; over the same period the competing welfare payments have been increased seven times by over 100%. Therefore, even if the Retirement Pension bestowed an advantage at the time of retirement, that advantage could be quickly eliminated as alternative benefits were increased.

Finally, the Retirement Pension is liable to income tax if the farmer's total taxable income after retirement brings him into the tax net. Welfare payments, including the Old Age Pension and the Smallholders' Unemployment Assistance, are not taxable.

In summary, the financial advantage of the Retirement Pension over competing State benefits varies widely depending on the circumstances of farmers. In general, however, it may be said that the advantages are greatest in areas outside the Congested Districts and for farmers whose means would deprive them of most or all of the Old Age Pension. The areas most in need of structural reform therefore receive least advantage from the Retirement Scheme.

The Scheme could be made more attractive either by increasing its benefits or by reducing the competing benefits. Our proposal in Section 3.8 to reallocate funds from the dole to the Disadvantaged Areas Scheme might reduce the conflict between the Retirement Scheme and these other schemes, but conflict would still exist. The only solution here is to pay a significant bonus over competing benefits to attract volunteers into the Retirement Scheme. Since the competing benefits vary from farmer to farmer, the retirement benefits should also vary. We therefore propose that the present fixed payments be made flexible on the principle of incorporating incentives significantly greater than the alternative State benefits which the farmer would be entitled to if he did not retire. This would also imply a parallel adjustment over time in the retirement and in welfare benefits. Further flexibility in the retirement benefits should be tolerated where particularly well qualified recipients are available to farm the released land.

The net cost to the Exchequer of the Scheme would be the bonus paid over and above the alternative State costs. The economic benefits from the Scheme would be the additional value added on the land transferred on retirement. Since the land released would generally be poorly farmed and would be transferred to potential development farmers working to a development plan, the increased value added should be considerable. A doubling of value added from £30 per acre to £60 per acre would be a conservative expectation. Such a pay-off would finance a considerable bonus over competing benefits. There would be in addition the social gains in the living conditions of the retired farmers.

In view of the unsatisfactory nature of the present payments, it is not surprising that the number retiring under the Scheme is small. Between May 1974 and the end of 1977 the number was 371 and the total land thus released for reallocation was 15,600 acres. Even with improved benefits it would not be realistic to expect this Scheme to make other than a small contribution towards structural reform in the future. Therefore, it should be supplemented by more general efforts to achieve earlier and more effective land transfer.

4.1.2 Family Transfers

A "Family Farm Leasing" system which has been proposed by Macra na Feirme[9] is one possibility for facilitating earlier family transfers. If a farmer preferred to sell his farm to an heir rather than lease it, a parallel system of "inheritance annuity" could be adopted. By this we mean that the owner would actually sell his holding to his successor at part or full value on an annuity basis rather than just give it away free or on a leasing arrangement. The annuity would be a guaranteed income for the seller. It could be set at any capital level up to full value, at any level of interest, and over any period of years that are mutually acceptable to seller and purchaser. The purchaser would be the owner, subject only to the annuity and to the seller retaining rights of residence if so desired. The purchaser would then live in a second temporary residence or in rented accommodation in the vicinity. The arrangement could work between any two people and not just between fathers and sons. The annuity should be free of tax to encourage its adoption. The Land Commission, at the request of the participants, could perform a valuable administrative role in the scheme by acting as the collecting and paying agency for the annuity. In the event of default, the Land Commission could refuse to vest the holding in the name of the heir.

These kinds of systems would require precise development and active promotion among solicitors as well as among farmers if they were to have a chance of general adoption. Socio-economic advisers under Directive 161 could implement such a campaign.

[9] Macra na Feirme, op. cit., pages 123 and 124.

4.1.3 Taxation

The general taxation system should be actively used as a means of achieving earlier retirement as it is used to achieve other socio-economic objectives. The present code should be revised wherever it can be shown to impede early transfer. One such area is the operation of capital gains tax on lifetime transfers of over £250,000 to sons and nephews; under the present code farmers can reduce their tax liability by postponing transfer till after death. The system of death duties that applied up to 1974 made a positive contribution towards earlier retirement by reducing the liability if the estate had been transferred prior to death. A similar variation should be incorporated in other taxes. For example, the present differences in tax rates between gifts which are lifetime transfers and inheritances which are transfers after death should be scaled in relation to the age of the donor. Also the option available in the farmer income tax code as between notional income and actual income could be restricted above the age of 65. At the same time, income derived from the sale or leasing of land to designated categories of people should receive favourable tax treatment provided there had been a sufficient period of ownership of the land.

4.2 Policy Relating to Open-Market Purchase

Open-market purchase accounts for only 15% of all land transfers. It is particularly prominent in farm enlargements, accounting for about two-thirds of all non-Land Commission enlargements.[10]

The agricultural land market functions in Ireland subject to minimum Government regulation. The main constraints on free sale relate to non-national purchasers, permission for sub-divisions, and Land Commission requirements. Foreigners can purchase ordinary agricultural land only with the permission of the Land Commission. The Land Commission itself has power to purchase, either voluntarily or compulsorily, land which it requires for the relief of congestion.[11] In recent years the Land Commission has acquired about one-quarter of all land that is transferred by purchase.

The functioning of the agricultural land market is the object of frequent criticism. The main allegation is that the market is weighted

[10]See NESC Report No. 27, Section 3.6 for the data quoted in this section.

[11]Kolbert, C. F. and O'Brien, T.—*Land Reform in Ireland*, University of Cambridge, Department of Land Economy, Occasional Paper No. 3. 1975. Appendices A and B.

against small and medium-sized farmers who are most in need of additional land to remain viable. Since land goes to the highest bidder, it is natural that this is the case. The problem is aggravated by the very high price of land generally prevailing in Ireland relative to the current income which it is capable of generating. This means that only a person with surplus income from another source can afford to purchase land. These people are typically either well-established medium or large farmers or people with a non-farming job. In the 1971 to 1975 period, 54% of all land passing through the open market was purchased by people with non-farming jobs.

Another important criticism of the agricultural land market is that it is extremely difficult for people to enter farming *via* this route. Only 10% of all new farm operators established themselves in farming by open-market purchase between 1971 and 1975. Most of these had non-farm jobs; only one-fifth had been farming full-time.

These criticisms of the agricultural land market are social in nature rather than economic; they relate to the type of people who acquire the land rather than to the use made of it. Indeed, the limited evidence available indicates that purchased land is reasonably well utilised. This is only as would be expected when one considers the enormous repayment charges when a substantial part of the purchase price is borrowed. From the point of view of economic development, there is not therefore a clear case for further regulation of the market.

The economic case that does exist is that highly competent small farmers cannot compete with some less competent large farmers or non-farmers. There is, of course, a strong case in equity for a fairer distribution of land among those capable of utilising it. Such distribution would sustain more individual family farm units and therefore more employment than large scale mechanised farming. This is an important consideration in Ireland. In addition, full EEC membership may require a repeal of present legislation discriminating against non-national buyers. If this should be the case, then the Government would have to choose either freedom of purchase by all EEC nationals or general controls on purchase which would be the same for Irish people as for other EEC people. In this event there would be a further economic case for regulating sales to guard against speculative buying that might not be optimal economically.

Taking both the economic and the social aspects of land purchase

into account, we support the main proposals of the Inter-Departmental Committee on Land Structure Reform.[12] In particular we support the proposal that an appropriate agency would monitor all land sales and regulate the market. The agency might refuse its consent to a particular transaction where it was satisfied that—

(a) the proposed purchaser already owns sufficient lands which, if efficiently used, could provide an acceptable standard of livelihood for him and his family;

(b) the proposed purchaser does not intend to reside on the property and does not live close enough to farm it to an acceptable standard of efficiency;

(c) the proposed purchaser does not possess the farming competency to work the land to an acceptable standard of efficiency;

(d) farming has not been nor will be after purchase the proposed purchaser's main source of livelihood;

(e) in the interest of creating the maximum number of viable family farm units, the lands for sale are required for purchase by local progressive small-holders prepared to operate development plans;

(f) the proposed purchaser's holding, after the transactions, exceeds a certain level.

4.3 The Land Commission

The Land Commission handled an estimated 6% of all land transfers in the 1971 to 1975 period. While this is a small total volume of activity, it nevertheless represents over half of all the enlargements in the country. The size of the enlargements, however, is small, averaging only 15 acres per holding between 1971 and 1975. By their operations the Land Commission make a valuable contribution to redressing the inequities of the inheritance and open-market systems of transfer. However, the Land

[12]Inter-Departmental Committee on Land Structure Reform, *Interim Report*, the Stationery Office, Dublin. Prl. 6395, May 1977.

Commission is experiencing increasing difficulty in acquiring suitable land; in recent years 70% of compulsory acquisition was in holdings of less than £25 R. V.[13]

The use of the Land Commission to acquire, improve and reallocate land in holdings as small as these must be an exceedingly expensive operation for the State. This is especially so in the Congested Districts where only about half the annuity payment is paid by the allottee, the other half being financed by the State. The system is also slow and cumbersome. In addition, only a fraction of the holdings enlarged by Land Commission allocations are brought up to the Commission's own standards of viability.[14] The wide distribution of small parcels of land among a large number of farmers has served more a social than an economic purpose in the past. This purpose is less justifiable to-day than in the past because non-viable farmers have much improved opportunities of supplementing their income, either by securing off-farm employment or through benefiting from social welfare assistance. Therefore, we fully support the Inter-Departmental Committee's conclusion that "the time has come for the State's role in land acquisition and division to be substantially altered".[15]

The two fundamental changes recommended by the Inter-Departmental Committee and supported by us are:

(a) that suitable candidates for land be first located and then land sought to satisfy their needs; and

(b) that direct intervention by the State in the exchange of land be minimised.

The means proposed to implement these changes are the establishment of a Register of Priority Entitlement Land Applicants; the regulation of the land market as outlined in page 90 to ensure that these farmers have favoured access to land coming on the market; and the exer-

[13]Inter-Departmental Committee, op. cit., paragraph 18.

[14]For example, in the period 1971 to 1975, only about one-quarter of enlarged holdings in Connacht-Ulster reached the standard of 40–45 adjusted acres. See A. Cotter, *A Study of New Farm Operators, 1971–1975*. M.Agr.Sc. Thesis, National University of Ireland, 1977, pp. 124–131.

[15]Inter-Departmental Committee, op. cit., paragraph 22.

cise of compulsory powers to designate lands which would have to be released for direct purchase by Priority Applicants, subject to a satisfactory plan of division and the willingness of the Applicants to pay the market price for the land. This latter procedure would remove the Land Commission from the tedious and expensive arena of acquisition and improvement of lands and would introduce a certain element of market forces into the allocation of the designated lands.

We would envisage the Priority Applicants coming from the developing farmers in the reorganised Farm Modernisation Scheme. The Applicants should already have a high production performance on their existing land and they should have had, or be required to take, a minimum agricultural education equivalent to the Winter Farm School and the basic 100-hour course under Directive 161. They would on receipt of the land begin a new development programme that would be encouraged by the same bonus system as proposed under the Farm Modernisation Scheme. With this approach, the problem under Directive 159 of unduly high income criteria for qualifying as a potential development farmer as discussed earlier would be bypassed. Some Priority Applicants would achieve the EEC standards and would be allocated land released under the revised Voluntary Retirement Scheme—as currently required under Directive 160. Other Priority Applicants would not meet these standards but they would still be eligible for either open-market or designated lands. All land transferred by the Land Commission would be designated for Priority Applicants. If such Applicants were not available or were unwilling to take Land Commission land, then that land could go to other willing purchasers including eligible non-farmers with high qualifications such as those trained under the Farm Apprenticeship Scheme.

