

# Trends in Agricultural Development in Europe and Ireland

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The most widely accepted economic argument in favour of Irish membership of an enlarged European Economic Community is that it will lead to a big increase in our earnings from the export of agricultural products. This, it is hoped, will come about for two reasons, the first is the higher prices paid to the farmer for agricultural products in the E E C compared with those currently received in this country, the second is the increased volume of agricultural exports which is anticipated due to the better opportunities for our farmers when they have direct access to a market of over 230 million consumers.

This paper is primarily concerned with the second of these two facets of the consequences of Ireland joining the E E C and does not discuss in detail the factors which will determine the prices of individual farm products. These are not, however, entirely separate issues, for the value of the new opportunities which the Common Market presents to our farmers will depend on the prices received for our exports of farm products. Moreover as two-thirds of our agricultural output was consumed at home in the period 1956-60,<sup>1</sup> a change in the prices for all our agricultural products could well have its greatest single impact on the prices of farm products entering domestic consumption.

To the extent that this happens, the rise in farm prices will represent a redistribution of real income between agriculture and the rest of the economy, and it will reverse, or at least slow down, the trend of a more rapid rise in incomes of the non-farming population than in the incomes of those engaged in agriculture. It will not, however, represent any net gain for the economy as a whole, this will come only from the higher earnings from that part of our agricultural output which is exported, and will be appreciably less than the total gain to the farming industry.

In the absence of a schedule of the E E C target prices a very tentative estimate has been made of the national and the purely agricultural benefits to be gained in this country from the higher prices for agricultural products to be realised under E E C conditions. This has been based on our agricultural output for 1960. The details are set out in

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<sup>1</sup>In the last 2 years this proportion has fallen, and by 1961 55 per cent of agricultural production was consumed at home.

Table I in the Appendix, the E E C forecast figures are more than simple averages of the existing prices in the Common Market countries, they are really a prognostic based on a wide variety of different sources of information available on the current E E C policy on agricultural prices<sup>2</sup> It is necessary to remember that by the time the full effects of the E E C agricultural prices are felt in this country, our farm production may be materially different from what it is at present. To the extent that this actually occurs it will alter the relationships discussed below

The figures which have been used to revalue Irish agricultural output are derived from the actual prices being paid in the Member countries of the E E C during the year 1960/61 as given in the U N / F A O. publication on "Prices of Agricultural Products and Fertilisers in Europe", they are not a weighted average of these prices although the prices derived in this way give broadly comparable results In deriving the prices used in Table I, account has been taken of the broad trends in development in European agriculture, and also the fact that Ireland is at a slight transport disadvantage in supplying the most densely populated consuming centres on the Continent This exploration of the potential agricultural benefits of joining the E E C is not a specific forecast of what will actually occur, for the composition of agricultural output in this country has changed since 1960, and the price relationships between the main agricultural products in the E E C are also changing

The effects of the prospective E E C prices for farm products on these assumptions would be to increase the value of the 1960 volume of agricultural output by a little over 15 per cent This is made up of a rise of just over 20 per cent in the value of livestock production, offset by a very slight fall in the value of crop production In terms of the value of home consumed or exported products this implies an increase of 25 per cent in the receipts from exports of livestock, and of 17 per cent in the value of livestock consumed at home For crop production the total fall in value of just over 1 per cent is virtually all due to the fall in the value of exports, the current total value of which is under £5m

In absolute terms the gain in the total value of agricultural production under these price assumptions is just over £30m Of this, £17m. would come from the increased value of agricultural goods exported, and about £13.5m from higher prices for farm products consumed in this country The £17m would be a net gain to the national economy

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<sup>2</sup>Obviously any attempt to forecast the actual prices to be realised under E E C conditions involves a degree of subjective evaluation of the wide range of factors which will determine these prices From the data in Table I it would be possible to ascertain the effects of alternative assumptions as to these future prices

as a whole, although the higher value of home consumed farm products together with the higher earnings from exports would almost certainly have an effect on the level of direct exchequer assistance to the agricultural industry. In other words there will be a measure of income redistribution within the country in which the agricultural industry and the taxpayer will gain, at the expense of the consumers of food (and the farming population will be one of the principal groups concerned)

This, however, relates to the potential benefits brought about by higher prices for farm products at the current level of farm production. Many hopes for a quickening of the trend towards a higher level of agricultural prosperity and consequently a higher rate of national economic growth than would otherwise be possible, have been centred on the prospects of enhanced receipts from our overseas sales of farm products. The rate of agricultural expansion we achieve subsequent to our entry into the E E C will be one of the principal criteria of the justification of this step.

It is therefore necessary to focus attention on the determinants of agricultural growth generally, and on the prospects for a relatively high rate of growth for Irish agriculture in the economic environment of the Common Market. Before doing so it is desirable to define more clearly the criteria of "growth". As agriculture is universally an industry of declining relative importance as an economy develops, it is necessary to adopt somewhat different criteria for economic developments in farming from those used for manufacturing industry. A rate of expansion in total agricultural output in value terms which is below that of the economy generally could be regarded as highly satisfactory. On the other hand, a rate of expansion in productivity per man engaged in agriculture which is above that in industry may not be satisfactory, if it is due primarily to the loss of the underemployed part of the agricultural labour force<sup>3</sup>.

Given the present circumstances of agriculture in the Irish economy we might regard the progress of the agricultural industry as satisfactory if it met the following three conditions

- (i) reduced quickly the differential in real income per head of those in agriculture and those in the rest of the economy,
- (ii) maintains a rise in productivity per head in real terms at least as great as that in industry,

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<sup>3</sup>The productivity per man in Connaught might be doubled consequent upon a reorganisation of the structure of its agriculture and the halving of its labour force—but this would still not bring the output per man up to that achieved on British farms. c f Report of Inter-Departmental Committee on problems of small western farms (Pr 6540) Dublin 1962 Appendix A

- (iii) realises a rate of growth in total output which is sufficiently close to that of the economy as a whole to avoid any material drag on the latter—a difference of no more than 20 per cent might perhaps be the target to aim at

At the same time, it must be also recognised that there are certain social objectives in our present agricultural policy which are likely to militate against the most rapid pursuit of these economic ideals. The relative degree of importance given to the social objectives can only be assessed subjectively, this paper concentrates on the economic issues which are of great complexity in themselves

The crucial issue for the farming industry is not that of the higher prices for the present output but the subsequent effects of this “shot in the arm” on the performance of the farming industry when it is in direct competition with those of the other members of the Community. It is assumed for the purposes of this paper that the “common organisation” for agricultural markets will basically permit competition between the various farming industries within an enlarged E E C whose membership is extended to cover the present four applicants (Ireland, U K, Denmark and Norway) as well as the existing members. Unfortunately the Treaty of Rome is by no means explicit on the operation of free competition for agricultural products within the Community, and much of the current detailed agricultural policy which is being promulgated in the flood of regulations coming from Brussels must cause apprehension as to the eventual reality of a free market. If the exceptions in the Treaty<sup>4</sup> are such as to create a fundamentally managed market in agricultural products, an economic assessment of membership of the E E C for our own agriculture would be virtually impossible without specific details of such arrangements. I am not convinced that the E E C agricultural policy will inevitably be one based entirely on free internal competition, although this is the avowed objective of price policy within each sector of agriculture. As long as there is some degree of competition, the efficiency of Irish farming compared with that of the other members is of great importance. Although there is likely to be a high degree of insulation from competition in the market for agricultural goods from “third” countries, there will be a very high degree of competition from the other sectors of the economy of the E E C for the resources used in agriculture—especially labour.

Irish agricultural gross output (including both the value of changes in livestock numbers, and turf) in 1961 was over 25 per cent above the 1951 level, since the relatively poor year of 1958 it has been increasing by an average of 5 per cent per annum. The rise in the inputs of feeding stuffs, fertilisers and feed has, however, been much faster—an increase

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<sup>4</sup>Under Articles 39 to 46

of almost 50 per cent took place between 1953 and 1961—so that the volume of net output has increased more slowly than that of gross output

The picture is not one of a static industry. Over the decade of the 1950's the total farm labour force has fallen by over 17½ per cent, the level of productivity per man has risen by almost 50 per cent, at a rate faster than that in industry, there has been a much greater change in the pattern of farm holdings than is generally recognised, with the number between 5–15 acres falling by 20 per cent, and those of 15–30 acres by 12 per cent in the five years prior to 1960. The volume of industrial inputs of fertilisers, machinery, fuel, etc. has risen steeply over the decade as a whole.

All this has happened during a period in which agricultural prices rose by 10 per cent in the first three years but since then have fluctuated about a static level, the agricultural price index for 1961 was precisely the same as it was in 1953. Over the same period the index number of wholesale prices for the output of industry went up by approximately 20 per cent, and the index of consumer prices by over 40 per cent. This is of course the general pattern of relative price movements for an advancing economy, the important point is not that the Irish farmer was subject to influences different from those of farmers in other modern economies, but that the farming industry in this country over recent years has shown a very considerable degree of change in its level of output, in the total amount of resources it employs, and in the relative combinations of these resources in the production process.

It must be recognised that this has involved a growing amount of intervention in the prices and actual costs of both the outputs and inputs of the agricultural industry (see Appendix Table II). The subsidies to end-products have kept the level of agricultural prices from falling below that of 1953—although they have amounted to at least £10m in 1961–62 (including that part of the expenditure on the T B Eradication Scheme which was paid on the value of slaughtered cattle exports and on the export of fat cattle). The total amount of State aid to agriculture in 1961–62 at over £35m represents 18 per cent of the value of total output (and nearly one-quarter of total government expenditure). Although not all of this directly reduced costs or maintained the value of the final products it does represent a widely distributed system of support, and the economic contribution of the individual measures of support needs to be re-examined continuously in the framework of the necessity of creating a more efficient agricultural industry in the future.