This new approach to land allocation would have advantages in Irish farming extending far beyond the immediate beneficiaries of additional land. The specification of Priority Applicants on clear economic criteria of performance and potential would shift general farmer opinion away from the belief that small farmers can expect land allocations merely because they are small. Small farmers would quickly realise that ability was essential as well as smallness for priority access to land, and this would be a further enticement for them to participate in development programmes. The educational requirement should also increase the demand for agricultural education among smaller farmers.

4.4 Credit for Land Purchase

Priority Applicants would receive favourable consideration for the purchase of open-market land, as proposed in the previous section, as well as having first call on Land Commission land. The availability of capital for such purchase would be a major problem. The issue then arises of special credit schemes to enable Priority Applicants to buy land. There are risks involved in such schemes; readily available credit could simply get translated into higher purchase prices for land and thus help the seller and not the purchaser. In the regulated land market we envisage, it would be possible to control this by restricting loans to predetermined land prices. On this basis we would advocate adequate long-term loans for Priority Applicants with appropriate moratoria on repayments or with indexed repayments that would be scaled down in the early years of repayment and scaled up in later years.

To add a further incentive for excellence among small farmers and highly qualified non-farmers, we propose a special subsidised loan scheme for highly meritorious people. The number of small farmers qualifying would be severely limited by very high criteria of education and performance. The farmer should meet appropriate social qualifications of age and marital circumstances; he should have a minimum of one year's training in an Agricultural College; he should also be operating right up to the full potential of his existing land, having successfully completed a development programme under the guidance of his agricultural adviser. The best of the graduates from the Farm Apprenticeship Scheme should also qualify for this special scheme. It is recognised that eligible landless people would probably need some equity even with subsidised credit. In practice, therefore, such people may not benefit greatly from this scheme. However, further opportunities for them via leasing are identified below.

4.5 Leasing

The virtual absence of long-term leasing in the Irish system of land transfer was noted at the beginning of this chapter. Long-term leasing should be actively promoted by the Land Commission and by socio-economic advisers under Directive 161. It should be available as an option in all regulated transfers to Priority Applicants. However, progress in the short-term is most likely to be achieved in special circumstances such as intra-family leasing.

Conacre or the 11-month system, which is virtually the only leasing system being practised now, should be promoted for its good points and discouraged for its bad. Some such land is reasonably well managed especially in tillage.[16] It is better that this land be in conacre than lying semi-derelict. In addition, these short leases provide for special circumstances such as illness of the operator, and they can fulfil a useful economic role in spreading the overheads of people such as machinery contractors or second sons on farms. The Land Commission should make its attitude towards conacre widely known, and that attitude should reflect a variety of circumstances ranging from discouragement where the resultant land use is unproductive to encouragement where the land use is productive.

4.6 Taxation

Taxation policy is a further tool affecting the promotion and maintenance of economic development. It is easy to argue that the maximum stimulation to development exists when no tax is collected on the additional income generated. In fact no such tax was collected in Irish agriculture up to the budget of 1974. Yet the associated overall rate of development in the pre-1974 period, as analysed in Chapter 1, was not remarkably high when the advantages of EEC accession are taken into account. The Government in 1974 decided to introduce income tax on farmers but the restricted nature of the tax was such that very little revenue was collected up to 1977. Even though the tax has been relatively light, it could still be argued that its introduction and the threat of its extension had a retarding effect on development since 1974. Similarly, the replacement of estate duty by wealth tax, acquisitions tax and capital gains tax, though reducing the total tax burden, may also have had an adverse effect. The estate duty was paid by the widows and heirs of deceased farmers; the wealth tax was paid by the farmer while still alive. For this reason the latter may be a greater disincentive, though this has not been proven.

The position now is that the Government is taxing farm incomes and intend to continue taxing them. In addition, the farming organisations have emphasised that they are willing to pay their "fair share" towards

[16]Cox, P. G., "Fertiliser Use on Rented Land", *Irish Journal of Agricultural Economics and Rural Sociology*, Volume 6 No. 2, 1976. Pages 147–154.

the Exchequer. It is not within our competence to suggest what a fair share would be. It would, of course, be related to such factors as the income level of farmers, the tax burden on other segments of society, and the special circumstances of agriculture—especially the need for development. Beyond this the issue is entirely one to be decided by the Government.

While we cannot determine the amount of tax that farmers should pay, we can consider the forms of tax that are most appropriate to stimulate development. We are concerned only with the broad forms of taxation, not with the detailed provisions. The main forms considered are—income tax on the basis of either actual or notional income; resource taxes, including rates and capital taxes; and sales tax in the form of levies on sales of farm produce. Each of these alternative forms of tax will be considered from the point of view of incentive or disincentive to development, ease of collection and payment, and equity within farming. Equity between farmers and other sectors of society would be established by the decision on the total tax to be collected from farmers and this decision can only be taken by the Government.

Sales Tax: A Sales Tax would operate as a levy on sales off farms, collected at the point of final sale. This would have the advantage over alternative forms of tax that it would be relatively invisible to the farmer, since he would never receive the money that would be collected as tax; it would in this sense be akin to P.A.Y.E. The system would not, however, be administratively feasible because the levy would tend to re-direct trade from the levied channels to unleviable channels. Two such unleviable channels would be direct trading in the farmyard, roadside or market place and smuggled exports. Furthermore, the system could not be made progressive nor discriminating among farmers in any other way unless the sales of each farmer were identified. This again would not be administratively feasible. We therefore dismiss this system of taxation.

Resource Tax: Resource taxes already operate in a variety of ways. Rates on agricultural land in holdings of £20 land valuation upwards is a resource tax. The wealth, acquisitions and capital gains taxes also fall into this category. The main argument against this form of tax is that it is not related to the income generated by the resources. A high income intensive farmer pays the same tax as a low income extensive farmer with the same value of land. The resource tax is therefore

inequitable if the objective is simply to tax equal incomes equally. While this is an important objective of taxation, it is not—and should not be—the only objective. A tax system, especially in the Irish situation of few natural resources, should also serve to promote efficient resource use. Viewed in relation to this objective, the resource tax has the advantage of penalising under-utilised resources and favouring well-utilised resources. This is therefore a potentially valuable tool in the pursuit of accelerated development.

Resource taxes can also be inequitable among farmers if the resource valuation on which the tax is based is not fair. The Griffith's Poor Law Valuation on which rates are assessed (as well as a whole range of social benefits) is well known to be inequitable.[17] This is, however, a problem that can be resolved and is not an argument against the tax itself. Several reports have already recommended a general re-valuation of all land in the country to bring the system up to date.[18] All we can do is add our voice to the many already on record emphasising that a re-valuation should be treated as a matter of urgency.

Resource taxes are relatively convenient taxes to collect. Compared with P.A.Y.E. they are not, however, convenient to pay as they have to be paid out of income already received and as they tend to fall due in lump sums at times when liquidity may not be good. This is a disadvantage which resource taxes share with income tax as currently collected from self-employed people.

Income Tax: This tax is levied on assessed incomes earned. For ordinary wage and salary earners the assessment is straightforward and the tax can be collected most efficiently. For self-employed people like farmers the assessment of the income is more complicated. Records and accounts must be produced and the administrative problems of assembling and checking these records are considerable for both farmers and revenue officials.

The case for tax on the basis of actual incomes was made in an earlier NESC Report[19] as follows:

[17]See, for example, NESC, *The Taxation of Farming Profits*, Report No. 15, The Stationery Office, Dublin, Prl. 4912, 1976, Section 6.6. Also—Copeland, J. and Walsh, B. M., *Economic Aspects of Local Authority Expenditure and Finance*, ESRI Paper No. 64, 1976, Section 6.

[18]See Consultants part of NESC Report No. 15, op, cit., paragraph 148 and ESRI Paper No. 84, op. cit., Section 6.

[19]NESC Report No. 15, op. cit., Chapter 5.

(i) its fairness both between farmers and non-farmers and among farmers themselves;

(ii) its capacity to be progressive;

(iii) its acceptability to both farmers and non-farmers;

(iv) the business advantages of keeping accounts even though the action may be a forced one.

At the same time it was recognised that the implementation of the system would be difficult and when in full operation there would be a disincentive on additional production. Therefore, a notional rather than an actual income assessment was recommended for a transitional period; generous investment allowances were advocated; and the averaging of income over a three-year period was proposed.

The advantages of notional assessment over actual assessment are that it can be conveniently done and that it provides the maximum incentive for intensification since the marginal tax on additional output is zero. Since the NESC Report on farmer taxation was published, the Government has decided to continue the notional system as an option on a permanent basis. Farmers will be able to choose between assessment on accounts and assessment on a notional basis, subject to remaining for a three-year period on whichever system is chosen. The notional assessment has, as stated above, the maximum incentive for intensification. Therefore, progressive farmers are not likely to be deterred —though their liquidity is diminished by the extent of the tax. There remains the question of the static or regressing farmers.

From the point of view of equity in the narrow sense of current income distribution, such farmers should not be taxed on non-earned income. As indicated above, this is a particular view of equity which ignores another important objective of society, namely, the achievement of accelerated development. If some citizens waste potentially productive resources while others are forced to go unemployed or to emigrate, the situation can hardly be deemed to be equitable. We are convinced that in the Irish context the State should discourage the under-utilisation of land by the tax system.

Notional assessment alone without the accounts alternative would

provide a considerable incentive for the utilisation of land for those farmers in the tax net; it might, however, be excessively severe on low-income farmers. Even with the accounts alternative, there may still be some discrimination against extensive farming, as some extensive farmers may not go to the trouble of completing farm accounts; they would therefore pay more than they would be strictly liable for. However, the great majority of farmers are not in the income tax net and very many smaller farmers will probably not be in the net for a long time to come —if ever. In addition, the Government has decided to retain an accounts option. We see therefore a need to complement the existing income tax with a resource tax on land.

Ideally, the resource tax would be assessed on an up-dated and equitable land valuation; it would be levied by the Central Government and would be part of the Exchequer's tax receipts from farmers; and it would be fully rebated for farmers achieving minimum development targets in a scheme such as that proposed in Chapter 3. As an interim arrangement, the rates can serve as this resource tax provided they are directly related to development. In principle, some rates should be payable on all land not in developing farms. Farmers participating in the development scheme proposed in Chapter 3 and achieving their targets should receive a rates rebate, as under the present Agricultural Grant, during the period of development. Such a rebate would be a further incentive for development, additional to those already proposed. For a typical 75 acre farmer of £50 PLV the Agricultural Grant in 1977 would be approximately £250. It might be argued that a rebate of such a sum would not generate much motivation for development. On the other hand, we believe that the concept of a tax rebate would be of greater appeal to farmers than an equivalent sum paid as a bonus.

The Agricultural Grant therefore should be restored on developing farms which receive no Grant, namely, those over £75 PLV in 1978 and those over £60 PLV in 1979. Since rates are now given as a credit against income tax liability, the Grant would benefit only farmers whose income tax liability was less than the rates. But these are typically people who are farming extensively and who, therefore, need most to be induced into a development programme. The Agricultural Grant should be reduced on all other farms unless they are participating in a development plan.

Some people may consider that this would be unfair to smaller farmers. However, even a total abolition of the Agricultural Grant in 1977 would have involved a tax of about £5 per acre for such farmers. Considering the capital value of land and the level of income that can be earned from either efficient farming or from letting on conacre, such a charge can hardly be considered excessive. Furthermore, a relatively large proportion of small holdings are either farmed by part-time farmers or are let on conacre; the equity of derating such holdings is questionable even without a land use objective. Finally, farmers who might not like such a tax have, under our proposals, various means of escaping from it. They could become developing farmers, in which case they would be either partly or entirely exempt; they could retire under the improved Voluntary Retirement Scheme; or they could sell or lease their farms and receive tax concessions on either the capital or the rent received.

The taxation system we advocate therefore involves a combination of income tax under the notional system with an accounts option and the rates operating as a resource tax. The incidence of these two tax burdens within agriculture should be such as to leave a significant incentive for intensification, while at the same time applying a minimum tax on all non-development land. This we believe to be the optimum mix to encourage development.

CHAPTER 5

THE PROCESSING INDUSTRIES

NESC Report No. 34 presented a detailed analysis of the employment possibilities in the industries associated with agriculture. Employment was seen as a function of two main components, namely, the scale of throughput and the intensity of processing of that throughput. Our concern in this Report is to identify policies that would increase employment in these industries.

In Report No. 34 estimates were presented of the extra employment that would be likely to result from:

(i) two alternative levels of agricultural output,

(ii) three levels of processing intensity in those supply and processing industries which are affected by the alternative levels of output and

(iii) the termination of live cattle exports.

Increased *intensity* of processing was defined as an increase in the volume of value added per unit of throughput. It is not the same concept as *diversification* of processing, because diversification may take place by simply producing a wider range of products without any extra value added overall.

Diversification is desirable to reduce the risks associated with too narrow a product base and to increase marketing opportunities which may be availed of with a wider product range. If diversification is not associated with increased value added, it is not likely to have any significant effect on overall employment.

An increase in the intensity of processing, as distinct from diversification, involves increased value added. The effect of intensification on employment depends on how the process arises. It will result in a significant increase in employment only if it evolves through production of labour intensive rather than capital intensive products and processes.

It is likely that the substitution of capital for labour which is already well advanced will continue and that future investment will be more sophisticated and labour-saving than it has been in the past. Therefore, labour productivity will probably increase at a faster rate in future than it has in the past. The employment problems posed by this conflict of capital and labour are further aggravated by the fact that Ireland imports most of its capital requirements and therefore loses out in the employment which arises from producing the capital goods.

A summary of the employment estimates from Report No. 34 is given in Table 5.1. The results indicate that high output as distinct from trend

TABLE 5.1.

Summary of employment estimates by industry, level of output and intensity of processing: Change after 11 years in number of jobs compared with 1975.

Industry	Output	1975 intensity	Medium intensity	High intensity
Dairy	Trend	+ 1,601	+ 2,017	+ 2,933
	High	+ 5,904	+10,291	+13,759
Cattle	Trend with live exports	— 672	— 56	+ 504
	Trend without live exports	+ 896	+ 1,680	+ 2,464
	High with live exports	+ 1,097	+ 1,942	+ 2,668
	High without live exports	+ 2,670	+ 3,692	+ 4,639
Sheep	Trend	—	—	—
	High	+ 63	+ 63	+ 63
Pig	Trend	— 971	— 739	— 130
	High	+ 1,262	+ 1,579	+ 2,284
Feed	Trend	+ 609	+ 609	+ 609
	High	+ 3,032	+ 3,032	+ 3,032
Fertiliser	Trend	—	—	—
	High	—	—	—
All	Trend with live exports	+ 567	+ 1,831	+ 3,916
	Tiend without live exports	+ 2,135	+ 3,567	+ 5,876
	High with live exports	+11,358	+16,907	+21,806
	High without live exports	+12,931	+18,657	+23,777

Source: NESC Report No. 34, op. cit., page 147.

output could after a period of eleven years add between 11,000 and 18,000 extra jobs in factories depending on the intensity of processing. Compared with the 1975 intensity level the high processing level could create between 3,350 and 10,600 extra jobs depending on the level of output. Termination of live cattle exports could add between 1,500 and 2,000 jobs, depending again on the intensity of processing.

The feasibility and means of achieving the high level of output have been analysed in previous chapters. In this chapter the possibilities of achieving the higher employment levels which are associated with the higher processing intensities are examined. Most of the potential for extra employment from this source lies in the dairy processing, beef and sheep processing and pig processing industries. The analysis therefore concentrates on these industries.

The results shown in Table 5.1 have been discussed with key management personnel in the three industries. The concensus of these experts is that the medium intensity is the level of processing likely to prevail in the mid-eighties. If this should be the outcome, then the data provide estimates of the extra employment which would be forthcoming from achieving a higher than expected increase in processing intensity.

The effect of increased processing intensity depends on the output level with which the intensity is combined. With trend output and a continuation of live cattle exports, the high level of intensity would provide after eleven years an estimated 2,085 more jobs than would medium processing intensity. With the high output levels of milk, cattle and pigs and with a continuation of live exports, the high processing intensity would generate 4,718 more jobs than would medium intensity processing. The corresponding figures for trend and high output levels with no live exports are 2,309 and 5,120. Therefore, the employment effect of moving from a medium to a high processing intensity level is in the region of 2,000 to 5,000 extra jobs. These jobs would be additional to those created through the scale of throughput effect. The question then is, can some or all of these jobs be realised?

5.1 Review of Recent Studies

The food processing industries have been the subject of several major

studies in recent times.[1] The performances of these industries were reviewed and many recommendations and suggestions were made in these reports. The recommendations and suggestions related mainly to aspects of structure, conduct and the environment. Structural aspects refer to such matters as the number, size, capacity, financial structure, location, type of ownership and degree of integration of firms in an industry. Conduct aspects refer to the methods employed by firms in setting prices and output levels, in undertaking promotions and in competition tactics. Environmental aspects refer to factors such as the supply of raw materials to firms, including cyclicality and seasonality in supply, to factors relating to the demand for the products produced by firms including intervention and to infrastructural factors such as transport and communications. The main recommendations of the reports are tabulated in Table 5.2.

Many of the points listed under Structure and under Conduct in Table 5.2 were put forward as possibilities or as general exhortations and were addressed mainly to the industries themselves. While the industries are improving their performance, there is considerably more along the lines of the various recommendations that they can do. We would expect the proposed Agricultural Development Council to actively encourage and promote these.

In this Report we seek to go beyond exhortations and to identify areas for positive Government action to bring about more intensified and more effective marketing. We focus on performance rather than on structure, conduct or environment. After all it is performance that matters and all other factors are only of consequence in so far as they lead to better performance. Certain structural and conduct aspects may be necessary conditions for a good performance, but they are not in themselves sufficient conditions to ensure a good performance.

Therefore, it has been adopted as a basic principle that the Government incentives which are proposed later in this chapter for the food processing industry should be paid only on the basis of achieved per-

[1]McKinsey & Co., *A Marketing Opportunity for Agricultural Products,* Bank of Ireland, 1977. Cooper & Lybrand Associates, *Beef Packing & Processing, a development study,* IDA, 1977. Food, Drink & Tobacco Federation, *Food Processing in Ireland, achievements and prospects,* C11, 1977. Bord Bainne, *Five Year Marketing Plan,* 1977.

TABLE 5.2.

Summary of Main Recommendations and Suggestions of Recent Reports

STRUCTURE

Dairy Industry

1. The co-ops should strengthen their capital structures possibly by means of a capital levy on milk supplies and by engaging in joint ventures.
2. Bord Bainne, the financial institutions and Government should examine the position with regard to the capital requirements of Bord Bainne with a view to devising means of improving the situation.
3. The co-ops should improve the use of their production capacity by promoting the reduction of seasonality of milk supply.
4. The co-ops should co-ordinate their approach to the provision of additional processing capacity.
5. Bord Bainne should consider the acquisition of distribution companies in some high-potential EEC markets for the exploitation of overseas marketing opportunities.

Cattle and Pig Processing

1. The beef packing industry should consider the possibility of becoming directly involved in beef wholesaling in Britain.
2. The IDA should encourage the development of intensified beef processing.
3. For successful development of a significant beef processing industry, Irish processors should consider possible involvement with major British and German producers of mass-marketed branded beef products.
4. The meat industry should promote selective structural rationalisation especially in the pigmeat processing industry.
5. In an effort to overcome supply cyclicality, pig processors should achieve integration with pig producers through, for example, contracts and payment of a special bonus for stable long-term supplies.

CONDUCT

Dairy Industry

1. The industry under the direction of Bord Bainne should support production of diversified products on an agreed costing basis.

2. IMI and IAOS should develop programmes for the further improvement of the level of general management in co-ops.
3. Government should remove legislative anomalies in relation to co-ops e.g. the £1,000 ceiling on individual shareholding.

Cattle and Pig Processing Industries

1. The IDA should promote increased in-factory efficiency in the beef packing industry especially in cutting and chilling.
2. The industry should introduce a beef grading or classification scheme for procurement purposes which should be administered by the Department of Agriculture and paid for by the industry.
3. The beef industry should implement a product specification scheme covering all the industry's beef products.
4. The beef industry should establisn a code of trading practice which would be established and operated under either the Irish Fresh Meat Exporters Association or CBF.

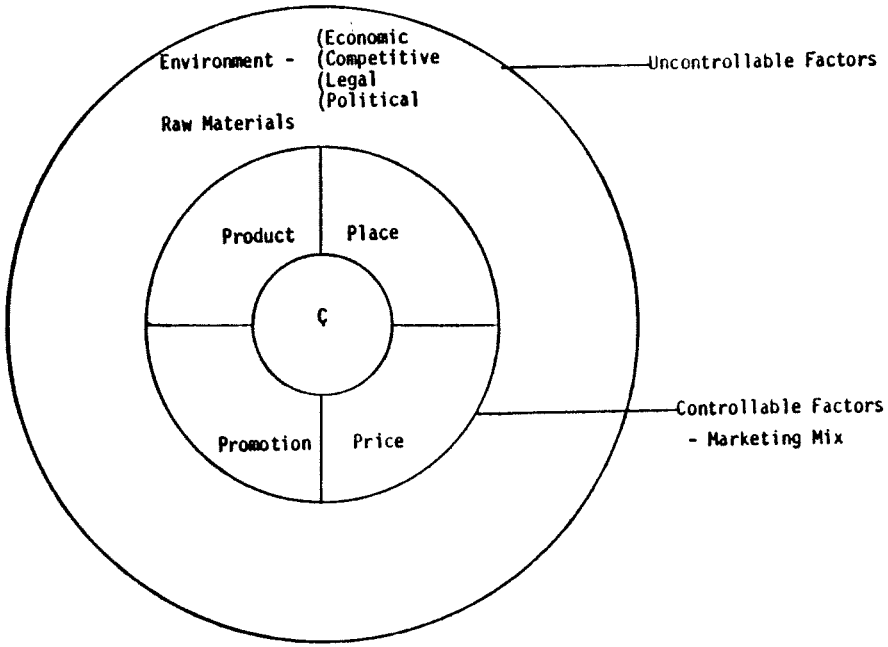
Environment

1. The Government should improve the incentive framework in both the dairy and beef industries by promoting changes in CAP that have the effect of encouraging the growth of marketing and the development of new markets.
2. The Government should incorporate into all measures which are designed to provide financial support to the Irish cattle industry an element which would favour Spring rather than Autumn release of cattle off Irish farms so as to reduce the seasonality of cattle supply to factories.

formance in the market place, and not simply to develop structural and conduct characteristics which might or might not give rise to good performance. This approach is consistent with the approach adopted in the previous chapters in which it is proposed that Government aid to producers should be more directly related to performance.