It is also necessary to view these developments in agriculture against the background of the changes in the economy as a whole. Gross national product at constant prices rose by 17 per cent from 1950 to

1960, and the volume of industrial output rose by 28 per cent during the same period. The total number at work in non-agricultural activity declined from 724,000 in 1951 to 710,000 in 1961, of this total 289,000 were employed in all industrial production in the earlier year and 284,000 in the latter. This fairly constant level of industrial employment was associated with an annual unemployment percentage of between 6.8 and 9.2 per cent, falling below 6 per cent only in 1961, although there has been a steady rate of fall since 1957. In Ireland the predominant attractions for labour from agriculture have not been the opportunities in industrial employment in this country but those in Britain, the main domestic force has been the gap in the level of national income per person in the agricultural and industrial sectors, in 1951 the national income per person in industry was nearly 62 per cent above that in agriculture, but by 1961 this had risen to nearly 70 per cent.

This deterioration in the relative position of those engaged in the agricultural sector compared with the position of those engaged in industry was not a reflection of any comparable change in the real productivities per person engaged in the two sectors, for industrial productivity per head rose at a slightly lower rate than that in agriculture. Nor does this change reflect any overwhelming fall in the importance of agricultural output in the international accounts of the country. Exports of products of primarily agricultural origin accounted for 69.3 per cent of the total value of domestic exports in 1951, and fell over the next 10 years to 59.8 per cent.<sup>5</sup>

It is hardly surprising that under these economic circumstances a good deal of attention has been given to the improvements in farming prosperity when the likely E.E.C. agricultural prices are actually being realised by the farmers of this country. The most important question is the overall effect on the development of our agricultural industry in the general economic climate of the Common Market once the transitional period is over. Although any conclusions based on the current economic trends of the Six (together with the three current applicants apart from ourselves) involve very large reservations, they do give some measure of the prospects for our own agricultural industry in the competitive environment of the E.E.C.

In the period 1953/54 to 1960/61 food production in N.W. Europe as a whole has increased by 21 per cent<sup>6</sup> (see Appendix Table III). Of the E.E.C. countries, France, Germany and the Netherlands have been increasing their food output at a somewhat faster rate and Belgium/Luxembourg at approximately the same rate. Italy, whose agriculture

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<sup>5</sup>E. A. Attwood. *Agriculture in the Irish Economy*. *The Irish Banking Review*, June 1962.

<sup>6</sup>Although the season 1960/61 itself is well above the trend over this period as a whole.

is basically very different from that of the other members of the E E C , has been increasing her food output at a slower rate, although the very wide annual fluctuations in the level of Italian food production make it much more difficult to determine the trends in this instance. Of the four applicants, Denmark and the U K have been expanding food output at a rate similar to that of average of N W European countries, and Ireland and Norway at a considerably lower rate over this period.

These trends in production (which actually relate to food, but which can be taken as indicative of total agriculture) are the consequence of the trends in agricultural prices within each country, the trends in the volume of resources which are committed to farm production and the rate of improvement in the productivity of those resources. These three factors are closely inter-related, but it is useful to consider them separately as far as possible.

The upward movement of agricultural prices in the main European countries in the 1950's has been much slower than that of the prices of the Gross National Product (see Table IV). The increase in the agricultural price levels for N W Europe as a whole was just over 20 per cent during the period 1950/2-1959, the increase in the implied price index for the Gross National Product for N W Europe over the same period was over 33 per cent. In four of the ten countries (U K , Italy, Belgium and Denmark) the increase in agricultural prices was very small during the fifties, it is rather surprising that of the ten countries only France, Germany and Norway has the rise in agricultural prices exceeded that in Ireland. The rise in French prices for farm products is of particular importance in the N W European index because French agriculture accounts for approximately one-third of the total E E C agricultural production (and one-quarter of the ten countries under discussion).<sup>7</sup>

A very similar picture emerges if, instead of considering the agricultural price movements by themselves, they are viewed against the movement in prices in the Gross National Product as a whole in the different countries. The U K , Italy, Denmark and Belgium have had a very low proportional increase, in Ireland and the Netherlands the increase in the agricultural price level from 1950-2 to 1959 has been slightly more than 40 per cent of that in the Gross National Product. In Germany and to a lesser extent in France the increases in agricultural prices have kept nearly in step with those in the economy as a whole, and in Norway the exception to the rule is to be found in that agri-

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<sup>7</sup>The French farm price increases were, of course, part of the general price inflation in France. This rise in the implied price index of the French Gross National Product was over 55 per cent during the fifties, which was much greater than that in the other European countries. See "Towards a Capital Intensive Agriculture" Pt I, F A O , Geneva 1961.

cultural prices have risen more sharply than those of the Gross National Product

The rate of development of agriculture depends not only on the trends in prices, but the actual price levels prevailing during the period. Static but relatively high prices as in the U K in the fifties are a better inducement to expansion, than low prices even if these are rising at a relatively high rate. The very extensive degree of government intervention in the prices received by farmers, and the numerous ways devised to raise prices, have created widely differing schedules of prices for farm products in the different European countries. An estimate of the degree of protection for seven of the major agricultural products for 1956/7 to 1958/9 has been published for the countries of Western Europe<sup>8</sup>, from this, and from the relative importance of each of these products in the total national output for 1955-59, it is possible to estimate the total degree of agricultural protection in each of these countries (see Table V Appendix). Whilst the actual position of each of the different countries is what might be expected from a general consideration of the agricultural policies pursued by each country, the actual degree of protection in the U K, Italy and W Germany is surprisingly high. The Irish position is very close to that of the Netherlands and France, the very low figure for Denmark will have been increased appreciably by the new agricultural supports in that country introduced during the past two years.