The remainder of this chapter is devoted to a consideration of the ways in which the development of increased processing intensity, particularly in the dairy, cattle and pig processing industries, can be promoted by direct Government action. The discussion relates to export marketing although some reference is made to marketing in the domestic market. For the purposes of examining the role which Government might play in accelerating processing intensity through better marketing, the process of marketing is first briefly described.

The following is a simple representation of marketing:



The focus of the firm's attentions is the customer (C). The firm organises its resources to produce a *product* or product lines, distributed in a certain way (*place*), at certain *prices*(s) and with a certain amount and type of *promotion*, all calculated to best satisfy the customer; in this way the firm hopes to achieve its profit and other objectives. Product, Place, Promotion and Price (the 4 P's) are known as the marketing mix and are to a large extent controllable and capable of manipulation by the firm. The firm must work within certain environmental limitations over which it has much less direct control. These include demand factors such as access to markets, world recessions, MCA systems, factors on the supply side such as seasonality and cyclicality of raw material supply, and quality heterogeneity of the produce supplied.

The area of the environment is predominantly an area for Government action especially with regard to factors relating to the demand

side, such as accessibility to markets, trading anomalies, etc. On the supply side the Government also has a major role to play in ensuring high and stable levels of agricultural output. Of course, food processing firms also have a part to play through their own direct effects in ensuring that they develop good supply links with producers.

Direct Government action in the marketing area—short of State trading—must concentrate on the marketing mix. Since the price received is the end result of the marketing effort, marketing policies can be implemented only in relation to product, promotion and distribution. The manipulation and co-ordination of these three variables comprise market strategies which result in market development. Possible options in market development are considered in the next section.

5.2 Options in Market Development

Market development determines the level of production and the type of products produced. In addition, the manner by which Irish food processors serve their markets is of direct relevance to the need for, and extent of, Irish expenditure on product development. Market development is first examined in the context of the production of consumer products and second in the context of non-consumer product marketing.

5.2.1 Consumer Product Marketing

For any given level of technology, the more the food industry processes its raw materials into consumer products, i.e. products which are purchased by the consumer without further commercial alteration, the greater will be the level of employment in food processing. Two parameters are important in determining the extent to which this type of development occurs in processing. These are: (i) distribution facilities and (ii) promotions and branding. The main brand options for consumer foods open to processors in Ireland may be listed as follows:—

1. Irish Brand.
2. Non-Irish Brand.
3. No Brand.

The distribution of consumer products may be examined under each of these possibilities.

Irish Brand

This may involve a single national brand or a number of individual Irish manufacturer brands. With a single national brand, it is assumed that a single Irish agency would be involved in exporting the branded product. This is the situation which exists at present for most exports of packaged Irish butter. It is also the system which tends to be generally advocated as the best approach in marketing other food products. For this reason a description of the system and of its advantages and disadvantages is necessary. Other systems can then be compared with it.

Distribution under this option may be done through existing agents and wholesalers or through storage and transport facilities which are wholly or partly owned by Irish processors. Setting up a new distribution system is extremely expensive. For economic utilisation it requires a very high volume of sales and a wide range of products. Buying into existing facilities, such as the Bord Bainne Adams Foods link-up, is less expensive and less risky. It is less expensive because the facilities do not have to be bought out completely. It is less risky because one is also buying the existing goodwill attached to the distributor. It may also have the advantage that products supplied by the Irish processor may complement the range supplied by the non-Irish partner. In that case, the Irish partner would not be required to supply as wide a range or as large a volume of products as would be the case under sole Irish ownership and utilisation. Renting of existing distribution facilities avoids investment in fixed assets and affords the firm maximum flexibility to avail of changing market conditions as between countries.

From the branding point of view the advantages of the single Irish brand are those which accrue to branding in general, namely, identification of the product at point of final sale and the potential build-up of consumer brand loyalty. These afford relative security of market outlets, leverage over distributors and, in the absence of price control, the possibility of earning price premia through consumer loyalty. Exportation by the single agency has the further advantage of providing maximum countervailing power to the seller and of eliminating the possibility of sellers underquoting each other in selling prices. In addition, the possibility of being able to finance adequately and successfully one brand which is supported by all processors is far greater than the possibility of doing this for numerous individual brands.

The use of a single national brand has also got disadvantages. Firstly,

lapses in quality can have a longer and more harmful effect on the sales of a well identified branded product than on the sales of an unbranded product. Secondly, branding requires heavy expenditure on promotions, and even then may not gain the expected benefits. Also it may be difficult or impossible to persuade all processors to operate under a single brand as some processors may not be convinced of its net advantages.

With a number of individual Irish brands, distribution may be carried out as for the single national brand. Alternatively, distribution could be done through foreign manufacturers where the Irish products complement the product range of the foreign manufacturer. This approach has all the advantages and disadvantages of branding in general which have already been referred to. In this case the cost of promoting and developing the brand would be borne totally by the individual Irish processor or by any group of Irish processors who would co-operate in such a venture. Due to the very high costs and risks involved in this approach to market development, it is doubtful if it should be attempted by Irish processors on any basis other than on a joint and probably national basis.

Non-Irish Brand

Under this system processors in Ireland produce products to specifications laid down by foreign processors or distributors which are branded with the foreign processor's or distributor's brand. The Irish processor may be the complete owner of the production facilities, or he may own them in partnership with the foreign processor or distributor. The products may be distributed through facilities in which the Irish processor may or may not have a degree of ownership. In practice, where production occurs under this alternative the Irish processor does not have an ownership stake in the distribution facilities—these are the sole responsibility of the foreign manufacturer or distributor.

This approach has the advantage that the Irish processor does not have to incur the expense, discipline or risk involved in promoting and developing a brand name or in acquiring distribution facilities. It also has the advantage that the Irish processor may receive technical assistance from the foreign processor or distributor in the development of new or modified products.

The major disadvantage of this system is that the Irish processor does not develop his own identity in the market and is in danger of being

dictated to by the foreign processor or distributor in relation to price, conditions of supply, etc. An Irish processor can, however, minimise this danger by not becoming over-committed to any one foreign processor or distributor.

Non-Irish branding exists in the Irish dairy, cattle and pig processing industries. These arrangements are satisfactory to the processor in all cases with which the authors are familiar. In addition to satisfactory price and profit aspects, processors gain experience in product development and in quality control. The level of quality required is usually high and in particular a consistent quality level is demanded. However, it must be reiterated that for longer-term security processors should not become over-committed to any one customer, but should spread their sales across customers and across national markets, if possible.

No Brand

A development which may become more prevalent in the future is the marketing of consumer products which are not branded except for basic information such as the source and content of the product which may be required by law. It is likely that EEC legislation on minimum standards of food composition and presentation will become wider in scope and more demanding in requirements in response to growing consumer pressure. As consumers become increasingly aware of these standards and accustomed to their security, they may be less willing than they are now to pay price premia for branded products. The no-brand consumer product option in food marketing has already been experimented with in the United States.[2] The food items meet all the minimum Government requirements for quality, are packaged in simple containers and are not promoted at all. They are reported to sell at prices between 10 to 35% below those of comparable brand-name products. The current and possible future significance of this form of marketing has not been studied by the authors.

The no-brand development is facilitated by the existence of price control measures. The function of promotion is to lift and tilt the demand curve, i.e. to expand demand for the product which is promoted and to change the nature of that demand by making it more price inelastic by building up consumer loyalty to the branded product. However, price control agencies allow price increases only for unavoidable cost increases, i.e. increased material costs and increased labour and other costs which cannot be absorbed by greater efficiency. They do not allow processors to increase price simply because the market will bear this increase, which is the case when processors are successful in building up consumer loyalty. Under a price control regime, the only gain to be had from promotion is maintenance or expansion of sales and market share.

[2] *Time Magazine*, November 21, 1977, page 45.

5.2.2 Commodity Marketing

The discussion so far has dwelt on consumer products. The production of consumer products is not the only way through which processing intensity can be increased and employment created. Employment can also be increased by the production of certain commodity or wholesale type products. For example, the increased production of vacuum-packed meat for sale at wholesale level will increase direct in-factory employment three to four fold over the production of carcase meat. This product may also be branded and this may be beneficial to the processor provided he can consistently meet quality requirements. However, little or no promotional expenditure is required at this level. The product may be distributed through facilities which are rented or wholly or partly acquired by Irish processors for that purpose.

5.3 The Government's Role in Market Development

The Government's primary interest is taken in this study to be increased employment. Possible measures which the Government could take are assessed against this objective.

In this context the type of market development in which government would not have a direct role to play do not need to be examined. These are the non-Irish brand options. It would not have a role under these options because in these instances market development is the responsibility of the foreign manufacturer or foreign distributor. The Irish processor does not establish any identity for himself in the market place and plays a subsidiary role to the foreign manufacturer or distributor. As stated earlier this strategy is practised by Irish food processors and there is reason to believe that it is likely to gain in importance in the medium-term future. No impediments should be placed in the way of this development, as it has considerable advantages for Irish processors as well as providing increased employment for the country through the increased production of consumer food products.

Options involving Irish branded consumer products are the most

desirable in that they provide both maximum security of market outlets and also maximum domestic value added. These are also by far the most expensive options, because they require that a brand image be created at consumer level and that products be distributed by retail outlets. The acquisition of distribution facilities is expensive as is the promotion of products, especially during the product-launching period. However, it may not be necessary actually to acquire distribution facilities. Existing agents in the market may be able to handle the products at rates which may be more competitive than would be possible if these facilities were acquired.

Heavy promotional expenditure (including market intelligence, market information and market monitoring costs) is always necessary under these options and government aid in this area would facilitate the development of these options. If it were shown that it was absolutely necessary to acquire distribution facilities, then government aid would again facilitate this development.

Finally, commodity marketing could also be aided by the government provided it involved a switch from production of less labour intensive to more labour intensive wholesale-type products. The only aid involved in this case would be aid for acquisition of distribution facilities where this was shown to be necessary. This approach would be less costly for the government and less risky for processors since no promotional expenditure would be involved. However, if it developed successfully, it could form the basis of a distribution system which could progressively be used in the distribution of branded consumer products.

5.4 A Marketing Incentive Scheme

To encourage desirable market development and consequent increased processing intensity we propose a Marketing Incentive Scheme. Aid under this scheme would be available to any processor or group of processors who export marketed consumer food products under Irish brand(s) provided certain conditions as outlined below were complied with. Aid would also be paid to processors who exported commodity type food products which involved a switch from less labour intensive products to more labour intensive products provided also that other conditions as outlined below were met.

Aid would be paid for promotions and possibly for the full or part acquisition of distribution facilities. The possibility of receiving such aid

would be contingent on well specified marketing plans with minimum volume and range of product stipulations and where the marketing venture is not merely a substitution for existing successful marketing operations. Aid would be paid only for sales of products for which export demand is growing. The rates at which such aid would be paid should increase with increased market share for a limited period, say three to five years, and should then be phased out. Aid would be paid only on the basis of quantified and certified performance in so far as this is feasible.

The stipulation with regard to minimum volume and range of products would induce co-operation in marketing among processors and would induce extension of the product range. Expanding markets present more marketing opportunities than do static or declining markets. Increasing rates of aid for increasing sales and market shares would induce processors to become seriously committed to, and well established in, markets. Payment on the basis of performance would ensure maximum processor interest and effort in achieving targets.