The trend in the volume of resources in agriculture is dependent on the relative attractiveness of opportunities in other parts of the national economy and the degree of friction in the movement of resources from one sector of the economy to another. The main resource concerned is labour, capital is of lesser importance in that it is much more responsive to price changes and land is of course only transferable out of agricultural production to an extremely limited extent. From the data on the agricultural labour force in the main European countries<sup>9</sup> and from the data on gross output in the different European countries, it is possible to estimate the gross output per man in each country (see Table VI Appendix). The direct comparison of output per man in 1959/60 shows that labour productivity in Ireland is very similar to that of Germany, France and Norway, this group is in an appreciably better position than that of Italy but a long way behind Belgium, the Netherlands and the U K. These figures are, however, of limited validity as a basis for a direct comparison because of the differences in values of individual agricultural products and of the comparability of the statistics

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<sup>8</sup>E F Nash Agriculture and the Common Market Journal of Agricultural Economics Vol XV No 1 May 1962

<sup>9</sup>Man Power Statistics 1950-60 O E C D Paris, October 1961



of the labour force in agriculture in different countries. When allowance is made for the different price levels of agricultural products the level of labour productivity in Germany falls to only 75 per cent of that in Ireland but the general pattern of results is otherwise basically similar.<sup>10</sup>

It is not, however, simply the relative positions at present which are important but the trends in labour productivity. The gross output per labour unit for 1959 compared with the 1950-2 average for N W Europe has risen by 55 per cent and in the comparison of individual countries the rate of growth in Ireland is lower than that of any of the others.<sup>11</sup> This is partly due to the comparatively low rate of decrease in our agricultural labour force during the 1950's. As the need to increase output per man employed is one of the principal factors in raising agricultural incomes per head relative to those received in other sectors of the economy, there is evident need to increase still further the rate of improvement in labour productivity in Irish agriculture.

Data on trends in capital inputs in European agriculture are less satisfactory. The conclusions of an E E C study<sup>12</sup> are that "as a rough order of magnitude and with no great accuracy claimed for the figures, inputs of capital (including or, if preferred, plus land) may have increased by some 30 per cent in W Germany and Norway, about 20 per cent in Austria and perhaps close to 10 per cent in France, the Netherlands and Sweden. If land is left out of account, capital inputs proper may have increased at rates comparable with agricultural output. In the few other countries for which data are available, the volume of capital inputs in agriculture seems—even if land is included—to have grown faster than output." This refers to the period 1950-52 to 1957-59, there is every reason to expect this trend to continue in the future, for the substitution of capital for labour is one of the most characteristic features of agricultural development in a modern economy. Unfortunately comparable data for Irish agricultural investment are not available. We do know from the data in the National Farm Survey that farm profits and investments in working capital items, primarily livestock, are closely correlated. These working capital investments, at conservative valuations, ranged from averages of under £15 to almost £35 per acre in 1955-1958.<sup>13</sup> There is clear evidence of an increasing level of investment in machinery and in livestock during the fifties, the grants given for buildings and water supplies and towards the improvement and rehabilitation of land also indicate a greater measure of

<sup>10</sup>This analysis is based on the figures of European Agricultural output calculated at European import prices for 1955/56 and on the figures of the agricultural labour force in each of the countries concerned in 1956.

<sup>11</sup>"Towards a Capital Intensive Agriculture", *op cit* (See Appendix Table VII).

<sup>12</sup>Economic Survey of Europe, 1960, Chapter III. Economic Commission for Europe, Geneva, 1961.

<sup>13</sup>National Farm Survey 1955/6-1957/8. Financial Results for Farms included throughout the three years. Supplement to Irish Trade Journal and Statistical Bulletin, December 1959.

capital investment, whether the trend is as strong in this country as in other European countries is, however, impossible to determine

The changes in the productivity of the resources employed are even more difficult to assess. For N W Europe as a whole, the increase in the years 1950-59 in gross agricultural output per total inputs was 20 per cent<sup>14</sup>, compared with a rise in overall labour productivity of 50 per cent over the same period. This increase is partly due to the reorganisation of the resources used (particularly of the combination of land and labour in the individual producing units) and partly to the physical improvement in yields due to technological changes. The general picture seems to be that the trend in yields of crops in this country is expanding at or about the average W European level, although actual yields are still below those of the most intensive European agricultures, such as Denmark and the Netherlands. The expansion in livestock productivity per animal has been lower than that in crops, and livestock yields are still below those of most of the other countries under examination.