In administering this scheme knowledge of markets and market measurement would be necessary. The centralised marketing bodies, An Bord Bainne and the Pigs and Bacon Commission would be eligible to receive incentives under this scheme and could not therefore play a part in its administration. Coras Trachtala (CTT), the Irish Export Board, is a State sponsored body with long experience in aiding processors to develop their markets. CTT have for some years administered schemes which are somewhat similar but much smaller in scope than the market development incentive scheme proposed here. It therefore seems to be a suitable body for administering this scheme.

The position and functions of Coras Beostoic and Feola (CBF), the Irish Livestock and Meat Commission, are difficult to assess in these proposals. CBF was set up in 1969 and has, since its foundation, been financed totally by the State. Its budget in 1971 was approximately £0·5 million. It provides the live cattle export trade and the cattle processing sector with market information and intelligence and engages in some promotional activities for Irish cattle and beef. If it were to become a voluntary central marketing agency for the beef industry and were financed by the beef industry, it would be eligible to receive market development aid on the same basis as Bord Bainne and the Pigs and Bacon Commission. The prospect of this happening seems remote at

this stage. Under the proposed Marketing Incentive Scheme, firms would have to engage in promotional activities which would be specific to a marketing plan and to certain branded products. The more diffuse type of promotions engaged in by CBF would therefore not be eligible for support. However, its market information and intelligence functions could continue to be of benefit. If it were to continue being financed by the State, CBF should cease providing a general service to all the industry and should concentrate its efforts on assisting processors who wished to avail of the market development incentives. It would provide this assistance through the provision of market information and intelligence in the drawing up and adaptation of marketing plans. Its role would therefore change from being a diffuse one for all the industry to being a highly specific one assisting developments on a voluntary basis in the processing sector which its paymaster, the Government, saw as being desirable in the national interest. If, on the other hand, the industry wished to finance CBF, it could perform whatever functions the industry specified.

The proposed Marketing Incentive Scheme might be in conflict with EEC competition policy. In this regard two factors must be considered. These are the nature of the proposed scheme and the level of incentive aid payable. The nature of the proposed market development incentive scheme would seem to be in accordance with EEC competition policy. A 1976 document[3] on this topic states:

> "Any operation involving the extension or reorganisation of the recipient firm or production unit must, then, hold out the prospect that it will one day be able to fend for itself unaided. Assistance designed purely to keep the firm out of the receiver's office, not backed by re-organisation schemes, must therefore be excluded; the same applies to operational aids. Aids must be of a temporary and degressive nature so as to constitute an incentive to management to intensify their own efforts. They must lend themselves to reasonably accurate assessment and measurement and be well adapted to their objectives, so that the effects on competition can be minimised. Likewise, account has to be taken of the social objectives of national measures especially in safeguarding employment."

[3] *The European Community's Competition Policy*, Commission of the European Communities, 1976. P. 19.

The scheme proposed here is an incentive-type degressive one and thus accords with the above conditions. It should be consistent with EEC policy as it is designed to safeguard existing employment and create extra employment. In addition, it would assist and encourage firms to market their products and to avoid selling into intervention.

The level of the market development aids would be scrutinised by the EEC authorities. Ireland should press the case for realistic levels of aid, otherwise the scheme would fail. The Irish case could be based on the undeveloped state of Irish industry relative to other EEC countries; the fact that Ireland is faced with a grave unemployment situation which these proposals are designed to alleviate; and the fact that the proposed scheme is an incentive-type degressive one and not designed as a permanent prop.

The cost to the Exchequer would depend on the rates of incentive and the degree to which they are availed of by industry. The rates should bear some meaningful relationship to the costs incurred by the processors if the scheme is to be effective. It is not appropriate to set the exact levels of rates here, but it is likely that the aids under the Marketing Incentive Scheme should at least be in the region of 33% of total cost. It is very difficult to know to what degree the proposed aids would be availed of by industry. This would depend on the levels at which the rates of aid are set and on the environment in which firms operate.

5.5 Product Development

The proposed Marketing Incentive Scheme envisages payment of aid under certain conditions one of which relates to a minimum range of products. This necessitates an effort in research into, and development of, new or modified products (R & D). By food R & D is meant the development of what are clearly new or modified products (including packaging) which provide the developer with a substantial potential competitive advantage over his competitors. This section examines the position with regard to food R & D in Ireland, the role that it would play in the marketing options outlined earlier and the role that Government is playing in food R & D and the further role it could play.

A recent publication[4] shows that Ireland's commitment to food

[4] Downey, W. K., Brennan, M. I., *Technological Supports for the Food Industry*. Stationery Office, Dublin 1976.

research and development[5] (R & D) in 1973 was the lowest in the EEC in terms of expenditure (£1·2 million) and in terms of man power (50 full-time graduate equivalents). Denmark spent over four times as much and the Netherlands spent seven times as much on food R & D as did Ireland. At the same time Unilever employed over 3,000 people in food R & D.

Subsidiary firms in Ireland benefit from R & D carried out by the parent firms abroad so that the position may not be quite as bad as the figures indicate. Notwithstanding this qualification it would seem that Ireland's ability to compete in new food product development with its main competitors in the EEC market is very low. In the absence of greatly increased expenditure on food R & D it will remain low.

The main reasons for introducing new products are the following:[6]

1. To insure against the inevitable obsolescence of existing products, as a result of competition or attrition. A decline in the profitability of an existing product can only be reversed in the long-run by bringing in a successful new product to replace it. In other words, a flow of new products is necessary to protect the existing assets in the business.

2. To expand more rapidly than is possible with a single line of products, and to spread business risks over a broader product base and reduce the likely impact of competition in any one product area . . . .

3. To increase the overall profitability of the business . . . . through the maintenance and widening of differential advantages over competition, the more profitable use of by-products and the fuller utilisation of production and selling capacity . . . .

There is evidence available to show that the development and successful marketing of new products is perhaps the most important single factor

[5]Excluding R & D expenditure on alcoholic beverages.

[6]Rodger, L. W., *Marketing in a Competitive Economy*, Hutchinson of London, 1968, p. 114.

in determining long-term company growth and profitability. Rodger[7] presents some of this evidence. Other evidence is provided by the Nielsen Retail Audit Company.[8]

However, the development and commercialisation of new products is also extremely hazardous. Levitt states;[9]

> "While it has been demonstrated time after time that properly customer-oriented new product development is one of the primary conditions of sales and profit growth, what have been demonstrated even more conclusively are the ravaging costs and frequent fatalities associated with launching new products. Nothing seems to take more time, cost more money, involve more pitfalls, cause more anguish, or break more careers than do sincere and well-conceived new product programs".

Given the low current commitment by Ireland to food R & D and given the potential rewards and risks of such R & D, the basis for increased expenditure must be carefully assessed. The type of R & D that should be engaged in and the conditions under which it should be undertaken for maximum likelihood of success should be clearly specified.

Of the food R & D expenditure in Ireland in 1973 of £1·2 million, it would seem as far as can be estimated from the available data that about £0·7 million was contributed directly by the food processing industry and £0·5 million was contributed by the Government. The industry's direct contribution to food R & D amounted to about 0·001% of its turnover in that year. The industry's perception of the need for food R & D is obviously not very great. Further evidence of this is shown by the very poor response by this industry to the IDA's R & D grant scheme which was introduced in 1970. Of £2·08 million approved by the IDA in the years 1974/75/76 under their R & D grant scheme, only £235,000 or 11·3% was approved for the food processing industry.[10] This is a very

[7]*Idem.* P. 115.

[8]*Nielsen Researcher.* Number 5 1973 and Number 3 1976, Research Office, Nielsen House, Headington, Oxford.

[9]Levitt, T., "Exploit the Product Life Cycle", *Management Perspectives in Marketing*, Ed. L. E. Boone, Dickenson, 1972. P. 196.

[10]Communication from the IDA.

low proportion for the industry with a gross output which is over 30% of the value of gross output of all transportable goods industries.

The reasons for this low interest in R & D is probably related to two factors: protection on the home market and commodity selling on the export market. The home market was heavily protected until EEC accession, so there was no competitive spur to engage in R & D and new product development. In export marketing, by far the most common form of "marketing" has been and still is commodity selling. Generally this requires little product development. In the future, however, developing countries will have an increasing demand for products which can be re-constituted within their own borders and there will be a need for research and development into these types of commodity products.

The amount of R & D necessary in future for export marketing will depend very much on the system of export marketing adopted. The need for an Irish commitment to food R & D is greatest with the marketing strategies involving Irish brands. In this type of marketing, new product development is vital for long-term survival and growth. It should be noted that this is the form of marketing in which Irish processors engage on the domestic market. This market no longer enjoys the same degree of protection which it did prior to Ireland's EEC entry in 1973. Therefore the need for Irish food processors to engage in new product development for the home market is now greater than it was prior to 1973.

Under non-Irish brand marketing the need for an Irish commitment to food R & D is probably very small. With this system of marketing Irish processors produce products to specifications laid down by foreign manufacturers or distributors. Any alterations to existing products or production of new products are also well specified and, where necessary, technical advice and in-factory assistance are available from the foreign manufacturer or distributor. Since this form of export marketing appears to be increasing, the need for Irish expenditure on R & D to service food export marketing is reduced accordingly.

Similarly, with non-branded consumer product marketing very little, if any, R & D would be necessary. The dominant requirement for this form of marketing is in the area of quality control to ensure that the unbranded consumer product meets the legal composition and presentation requirements.

The necessity for R & D with commodity marketing is also limited.

Products sold under this system would be typically bulk butter, bulk cheese, bulk milk powder and carcase meats. In more recent years an increasing, although still very small, proportion of meat is being sold at wholesale level in vacuum-packed form. More technology is involved in this form of meat product than in carcase meat. This type of development may require some effort in the R & D area. However, the technology of vacuum-packing is now well developed and in any case suppliers of equipment also supply advice and aid in this area.

In summary, food R & D and food product development are necessary components of a dynamic consumer oriented food export marketing programme. For other forms of exporting, food R & D and food product development play a peripheral role. In the immediate future it is expected that the marketing of non-Irish branded consumer products, as well as commodity marketing of vacuum-packed meats, will become more prevalent. Therefore, the need for extra Irish expenditure on food R & D will not arise in this period. However, the proposed Market Incentive Scheme is designed to induce the marketing of Irish branded consumer products and to enable this form of marketing to become the dominant form in the longer term. This will require increased expenditure on food R & D.

While it may be prudent to retain research resources in the food R & D area pending the development of this form of marketing, the initiative in successful product R & D must come from the industry. A recent study[11] of the factors determining the commercial success or failure of new dairy products developed by the Agricultural Institute showed that new products which are the result of research initiated by industry had relatively good chances of being developed into commercially successful products in contrast with those new products resulting from research initiated by the Institute itself. Successful product R & D cannot therefore precede market development initiatives by industry.

5.6 The Government's Role in Product Development

As pointed out earlier, the Government has directly supported product R & D through an IDA grants scheme since 1970.[12] The response of the food industry to this scheme has been poor. It has been argued above

[11] Higgins, T., *Research Planning and Innovation*, Stationery Office, Dublin 1977.

[12] CTT also offer a product design and consultancy grant.

that this has been due to domestic market protection and to the commodity forms of export marketing engaged in. Since 1975 the Government has matched the research levy collected by Bord Bainne on behalf of the dairy industry. It seems likely—as evidenced by its willingness to do so for the beef industry in the early 1960s—that the Government would match a similar levy in the case of other processing industries. We would recommend that the Government should do so for firms which participate in the proposed market development scheme for Irish branded consumer products to enable them to meet the range of products condition of the Marketing Incentive Scheme. The Government also supports research and development indirectly through its funding of the Agricultural Institute and to a lesser extent through the Institute for Industrial Research and Standards. As far as product research and development as such is concerned, there does not appear to be very much more the Government can do. The initiative must come from the industries.