This is of the greatest importance, because the indices of projected per caput demand in W Europe are higher in the field of livestock production. For meat and eggs, the F A O projection shows a rise of 25 to 30 per cent, compared with a rise of 10 per cent for dairy products and a fall of 10 per cent for cereals and starchy roots<sup>15</sup>. At present the degree of self-sufficiency of the E E C is higher for livestock products than for grains and sugar (see Table VIII Appendix). The low rate of expansion in demand for the starchy foods, together with the rapid expansion in output of crops, makes the future prospects for livestock products much better than a consideration of the present position might suggest.

The developments in European agriculture are due not only to the degree of Government assistance which is given, but also the research and advisory facilities made available to the industry, the entrepreneurial spirit of the farmers themselves, and the developments in the rest of the economy of the countries concerned. The expansion of both advisory and research facilities in this country has been very rapid during recent years, but the amount of resources employed in relation to the total agricultural product appears to be below that of the intensive agricultural countries such as the Netherlands and Denmark. As this is one facet of agricultural policy which will presumably remain the responsibility of the individual governments in the E E C, it is likely to become of increasing importance in the development of the national agricultural policy.

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<sup>14</sup>Agricultural Commodities, Projections for 1970, F A O, 1962. Table M 13.

<sup>15</sup>Agricultural Commodities—Projection for 1970, U N /F A O Rome, 1962.

The levels of enterprise and physical effort put into farm production by the individual farmers are impossible to disentangle from the other factors determining the development of farm production. The Danish and Dutch farmers have organised a more effective marketing system for their products than have farmers in this country, and the re-organisation of production on the individual farms appears to be at a higher level in these countries.<sup>16</sup> At the same time there is no evidence that the farmers in this country would be any less aggressive in their farm business policies than those of Italy, France or Germany, given the equal marketing opportunities.

The rate of economic growth in Europe in the period 1950-60 was much higher than that in Ireland, for the E E C as a whole the gross national product went up by an average annual rate of 5.5 per cent; allowing for the increase in population, this represents an annual rate of growth of 4.6 per cent per head. In the U K the annual rate of growth was 2.4 per cent (or 2 per cent per head of population), for Denmark 3.3 per cent (2.5 per cent per head) and for Norway 3.5 per cent. (2.5 per cent. per head). The Irish figures show a higher rate of growth per head (2.0 per cent) than in the total gross national product over this decade (1.6 per cent), but with the exception of the U K they are appreciably lower than those of other European countries in both total and per capita rates of growth.

The trends in growth in these economies are associated with widely differing levels of importance of agriculture. For the E E C as a whole agriculture, forestry and fishing accounted for 11.3 per cent of the Gross Domestic Product (of which the Italian figure of 18.7 per cent. was by far the highest) compared with 25.3 per cent in Ireland, 4.2 per cent in U K and 16.3 per cent in Denmark (see Table IX Appendix). There are also widely differing levels in the relative incomes of those in the agricultural and non-agricultural sectors of the economy, in the U K, the Netherlands and Belgium the income per head in agriculture is around 90 per cent of that in the rest of the economy, in Norway and Ireland it is approximately 66 per cent, and it falls as low as 45 per cent for W Germany. The incentive to move out of agriculture is highest in Germany, Italy and France (i.e. the countries where industrial expansion has been most rapid). The average annual rate of decline of the agricultural labour force has been highest in France, Germany and Belgium and lowest in Ireland and the U.K.

An assessment of the prospects for Irish agriculture in competition with that of the other members of the E E C is made particularly

<sup>16</sup>See e.g. K. Rasmussen—“Production Function Analysis of British and Irish Farm Accounts”. University of Nottingham Department of Agricultural Economics. June 1962.

“Variance and Production Function Analyses of Farm Accounts” Blackwell, Oxford, 1961.

complex because of the uncertainties concerning the relative rates of growth of the different national economies. The general picture which emerges from a consideration of the experience of the fifties is that whereas Irish agriculture had made good progress by the standards of the rest of the Irish economy, it has not been developing as rapidly as that of most other W European countries. This, however, is very closely related to the relatively slow development of the economy as a whole. A change in the general economic environment consequent on full membership of the E E C should have two fundamental effects. It should alter the price ratios between agricultural and industrial products in favour of agriculture, probably of the order of 15 to 20 per cent, and it should produce a much more rapidly developing economy within which agriculture will have to compete more strongly for the resources of labour and capital than it used. This rate of economic development of an enlarged E E C as a whole is likely to be similar to that in Ireland during the past three years, but the effect will probably be different. The results of a rapid rate of development in the Irish national economy in recent years has been to accentuate the gap in income per head of the agricultural and non-agricultural sectors of the population. This must soon begin to increase the rate at which resources—particularly labour—move into the more highly paid sectors either here or abroad.