From the marketing point of view, however, it is not just the basic product which is important but also the presentation and packaging of the product. It is apparent from a comparison of Irish and foreign food products that Irish products are generally deficient in the style of packaging. To maintain their share of the domestic market and to export consumer products, it is important that Irish processors give more attention to this area.

5.7 The Dairy, Cattle and Pig Processing Industries

While the Marketing Incentive Scheme would apply to any processor or group of processors in the dairy, cattle and pigs processing industries which could meet the requirements of the scheme, a closer examination is made in this section of past developments in these industries, their marketing systems, their commitment to product development, etc. and of any measures which might be undertaken specifically for these industries.

5.7.1 Dairy Processing

Measuring diversification as the proportion of manufacturing milk not used for butter production, the dairy industry diversified its output substantially throughout the 1960s. This development was halted in the

early 1970s, reversed in 1976 but progressed again in 1977. Nineteen per cent of manufacturing milk was used for diversified production in 1960/61/62, 31% in the period 1970/71/72, 25% in 1976 and 31% in 1977. In addition, virtually no skim milk was processed in the early 1960s, whereas in recent years it has all been processed into skim powder or other products. The rate of progress in diversification in this industry thoughout the 1960s and into the early 1970s was therefore quite significant. Recent production patterns have undoubtedly been influenced by the existence of the intervention system, but Bord Bainne are trying to promote further diversification.

Of the three industries under consideration here, the dairy industry makes the greatest contribution to product R & D. The Dairy Industry Technical Study Group was formed in 1973. This is a broadly based group which initiates research in dairy products and processes. It was funded initially by a grant from Bord Bainne. As its research programme developed, increased finance was necessary, and in 1975 a scheme was initiated (which still continues) by which a levy of 0·05p per gallon of manufacturing milk was collected by Bord Bainne on behalf of this group. The levy is matched by the Exchequer. In 1976, the levy and Exchequer contribution totalled almost £0·7 million. Half of this amount is available for research and development work at processing level, the other half being used for research relating to the farming level. Most of the dairy R & D is carried on in the Moorepark centre of the Agricultural Institute. The Agricultural Institute generally engages in product development only if it is supported by industry.[13] The adoption of this approach with the centralised administration of research funds by the Dairy Industry Technical Study Group, should help to ensure that funds are allocated to the development of products which are more likely to be commercialised than heretofore.

Market development is solely the responsibility of the industry and is done for the greater part of the industry by Bord Bainne. The Government does not make any direct input in this area. Bord Bainne has advocated the diversification of production by industry-wide support for products on an agreed costing basis. If successful this would have the merit of making the industry more secure by broadening the product

[13]Personal communication with Dr. R. Gormley, Technical Coordinator of Food Research in the Agricultural Institute.

base and of providing greater flexibility and bargaining power. The extent to which it would lead to increased employment would depend on the labour intensity of the diversification.

The Government currently makes a significant contribution in the product development area by virtue of the fact that it matches the industry's R & D scheme administered by the IDA. The dairy industry, therefore, is well organised in the marketing and research areas and has already achieved some success in marketing consumer products under an Irish brand name. The Government aid under the proposed Marketing Incentive Scheme should be a significant stimulant for further development in the industry.

5.7.2 Cattle Processing

In the case of the cattle processing industry the main development in the last decade has been a four-fold increase in the scale of cattle slaughterings. This was a very significant achievement for an industry which was virtually non-existent in the early 1950s. The largest development in the product area has been in the deboning of meat. In 1975 approximately 25% of prime meat and over 50% of cow meat was deboned. The development of other forms of processing and diversification of production has been hindered by the operation of the EEC common policy. Intervention prices have been high relative to market prices with the consequence that significant amounts of beef have continually been sold into intervention. The operation of MCA's in recent years has been a considerable obstacle to product development.

The expenditure by this industry on product R & D has been extremely low.[14] This can be seen as a reason for, or as a consequence of, the fact that it produces very largely a commodity type output. No organised approach to providing funds for R & D, such as exists in dairying, is currently in existence. It must be acknowledged, however, that in the early 1960s this industry initiated the collection of a levy on cattle slaughterings which was to be used to set up a Meat Research Institute. This was collected on behalf of the industry by the Department of Agriculture. The industry's contribution amounted to about £90,000 and this was matched with another £90,000 by the Government. However, the scheme never materialised and eventually the money was allocated to the Agricultural Institute for meat research. In 1977, such R & D as was done in the meat area was done largely by the Agricultural Institute. It employed nine graduates to cover all research on beef and pigmeat.

[14]Downey, W. K., Brennan, M. I., op. cit., P. 34.

No central marketing organisation exists for beef and there are no signs that this is a likely development in the medium-term future. It is likely, on the basis of current trends, that the marketing of Irish beef under non-Irish brands will become more prevalent as will trade in vacuum-packed beef to wholesale level. As already outlined, the Government would have no market or product development role to play under non-Irish brand options. It could have a role to play in the provision of distribution facilities for vacuum-packed beef especially where these facilities might form the nucleus for the distribution of consumer products at a later stage. The necessity for Irish expenditure on product R & D would be small if the marketing developments outlined above materialise. Only if the industry moved in the direction of consumer type marketing under an Irish brand or brands would increased expenditure on R & D be necessary. For those firms which moved in that direction under the proposed Marketing Incentive Scheme, the Government should offer to match funds which these firms would allocate to product R & D. The Government has already decided to introduce a beef classification scheme which will be administered and paid for by the Department of Agriculture. This is a welcome development and should considerably improve the overall performance of the beef industry.

5.7.3 Pig Processing

Diversification in the pig processing industry has grown steadily over the years and in 1975 about 10 to 12% of production was in the form of canned or other pre-packed consumer products. Like the cattle processing industry, no organised approach to the funding of product R & D exists in this industry. It does, however, have a central marketing organisation which has put a lot of effort into improving product quality. This industry differs from the beef industry in that it sells most of its output on the domestic market in which consumption of pigmeat has been growing steadily.

Growth of in-factory product diversification for sale in the home market may increase in-factory employment but would reduce employ-

ment in the distributive sector, because less cutting and presentation of pigmeat would then be required at this level. In-factory product development would be desirable if it were required to defend the industry's domestic market share against competing imports or for the purpose of expanding exports. From a national viewpoint, R & D expenditure which would simply have the effect of increasing employment in one sector at the expense of reducing it in another should be avoided unless this were necessary to retain a market, the loss of which would lead to a net loss of jobs.

The most important issue for the pig processing industry is whether or not pig supplies can be stabilised and raised to a level which would bear the costs of a serious export marketing effort under an Irish brand in the medium-term future. If this industry is to become a serious exporting industry, the low and unstable supply position must first be resolved. Currently it appears that, as in beef exporting, non-Irish brand options are becoming more prevalent. These require little or no expenditure on distribution, promotion or product R & D and involve no positive Government role. As was proposed for the beef industry, the Government should offer to match the funds which firms participating in the Marketing Incentive Scheme would allocate to product R & D.

5.8 The General Economic and Business Environment

The general economic and business environment is crucial for the successful development of industry. It is also an area where Government can play a major role which, if successful, will result in large benefits at minimum cost to the Exchequer. The environment may be examined from the point of view of the supply and demand conditions facing industry and the infrastructure in the economy.

Many people in the dairy, cattle and pig processing industries with whom we have consulted have stressed that the greatest role which could be played by the Government would be to reorientate agricultural policy more directly towards increasing the supply of farm-produced raw materials for their industries on an assured and stable basis. They stressed that there was great potential for increased volume of farm production, that the Government could and should implement measures to realise that potential, and that if these measures were successful the increased volume would facilitate and indeed would tend to force the processing sector to diversify and intensify production and engage in

more forceful marketing. Policies for increasing the rate of growth in the volume of farm output have been discussed in Chapters 3 and 4 above.

On the demand side, the most significant factor affecting marketing performance and product development in the dairy and beef sectors since Ireland's EEC entry has undoubtedly been the operation of the Common Agricultural Policy (CAP). Many of the processing problems arising out of the operation of the CAP have already been discussed in recent reports and suggestions have been made regarding remedial action.[15 16 17 18] The more important of these suggestions were summarised in Table 5.2. The suggestions may be studied in greater detail by reference to the relevant publications. The general theme of these suggestions was that the Government should strive to have the CAP adjusted so as to ensure the growth of new markets and marketing and the removal of obstacles to trade. We would endorse these suggestions in general while stressing the necessity to maintain the effectiveness of CAP in the achievement of its objectives.

The problem of trade distortions arising from the operations of the Monetary Compensatory Amounts (MCA) system is difficult to resolve because it gives rise to conflicting advantages and disadvantages. For example, with the MCA's prevailing in 1977 there was a significant price advantage to be gained through the export of carcase beef as opposed to vacuum-packed beef to the UK, French and Italian markets. Conversely, there was some price advantage to be gained through the export of vacuum-packed beef as opposed to carcase beef to the German market. In the absence of a long-term solution to the problems caused by monetary instability, the most the Government can do is try to maximise the advantages for the country and to minimise the adverse effects especially in the area of employment.

On the supply side, seasonality of supply is a serious problem in the milk and beef industries. It raises the unit costs of processing and inhibits market development because of the lack of continuity of supply. Efforts

[15] McKinsey & Co., *A Marketing Opportunity for Agricultural Products*, Bank of Ireland, 1977.

[16] Bord Bainne, *Five Year Marketing Plan*, 1977.

[17] Food, Drink & Tobacco Federation CII, *Food Processing in Ireland, Achievements and Prospects*, 1977.

[18] IDA., *Beef Packing and Processing—A Development Study*, op. cit., Pp. 121–122.

are already being made by creameries through seasonal pricing to move forward the date of calving and thus increase the early Spring milk supply. These efforts would be enhanced by policies that would accelerate growth, as rapid increases in stocking rates and yields could only come about through earlier calving.

Similarly, an increase in Winter beef production to improve the seasonal supply of beef would probably be associated with a rapid intensification of beef production. As indicated in NESC Report No. 34, the high growth projection would involve within a decade about 75% of beef being finished at 24 months. Since most calves would be born in early Spring, a movement towards 24 months beef would necessarily involve more Winter finishing.

A seasonal element in the intervention prices for beef has sometimes been advocated as a means of encouraging wintering. This would probably lead to higher prices being paid for feeder cattle in the autumn. It would not, therefore, necessarily increase the profitability and extent of wintering.

Cyclicality in pig production over the years has posed problems for pig processing similar to those created by seasonality in milk and beef production. A high growth rate in pig production as projected in NESC Report No. 34, along with the major structural change in the size of production units which has taken place in recent years should considerably reduce this cyclicality.

In the area of infrastructure the main causes of complaint by food processors were the telephone system and the roads. Poor transport and communication facilities affect the food industry to a greater extent than most other industries, because the industry is necessarily more dispersed than most others and its produce is bulky. This dispersion is very desirable from a social point of view. A campaign to improve the roads and the communications system would have the immediate effect of helping to reduce unemployment and would be contributing to further rural employment by facilitating the setting up of industries and by facilitating the increased efficiency of all rural based industry. Improvements in infrastructure also have the advantage that they are not subject to EEC competition policy.