If we are to maintain the population and economic vigour of Ireland, it will be essential to maintain an overall rate of growth in the economy at least as high as that of the E E.C as a whole, otherwise we shall fall further behind the economic standards of W Europe. Under these circumstances, the agricultural industry will have to achieve a rate of production per head of the same order of magnitude as that at present realised in the advanced agricultural industries of Denmark, the Netherlands or the U K. It has been cogently argued<sup>17</sup> that in these circumstances the agricultural labour force required to meet total home requirements will be no more than 8 per cent of the total population and that the total farm labour force can be estimated from the level of exports in relation to home consumption. For the period 1956-61, the value of agricultural exports was approximately 50 per cent of that consumed at home. If we double this level of farm exports—which will be a very considerable achievement—the farm labour force required in a technically advanced agriculture will be no more than 16 per cent. of the total population and if our total population remains at its existing level this means that the farm labour force will fall to approximately

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<sup>17</sup>Carl Thomsen "Farm Income Structure and Population Problems in Europe" Paper read to the Conference of the Agricultural Science Association, Dublin, September 1962

half its present level. If we are to keep a higher labour force on the farms of this country and to maintain an agricultural working population of 250,000 (compared with 400,000 at present) it will be necessary to set a target of trebling the existing level of exports of farm products. This would involve raising total production by 66 per cent over recent levels, even so it would add only marginally to total European consumption, and would depend primarily on the ability of our farmers to compete for the available European markets. As the output per acre in this country is only a little over 40 per cent of that in the E E C and only 45 per cent of an enlarged Community,<sup>18</sup> the physical opportunities are very considerable (see Table X Appendix). To achieve them we must strive to raise still further those "qualities most important to economic development such as enthusiasm, ruthlessness, self-confidence and optimism" together with "enterprise, drive, perseverance, diligence and inventiveness"<sup>19</sup>. This is every bit as important in farming as in any other industry, but just as difficult to foster by any deliberate act of official policy.

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<sup>18</sup>All comparisons in terms of comparable prices for agricultural products for 1955/56

<sup>19</sup>David Walker "The Allocation of Public Funds for Social Development," Economic Research Institute paper, No 8, Dublin 1962.

TABLE 1—TOTAL AGRICULTURAL PRODUCTION 1960 AT CURRENT AND POTENTIAL E E C PRICES

Livestock and Livestock Products	At Current Prices		E E C Price Prognostic \$ per 100 Kg (3)	At E E C Prices	
	Home Consumption (1)	Exported (2)		Home Consumption (4)	Exported (5)
	£ million		\$	£ million	
Horses	246	3,265	no change	246	3,265
Cattle, Calves and Hides	9,495	45,617	45 0	12,740	61,103
Milk Consumed by Persons	13,498	—	no change	13,498	—
Manufactured Milk	25,757	5,637	67 5	35,708	7,862
Sheep and Wool	6,495	6,431	no change	6,495	6,431
Pigs	13,357	7,414	no change	13,357	7,414
Poultry	3,346	873	no change	3,346	873
Eggs	8,434	103	60 0	8,825	108
Others	75	34	no change	75	34
Sub-total	80,703	69,374		94,290	87,190
<i>Crops and Turf</i>					
Wheat	11,077	—	8 70	13,554	—
Oats	1,493	51	6 50	1,642	56
Barley (Malting)	1,048	1,884	7 00	1,024	1,839
Barley (Feeding)	2,747	—	6 50	3,394	—
Sugar Beet	4,671	1,375	1 34	3,497	1,029
Potatoes	5,337	726	2 75	3,254	443
Others	6,459	504	no change	6,459	504
Turf	7,418	—	no change	7,418	—
Sub-total	40,250	4,540		40,242	3,871
TOTAL	120,953	73,914		134,532	91,061

Source Columns 1 and 2 Statistical Abstract 1961, Cols 3 to 5 author's estimates

TABLE II—STATE AID TO AGRICULTURE

Item	1958/59 (£,000's)	1959/60 (£,000's)	1960/61 (£,000's)	1961/62 (£,000's)	1962/63 (revised estimate) (£,000's)
1 Subsidies to end products	4,284	728	4,034	7,737	5,254
2 Subsidies to reduce costs	1,206	2,381	2,606	3,247	3,603
3 Land Project and Drainage Schemes	3,188	3,500	3,260	3,152	3,820
4 Other improvement schemes	1,273	1,328	1,227	1,268	1,402
5 Elimination of Diseases	1,771	5,383	5,244	9,288	6,479
6 Farm Buildings and Water Supplies	786	843	867	1,071	1,180
7 Education Research, etc	1,152	1,303	1,558	1,811	2,239
8 Land Annuity Grants	839	849	863	883	908
9 Agricultural Grant	5,520	5,575	5,664	5,849	8,595
10 Rural Electrification and Capital for Agricultural Credit Corporation	1,000	1,140	966	2,540	1,280
<b>TOTAL</b>	<b>21,019</b>	<b>23,030</b>	<b>26,289</b>	<b>36,846</b>	<b>34,760</b>

Source Budget Papers 1962 and Reply to PQ No 232 30th Oct 1962

TABLE III—INDICES OF TOTAL FOOD PRODUCTION 1952/3-1960/1

Country	1952/ 53	1953/ 54	1954/ 55	1955/ 56	1956/ 57	1957/ 58	1958/ 59	1959/ 60	1960/ 61 Preliminary
	Indices Average 1952/3-1956/7=100								
N W Europe	95	100	102	101	103	106	107	109	121
France	91	99	104	104	101	105	105	111	125
Germany, Fed Rep	95	101	101	100	103	105	111	107	124
Netherlands	99	99	101	103	98	106	117	118	130
Belgium- Luxembourg	94	96	104	107	100	107	111	105	117
Italy	92	104	96	105	104	102	117	117	111
Ireland	95	97	105	99	105	115	104	97	111
United Kingdom	96	98	99	99	108	106	102	111	117
Denmark	100	101	101	97	101	111	110	107	118
Norway	97	99	99	96	108	101	101	102	108

Source The State of Food and Agriculture F A O Rome 1962

TABLE IV—IMPLIED PRICE INDICES OF GROSS AGRICULTURAL OUTPUT AND GROSS NATIONAL PRODUCT  
1950—52 = 100

Country	Implied Price Indices of Gross Agricultural Output		Implied Price Indices of G N P	
	1956-58	1959	1956-58	1959
N W Europe	115.9	120.6	124.6	133.2
Belgium	97.1	102.1	112.4	115.4
France	130.1	139.6	133.8	155.1
W Germany	115.6	120.2	116.3	122.3
Italy	107.6	101.3	115.4	116.9
Netherlands	107.6	110.8	120.7	125.4
United Kingdom	103.6	103.0	128.0	133.6
Ireland	111.0	114.9	126.3	135.5
Denmark	100.3	103.1	122.5	131.1
Norway	127.3	136.8	126.3	127.9

Source "Towards a Capital Intensive Agriculture" Pt 1 F A O Geneva 1961

NOTE—Italy is not part of the weighted average for N W Europe. The official (C S O) figures for Ireland are 107 for 1956-8 and 114 for 1959 for the prices of the Gross Agricultural Output, and 126.4 for 1956-8 and 135.0 for 1959 for the prices of the G N P.

TABLE V—ESTIMATED AGRICULTURAL PROTECTIVE MARGINS, 1956/7—1958/9

Country	Wheat	Barley	Sugar Beet	Beef Cattle	Pigs	Eggs	Milk	Weighted av of 7 Products
Belgium	67	16	36	30	2	44	127	60.5
France	18	10	15	26	—	5	61	26.9
W Germany	61	59	56	34	29	48	72	49.3
Italy	67	47	45	36	29	49	155	73.4
Netherlands	30	26	3	47	12	2	57	33.1
Denmark	18	$\frac{1}{2}$	14	—	—	—	12	4.5
Norway	89	25	—	32	15	22	165	102.3
Ireland	16	—	49	—	—	19	90	30.0
United Kingdom	27	33	49	31	35	44	203	89.1

Sources. E F Nash "Agriculture and the Common Market" Journal of Agricultural Economics, Vol XV, No 1

Weighted average based on "Towards a Capital Intensive Agriculture" Table IV, F A O, Geneva 1961

NOTE—The calculations for the individual products were based on data in Chap III of the Economic Survey of Europe 1960, and the margins were defined as the "percentage by which the domestic price exceeds the import or export price". In some cases this margin is based on prices derived from small quantities of exports, but problems of this character always recur in the preparation of estimates of this type.



TABLE VI—NUMBER AND OUTPUT OF AGRICULTURAL WORKERS IN EUROPE

Country	Period	Number of Agricultural Labour Force		% Annual Decrease	Output per Man at National Prices		Output per Man at Constant Prices	
		Beg of Period	End of Period		U S \$ per annum	Index Ireland =100	Output per Head (£)	Index Ireland =100
Belgium	1950-60	368	258	3.5	3,907.0	310.3	1,146.7	261.0
France	1954-60	5,240	4,340	3.1	1,405.5	111.6	451.9	102.9
Germany W	1950-60	5,020	3,595	3.3	1,267.6	100.7	338.1	76.0
Italy	1954-60	6,843	6,225	1.6	874.5	69.5	247.3	56.3
Netherlands	1950-60	533	433	2.1	3,164.0	251.3	938.6	213.7
United Kingdom	1950-60	1,262	1,062	1.7	4,280.6	340.0	918.2	109.0
Ireland	1951-60	496	413	2.0	1,259.1	100.0	439.3	100.0
Norway	1950-60	334	254	2.7	1,110.2	88.2	362.4	82.5

Sources Cols 1 and 2 "A Study of the Agricultural Labour Force in Ireland in Recent Years" R O'Connor  
 "Agricultural Record" Vol XVIII Summer 1962  
 Col 4 Derived from "Towards a Capital Intensive Agriculture"  
 FAO Rome 1962  
 Col 6 Derived from McCrone "The Economics of Subsidising Agriculture" Appendix B London 1962