CHAPTER 6

SUMMARY

The acceleration of agricultural development is an objective which everybody in Ireland would accept in principle. In practice, however, no concerted national effort has been made to achieve this objective. EEC membership became a likely event as early as 1971. Since then opportunities have existed for a transformation of a poor and underdeveloped industry into an efficient and prospering industry. Yet agricultural growth in the favourable market environment of the 'seventies is proceeding at a pace only equivalent to that of the unfavourable 'sixties.

This is not to say that there is no progress—because there is. Particularly on the larger, more commercialised farms there is quite satisfactory progress. The problem is that these occupy as little as one-eighth of the land of the country. When their satisfactory performance is pooled with the moderate performance of another five-eighths of the country and the negative performance of the remaining quarter, it adds up only to a moderate overall performance.

We have shown in NESC Report No.34 that the pay off from rapid growth by comparison with current trends could be substantial. There could be up to 76,000 extra jobs after eleven years of sustained rapid growth. Added to this would be a major balance of trade boost and a significant increase in real farm incomes. We have emphasised in Chapter 1 that such a pace of development will not be easily achieved. It has not been achieved in Ireland or in any other country before. It will certainly not be achieved in Ireland by talking about it, or wishing for it, or regretting its absence. Only with fundamentally reorientated policies is there any hope of it. We have argued that with present policies all we can expect to achieve, taking one year with another, is a continuation of past

trends. Such an outcome offers very little by way of contribution to national development; it would leave agriculture at the end of the 'eighties still grossly underdeveloped relative to Ireland's EEC competitors, and it would leave agriculturalists still bemoaning lost opportunities.

In Chapters 1 and 2 we argued that, though accelerated development will not be easily achieved, it is achievable. It is achievable both in terms of the available on-farm resources and of the agricultural infrastructure of research, advice and education. It is achievable in terms of market availability and the marketing capacity of the various Irish processing industries. As far as commodities are concerned, more rapid growth would be concentrated in milk, beef and feed grains. Pigs and sheep could also contribute, but other commodities would be constrained by less favourable market opportunities.

Market opportunities are not likely, however, to be so good as to be taken for granted. We foresee a very slowly growing food market both internationally and within the EEC over the next decade. There probably will be occasional periods of scarcity, but normally markets will tend to be well-supplied and even over-supplied. Yet within the EEC, the Common Agricultural Policy provides an excellent framework for competitive expansion. Prices are unlikely to move up as rapidly in the future as in the period since EEC accession. Yet the prices prevailing are likely to be such as to allow profitable expansion to take place on most Irish farms. We recognise, of course, that the CAP has been under attack and continues to be attacked. It could collapse in the future, but this is highly unlikely. It is most likely to continue to be adjusted, but such adjustments do not threaten Irish development. We cannot envisage any likely adjustment in which a poorly developed agriculture in a decade from now would be preferable to a highly developed agriculture.

What then is required to accelerate agricultural development? We have argued in Chapter 2 that prices on their own are not likely to do it. There seems to be very little relationship between prices and overall growth, so that even if prices should prove in the future to be more favourable than we anticipate, this still will not induce a transformation of agriculture. Conversely, somewhat less favourable prices than we anticipate will probably not dampen development either. For balance of trade and terms of trade reasons, it will remain in Ireland's national

interest to continue to pursue the highest level of common agricultural prices attainable. The consequent domestic redistribution of income from consumers to farmers can be offset, if the Government sees fit to do so; the redistribution problem cannot be sustained as an argument against seeking higher agricultural prices.

6.1 Coordinated Planning

The policies we propose in Chapters 3, 4 and 5 of this Report relate to non-price issues. There are two basic principles: coordinated planning and linking of State aid more directly with performance. The Government claimed between 1974 and 1977 that economic planning had become unfeasible because the economic environment was too unstable. Whatever merit this argument had in relation to industry, it was clearly spurious in relation to agriculture. Since 1971 agricultural development could have been planned and should have been planned.

The planning we propose is not just an exercise by somebody in Dublin in setting targets and then hoping that farmers will meet the targets. We envisage a coordinated approach from Government level down to farmers through the advisory service. The advisory service is now doing a reasonable amount of medium-term planning on farms, but this micro-planning is not being coordinated to add up to anything at national level. We know of no reason why it should not be, and we can identify several good reasons why it should be. Furthermore, under our proposals all farmers in receipt of State aid who have potential for development would be planned and they would be serviced to enable them to implement their plans. In that situation, the arguments for coordinating these plans into a national plan would be even more compelling.

Specifically, we propose an Agricultural Development Council consisting of Department of Agriculture officials, representatives of the proposed Agricultural Training Authority, representatives of An Foras Taluntais and representatives of the farming organisations. The Council would be chaired by an official of the Department of Economic Planning and Development. The Council would initially identify targets for expansion, but these targets would be reconciled with the plans of individual farmers through the advisory service. The targets of national

development should be flexible enough to accommodate changing market requirements and changing farmer preferences. We have shown in Chapter 3 that within the EEC framework the particular expansion path pursued is secondary to the main requirement of accelerated development, namely, the achievement of rapid progress across a wide range of commodities. Too often in the past, progress in some enterprises was associated with regression in others, so that the aggregate impact was disappointing.

The local adviser would become a development officer linked to a national network which would give him responsibility for and authority to develop his particular district. He would plan the local development with his farmer-clients; he would advise and aid them with their plans; he would sanction the payment of State aids; and he would identify constraints on development which would be relieved if feasible by private enterprise, by cooperative enterprise or by State enterprise.

Co-operatives would have particular responsibility in this regard. By virtue of their broad membership and their socio-economic character, they should be expected to play a key role in providing or arranging the provision of a whole range of services such as building, machinery, drainage, group water schemes etc. Co-ops could also augment the efforts of the advisory service.

6.2 Payment for Performance

The planning framework proposed would not in itself achieve very much unless the planning was accompanied by appropriate policies. We must of course operate within the CAP framework. But there is considerable scope within that framework for reorientating Irish agricultural policy. Where the policies we advocate are in conflict with that framework, Ireland should seek changes in the CAP or derogations to accommodate her requirements.

The Farm Modernisation Scheme is the central policy of the CAP affecting development. While this Scheme has considerable merit, several deficiencies have been identified in it. Most can be solved by one fundamental change, namely, by payment of portion of the existing aids in the form of deferred payments rather than as grants. The deferred

payments would be paid as bonuses subject to achievement of development targets. All farmers applying for significant grants would thereby be induced to participate in a development plan and to achieve a minimum rate of progress to earn the bonus. The bonus payment should ideally be sufficient, when combined with the tax and other incentives for development which we propose, to motivate the largest possible number of farmers to develop. At the same time, they would place a serious responsibility on the State to facilitate development through the advisory service and other development services.

Under these proposals, all farmers seeking grants would be encouraged to become developing farmers, thus ending the present invidious classification of farmers into "commercial", "development" and "other" categories. These categories would still be required by the EEC in the administration of the Scheme to determine which farmers would receive EEC funding and to maintain present preferences among categories as ordained by the EEC. The classification would, however, be largely relegated to an office procedure and would not be of much practical consequence for real development.

Our proposed development scheme would in effect be a greatly extended form of the successful Pilot Area and Small Farm (Incentive Bonus) Schemes. Lest it be felt that this proposal is new, it is worth recalling that a similar proposal was made in 1970 by an interdepartmental committee.[1]

The clear pay-off from such development schemes has also been fully documented. The Pilot Area Development Scheme, for example, was initiated in 1964 in twelve representative areas in each of the twelve Western counties. The Scheme involved intensive advice associated with planned farm development and supplementary capital grants of an incentive nature. An assessment of the Scheme after its first five years of operation showed that the growth rate within the pilot areas was ten times greater than the growth rate in the West as a whole.[2] Given this evidence for twelve poor agricultural areas, it is extraordinary that this Scheme was terminated rather than being extended and that the principles of the Scheme and its merits have still to be justified as if they had never been proven.

[1] *Report of the Committee on the Review of State Expenditure in Relation to Agriculture*, The Stationery Office, Prl. 1231, 1970. Pars. 7.6 to 7.9.

[2] J. Scully, op. cit., p. 159.

There are two major schemes operated by the State for farmers in the poorer regions of the country: the Disadvantaged Areas Scheme (DAS) and Smallholders' Unemployment Assistance (SUA), otherwise known as the farmers' dole. The Exchequer expenditure on these Schemes in 1977 amounted to the substantial sum of £40 million. The development content of this expenditure as currently administered is minimal despite the objective of the DAS "to ensure the continuation of farming, the maintenance of a reasonable level of population, and the preservation of the countryside". The way to achieve these objectives in our view is to link expenditure as closely as possible with development, while at the same time providing welfare support for the genuinely needy.

We propose therefore that some of the SUA expenditure be re-allocated to the DAS to increase the level of headage payments and the maximum amount that herd-owners can receive. This would be achieved by adopting a more realistic multiplier for SUA assessment than is currently the case and re-allocating the expenditure thus saved to the DAS. It should be noted that with the present contribution of 35% by the EEC to the DAS payments, every £1 re-allocated from the SUA would enable £1·54 to be added to the DAS while leaving the Irish Exchequer's contribution constant. In addition, the increased headage payments would make the operation of the DAS in Ireland more compatible with the intentions of the EEC.

The higher headage payments might entice farmers to increase the numbers of their stock while allowing the quality to deteriorate. This should be prevented by applying appropriate conditions of payment. The main condition we would envisage is that farmers in receipt of substantial payments—perhaps those with 15 livestock units or more—would be required to participate in a development plan with their agricultural adviser if the resources on the farm were deemed by the adviser to permit of significant development.

As a means of stabilising the returns from drystock over the years, we also propose that the headage payments be phased over time in a counter-cyclical manner. In effect this would mean that a portion of the headage payment would be withheld when young cattle prices are relatively high in the cattle cycle, and the headage payments would be increased when cattle prices are depressed.

6.3 The Agricultural Advisory Service and Training

Our proposals have far-reaching implications for the Agricultural Advisory Service. They become the local development agents in the national network of planning. The volume of advisory work in the form of planning, advice, education and administration would increase enormously. This is essential if agricultural development is to be accelerated. Most Irish farmers still require a great amount of encouragement, advice and education to motivate them towards development and to enable them to develop. This entails a large input of on-farm attention by agricultural advisers. We have suggested costs and returns for this increased effort in Section 3.5. Provided the effort is applied within the developmental environment we advocate, the returns to the economy would be more than sufficient to warrant the additional effort. At the same time the operations of the advisory service should be streamlined and modernised to increase their effectiveness. In particular, an adequate administrative staff should be installed to reduce the routine office work of advisers so that they can spend the maximum time in planning, advising and educating. Also the provision of more specialist advice is necessary.

A framework for the comprehensive training of farmers and associated manpower now exists or is in the process of being established throughout the country. In many spheres the limitation at this stage is the demand for the available services rather than the supply. The need then is to co-ordinate the resources available and actively to promote the pursuit of education and training among farmers. The education division of the proposed Agricultural Training Authority should be able to provide the national leadership required to do this. The heavy emphasis on performance in our proposals and the specific educational requirements for priority access to land indicated below should be a useful stimulus.

6.4 Structural Reform

Even if all the foregoing proposals were implemented, there would still be a very large number of farmers who would not opt for development. Some would already be fully developed, while others by virtue of social conditioning or paucity of resources would not have the motivation to develop. For these farmers, structural policies should

be such as to encourage them to transfer management control to those who would undertake development.

The total turnover of agricultural management in Ireland is around 3% per annum. Land mobility has not increased in recent years despite suggestions that the large number of apparently heirless farm owners would accelerate mobility as they retired or died. On the contrary, heirs tend to emerge for such land and to retain ownership of it, often as part-time farmers.