TABLE VII—INDICES OF GROSS PRODUCT, LABOUR INPUT AND LABOUR PRODUCTIVITY IN AGRICULTURE AND INDUSTRY AT FACTOR COST AND CONSTANT 1954 PRICES

1950-52=100

Country	Sector	Gross Product at Factor Cost		Labour Input		Gross Product per Labour Unit	
		1956-58	1959	1956-58	1959	1956-58	1959
Belgium	Agric	124	109	80	75	154	146
	Industry	124	125	103	99	120	126
France	Agric	*	*	*	*	122	*
	Industry	*	*	*	*	141	*
Germany W	Agric	108	115	76	69	143	166
	Industry	176	197	136	140	129	141
Italy	Agric	120	131	93	90	129	146
	Industry	167	195	115	118	145	165
Netherlands	Agric	109	111	90	87	121	128
	Industry	142	156	111	111	128	140
United Kingdom	Agric	112	118	87	85	129	139
	Industry	119	125	106	105	112	119
Ireland	Agric	*	*	*	*	*	*
	Industry	*	*	*	*	*	*
Denmark	Agric	118	120	84	80	140	151
	Industry	116	131	99	105	117	124
Norway	Agric	108	105	83	80	116	133
	Industry	124	132	105	104	118	127

\*Figures not available  
 Source "Towards a Capital Intensive Agriculture" FAO Rome 1962

TABLE VIII —DEGREE OF SELF-SUFFICIENCY (1959/60)

Produce	Present Community	Seven <sup>1</sup>	Expanded Community Eight <sup>2</sup>	Ten <sup>3</sup>
Wheat	94 1	81 8	81 7	80 4
Coarse Grain	78 1	74 0	74 3	74 4
Rice	84 4	75 4	74 9	74 2
Sugar	89 9	67 2	67 9	67 3
Fresh vegetables	103 7	99 6	99 7	99 6
Citrus fruit	39 6	33 9	33 5	33 1
Beef and veal	91 5	86 1	89 9	93 6
Pigmeat	100 6	100 1	111 6	111 9
Mutton	98 5	53 3	53 3	57 5
Poultry	91 7	92 4	95 2	95 7
Eggs	90 3	93 5	97 2	97 3
Cheese	100 1	91 5	96 6	97 3
Butter	101 2	69 2	78 0	79 4

<sup>1</sup>Community plus U K

<sup>2</sup>Community plus U K plus Denmark

<sup>3</sup>Community plus U K plus Denmark, Norway and Ireland

Source Bulletin from the E E C Vol V No 2 March 1962

TABLE IX —AGRICULTURE AND GROSS DOMESTIC PRODUCT (1959)

Country	Gross Domestic Product per head in Agric as % G D P per person at work	Agric Forestry & Fishing % of G D P at Factor Cost
Belgium	89	7 5
Luxembourg	42	8 6
France	59	12 5
Germany W	45	8 0
Italy	59	18 7
Netherlands	93	10 1
United Kingdom	88	4 2
Ireland	70	25 5
Denmark	*	16 3
Norway	65	12 2

\*Figures unavailable

Source Col 2 "Basic Statistics for 15 European Countries" Statistical Office of the European Community, Brussels, 1961

Col 1 Author's estimate derived from Yearbook of National Account Statistics 1960 U N 1961, and Manpower Statistics 1950-60 O E E C Paris 1961.

TABLE X —OUTPUT PER ACRE IN EUROPEAN COUNTRIES

Country	Agricultural Land ooo acre	Agric Output at constant prices (£m) 1955/56	Output per acre Agricultural Land
Belgium	4,285	302 73	70 6
France	96,555	2,101 31	21 8
Germany W	35,213	1,291 52	36 7
Italy	51,643	1,547 11	30 0
Netherlands	5,708	418 62	73 3
United Kingdom	47,897	989 85	20 7
Ireland	14,624	184 51	12 6
Denmark	7,750	358 54	46 3
Norway	2,555	95 31	37 3
E E C	193,404	5,661 29	29 3
E E C, U K, Den- mark, Norway, Ireland	266,230	7,289 50	27 4

Source (1) R O'Connor "A Study of the Agricultural Labour Force in Ireland in recent years", Journal of the Agricultural Science Association, vol XVIII Summer, 1962  
 (2) G McCrone, op cit

## DISCUSSION

Mr Marsh said it seemed to be accepted now that an increase in agricultural output would be accompanied by a reduction in the numbers working on the land. It was well for us to recognise both this and also what an enormous amount of capital would probably be required for agricultural development. General Costello had spoken of a return on that capital of 20-30%. Mr. Marsh asked if any accounts of well capitalised, well managed, successful Irish farms, either large or small, had been made available. He thought if there was a prospect of a 20-30% return on an investment in farming, capital would flow in readily.

(N B Mr. Attwood in his reply said that he had seen figures for dairy farming showing a return of 45%.)