Land is transferred from one management to another by one of three processes, namely, inheritance, open-market purchase or Land Commission purchase. Nearly 80% of all transfers occur *via* inheritance; 15% occur through open-market purchase; and 6% are handled by the Land Commission. It is apparent therefore that changing the inheritance system would have by far the most widespread impact, even though most debate has been concerned with the other two transfer methods.

Farm inheritance in Ireland is characterised by aged withdrawals and moderately aged entrants. Unless the retirement age is reduced, the turnover of management will remain a very slow process, and much potentially productive land will remain under the control of poor management. The State has ample tools available to influence the retirement process if it wishes to use them.

There is the Voluntary Retirement Scheme which is orientated towards smaller farmers and offers them an incentive to retire. The basic weakness of this scheme is that in the entire Western part of the country the incentive offered is in direct competition with other substantial State benefits available to farmers if they remain in farming; these competing incentives include the farmers' dole, the Disadvantaged Areas Payments, and the Old Age Pension and associated non-cash benefits. There is therefore a direct conflict between these two sets of incentives. The competing State benefits must be matched and exceeded by the retirement incentives if there is to be an effective inducement to retire.

Since the State benefits vary with the circumstances of each farmer, we propose that the present flat-rate retirement incentives be varied in relation to the competing State benefits. Specifically, we suggest that the retirement incentive should significantly exceed the competing State benefits, with flexibility to adjust depending on the merits of

the available candidates for the released land. Our proposal would automatically link the retirement incentive with the competing welfare benefits and would thus prevent increases in the former from lagging behind the latter, as has happened to a huge extent since the New Voluntary Retirement Scheme was launched in 1974.

It may be felt that our proposal would be excessively expensive, but it should be clearly understood that the net cost to the State of the retirement incentive would be the difference between the competing benefits which would be paid if the farmer did not retire and the retirement benefits. Until there is a significant net retirement incentive there is not even the possibility of an effective retirement Scheme.

In addition to a potentially attractive Voluntary Retirement Scheme, we also propose that socio-economic advisers be appointed as provided for under EEC Directive 161. One of their functions would be to promote and aid more rational family transfers than now occur. A Family Farm Leasing system and an Inheritance Annuity system have particular relevance in this regard.

Finally, to add some weight to these voluntary approaches, the farm taxation system should be modified to encourage retirement in the same way as the taxation system generally is used to achieve other desirable socio-economic objectives. The taxes applying to farmers should incorporate adjustments which would give progressively stronger encouragement to farmers to retire as they advanced in age. This was one of the features of the former system of death duties and there is considerable scope for it in the present farmer tax code. At the same time, income derived from the sale or leasing of land to designated categories of farmer should, subject to a sufficient period of ownership, receive favourable tax treatment.

Turning next to open-market land purchases, the prevailing free-for-all system is particularly haphazard and unjust. We fully support the proposals on this subject in the Interim Report of the Interdepartmental Committee on Land Structure Reform. These proposals basically involve the monitoring of all land sales by an appropriate agency which would have the power to refuse consent for purchase to what it deemed as less deserving candidates.

The Land Commission has played a very prominent role in land restructuring in the past and it, or a similar agency, will continue

to do so in the future. Again, we support the proposals of the Inter-departmental Committee that the approach in the future should be to first identify suitable candidates for land and then to seek to meet their needs. The land agency would function mainly by regulation of land transfers rather than by actual purchase and distribution of land.

A Register of Priority Applicants would be drawn up who would be drawn from the developing farmers in the reorganised Farm Modernisation Scheme. These applicants should already have a high production performance on their existing land, and they should have or be required to obtain a minimum agricultural education. Such Priority Applicants would have first call on all Land Commission transfers and would receive favourable consideration for open-market purchase including special long-term loans. A core of outstanding applicants as measured by their performance would be eligible for a more favourable subsidised interest loan.

This new approach to land allocation would quickly transform the current widespread belief among farmers that smallness is a sufficient criterion for land allocation. The emphasis on recorded performance would be a further incentive to induce development among small farmers in addition to the incentives already designated.

The virtual absence of long-term leasing from the Irish system of land tenure has been much commented upon. While long-term leasing should be actively promoted by the Land Commission and by socio-economic advisers, significant progress in the short-term is likely only in special circumstances such as leasing between father and son. In the meantime the Land Commission's attitude towards conacre should be made widely known; it should be actively discouraged where the resultant land use is unproductive, but it should be actively encouraged where the land use is productive.

6.5 Taxation

Taxation policy is a further tool which can be used for the promotion of agricultural development. With the scope of the Irish Government for policy initiatives constrained in many respects under the CAP, fiscal policy becomes a particularly valuable instrument. Farmers have emphasised that they are willing to pay their "fair share" of taxation. We cannot

specify what is a "fair share" as that is a political decision for the Government. We do specify, however, what we consider to be the optimum system from the point of view of development to collect a specified amount of revenue. That system consists of a combination of income tax with a notional option and a resource tax in the form of a flat rate of tax levied on all land on the basis of an up-dated valuation. As an interim arrangement the Rates can serve as this resource tax.

All farmers achieving their targets in the new development scheme should receive the Agricultural Grant as a rates rebate during their period of development. All other land-holders should be required to pay some or all of the Rates chargeable on the land by appropriately modifying the Agricultural Grant. Such an arrangement would be a further incentive for development. Farmers who would wish to avoid this tax would have various means available to them to do so under our proposals. They could become developing farmers, in which case they would get exemption; they could retire under the improved Voluntary Retirement Scheme; or they could sell or lease their farms and receive tax concessions on either the capital or the rent received.

Despite these options our proposals might still be considered unfair to smaller farmers. However, even a total abolition of the Agricultural Grant in 1977 would have involved on average, an increase in tax of about £5 per acre for such farmers. Considering the capital value of land and the level of income that can be earned from either efficient farming or from letting the land, such a charge can hardly be considered excessive. Furthermore, a relatively large proportion of smaller holdings are either farmed by part-time farmers or are let on conacre. The equity of the present derating of such holdings is questionable even in the absen of a strong land use objective.

We believe our tax package contains the maximum incentive for intensive land use. Because of the notional option, the marginal rate of tax on additional income earned by intensive farmers would be zero. We see this as being equivalent to the export tax relief available to manufacturing industry. At the same time the resource tax would provide an incentive for extensive non-developing farmers either to develop or to retire. In addition, the combination of taxes would be capable of generating a "fair share" of taxation from farming and it would be reasonably equitable among farmers given the options available to

farmers within our proposals and the overwhelming importance of intensive land use in the Irish economy.

6.6 The Processing Industries

Increased employment in the processing industries can come about through increased scale of throughput or through increased processing intensity.

All the foregoing policies relate to accelerating growth in the volume of farm output and thereby the throughput of the processing industries. Increased processing intensity has to be achieved within the industries themselves. The main industries that would be affected by the accelerated development we envisage are the dairy, cattle and pig processing industries.

Interviews with representative managements in these industries established that they expected by the mid-eighties a processing intensity equivalent to the medium intensity specified in NESC Report No. 34. This would involve intensification beyond the level of 1975 such as to generate between 1,300 and 5,700 additional factory jobs depending on the volume of produce flowing off farms. We have sought, in this Report, operational means by which this rate of intensification could be further advanced, thus increasing the expected employment.

Several reports on the food processing industry have been published over the past year or so. These reports contain a variety of exhortations as to what the industries should be doing. We would expect the proposed Agricultural Development Council to actively encourage and promote improvements in the structure and conduct of these industries. Furthermore, many people within those industries with whom we consulted emphasised that accelerated growth in farm output itself would lead to more forceful marketing. It would also greatly improve the problem of seasonality of supply of both beef and milk and the cyclicality of pig production. We have focused our attention on identifying means by which more direct action could be brought about by Government initiative. As with our on-farm policies, our focus is on performance. In particular, we concentrate on market development and product development which are essential if intensification is to be increased.

A Marketing Incentive Scheme is proposed for export marketing

which would have the effect of inducing increased processing intensity and increased employment in food processing. This Scheme involves the granting of Government aid for product research and development, for promotions and possibly for the acquisition of distribution facilities. The receipt of aid would be conditional on the product carrying an Irish brand and on well specified marketing plans with minimum volume and range of product stipulations. The rates at which such aid would be paid would increase with increased market share for a limited period of perhaps three years and then would be phased out. Aid would be paid only on the basis of quantified and certified performance.

The other great scope for the Government to increase processing is in the area of the regulation of the market under the CAP. The CAP mechanisms have had both positive and negative effects on processing. The Government should strive to have the CAP adjusted so as to minimise obstacles to increased processing.

6.7 State Expenditure and the Pay-off

In our proposals we have kept within our general terms of reference of not requiring a major increase over levels in recent years in the proportion of State expenditure in relation to agriculture. For the most part we have concentrated on reorientating existing expenditure, as in the case of the payments under the Farm Modernisation Scheme, the Disadvantaged Areas Scheme and the Smallholders' Unemployment Assistance. Additional expenditure would, however, be necessary to employ additional advisers, to make the Voluntary Retirement Scheme effective, and to fund the Marketing Incentive Scheme. These would not be major expenditures and in every case they are directly linked to a return in the form of increased production and employment. In our view the expenditures would be very small in relation to the pay-offs.

Regarding the overall pay-off from the reorientation of policy, it is, of course, impossible to quantify it precisely. We would be more confident of a significant response in agricultural growth than in food processing. There can be little doubt but that the proposed tax package combined with the heavy emphasis on performance in our proposals would achieve a vastly higher development response than current policies. In addition, the structural reform policies proposed would make a steady but cumulative contribution towards growth over the years.

Taking the entire package of policies, we would expect them to produce something close to the high growth rate of 5 to 6% projected in Report No. 34. This would be an unprecedented achievement which would transform Irish agriculture within a decade. The effect on the food processing industries would be to move them beyond the projected medium intensity towards the high intensity. The additional direct jobs created both on-farm and in-factory over and above trend projections would thereby be in the order of 25,000. On the basis of a 1:1 ratio between direct jobs, on the one hand, and indirect and induced jobs, on the other, the total pay-off could be around 50,000 jobs. This by any standards is significant, and particularly by the standards of job requirements as outlined in NESC Report No. 35.

6.8 Conclusion

Agriculture is normally viewed as a shedder of labour in the process of economic development. While this is universally the case, it is nevertheless true that the pace of agricultural development can influence the rate of job loss. For most countries this question is only of theoretical interest, because the scope for accelerated agricultural development does not exist. Ireland since EEC accession finds herself in a rather unique situation: market outlets are available for competitively produced output; the production and marketing potential is there to produce it; but the policies that have been pursued have not been very effective. In the meantime the potential that appears to so many to be so readily achievable remains unrealised.

Opportunities exist for rewarding and fulfilling employment on the land; yet farm families, our educational system, and society encourage rural youth to seek their fortunes elsewhere. Opportunities could exist off-farms in servicing farmers' needs and in processing their output. At the same time we sit about writing reports which never seem to lead to any action.

NESC Report No. 34 and this Report have been written in an attempt to provoke a reconsideration of present attitudes towards agricultural development. There is no shortage of platitudes concerning agriculture, such as that it is a key industry in the Irish economy with considerable potential. What we are short of are the political will and the policies to realise its potential.

This Report contains a package of such policies. The package may not be to everybody's liking, but it contains what is necessary to accelerate agricultural development. The choice we see is clear: the country implements such a package or else it continues to speculate about potential while being forced to bemoan the failure to realise it.

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