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A Study of the Irish Cattle and Beef Industries

TERENCE J. BAKER, ROBERT O'CONNOR, RORY DUNNE

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A Study of the Irish Cattle and Beef Industries

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A Study of the Irish Cattle and Beef Industries

Introduction

This study was commissioned by The Irish Livestock and Meat Board (CBF) and has been prepared in close consultation with it at all stages. The views expressed and conclusions reached however are solely those of the authors, and cannot be taken as representing the opinions of either CBF or the Economic and Social Research Institute.

The aim of the study is to review the current situation and future development of the Irish cattle and beef industries in an international context, and to suggest actions which might improve the contribution made by these industries to the national economy. To this end, world supply and demand trends for livestock and meat in general and cattle and beef in particular are analysed in the first two chapters. Chapter two includes projections of consumption and production of beef and veal on a world and regional basis. Having thus set the broad context within which the Irish industries must operate, we turn in Chapter 3 to a more detailed consideration of the structure and likely development in the individual markets which are actual or potential outlets for Irish cattle or beef.

Chapter 4 examines past trends in the production and disposal of Irish cattle and discusses likely developments in the size and nature of cattle output in Ireland. In Chapter 5 we analyse the position and prospects of the Irish fresh meat industry. The contribution of this industry to the national economy is examined, its relationship with the live trade discussed and possible methods of assisting it are investigated.

Chapter 6 summarises the conclusions reached in the earlier chapters, and outlines our recommendations regarding the components of a coherent policy for the development of the cattle and beef industries.

CHAPTER 1

The World Meat Situation

Production

THE numbers of the principal meat producing species of domestic livestock have increased substantially over the past 20 years. This increase has applied to all species, and has taken place in every continent. As might be expected from the increase in livestock numbers, world meat production has also risen considerably but the figures for the latter (particularly in the early post war years) are much less reliable than those for livestock numbers. Over the 20 years from 1950 to 1970, production of pigmeat increased by 109 per cent, production of bovine meat by 94 per cent, and production of mutton, lamb and goat meat by 59 per cent. In the case of the two grazing categories these percentage increases in meat production are much greater than the percentage increases in the respective numbers of livestock. This implies a considerable improvement in the output of meat per animal over the period.* The increase in pigmeat production, on the other hand, is very slightly less than the increase in stock numbers. Detailed figures of livestock and meat production will be found in the Appendix to this chapter. Statistics for 1971 and 1972 are necessarily less comprehensive and reliable, but the indications are that in both years there were small increases in cattle and pig numbers and a decline in sheep numbers. World meat production appears to have risen moderately in both years, although in the case of sheep meat, this has been at the expense of a reduction in the size of the world sheep flock.

Consumption

On a world basis, meat consumption is obviously more or less equal to meat production. It is primarily the rise in demand which has stimulated the steady rise in production. The rise in total consumption can be attributed to the growth in world population, and partly to an increase in average meat consumption per head. While on a world basis the growth in population is a major factor, in the developed countries, which are of direct relevance to

*This large increase in cattle productivity appears very unrealistic and must be taken with great caution. (See Appendix Tables 1a and 1b).

TABLE 1.1: *Estimated average annual consumption of meat* per person in selected countries, for certain years*

Country	*Average* 1954–56	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971
						(lb.)							
United Kingdom	114	117	119	124	123	119	116	118	119	117	118	117	120
Australia	217	207	214	214	206	206	196	189	181	177	205	193	207
New Zealand	217	228	223	235	240	237	230	226	225	224	225	223	n.a.
Canada	130	133	131	130	136	140	142	140	146	151	149	151	161
USA	161	161	161	164	169	174	168	168	178	183	183	186	192
Argentina	230	190	213	216	195	170	180	202	213	213	220	n.a.	n.a.
Ireland	96	106	107	111	115	117	121	121	120	120	127	134	135
Denmark	113	120	121	130	126	124	123	125	124	128	125	130	n.a.
Netherlands	71	77	78	86	86	75	80	94	107	104	100	102	107
West Germany	93	109	113	118	118	120	121	121	124	132	134	140	n.a.
Belgium	82	90	89	94	107	99	103	103	109	111	112	115	n.a.
France	113	114	117	121	122	125	125	127	130	132	132	133	n.a.
Italy	31	43	42	46	52	55	56	59	63	72	73	79	82
Japan	5	8	9	11	12	14	16	19	19	19	20	23	n.a.

*Excluding poultry. n.a.=not available.

Source: Commonwealth Secretariat (CS) Meat Reviews 1956, 1964, and 1970, and personal communication with Miss Rosemary Minto of the Commonwealth Secretariat.

Ireland, it is the increase in consumption per head which has been, and will continue to be, the dominant influence. Table 1.1 sets out the pattern of (non-poultry) meat consumption per head in most major non-Communist developed countries. Figures for poultry meat consumption are not available for all the countries listed and therefore cannot be included in this table. The available figures for poultry consumption are given in Table 1c of the Appendix to this chapter.

It can be seen from Table 1.1 that there are great differences between countries, not only in the level of per capita meat consumption, but also in its rate of growth. Of the countries with a very high level of consumption, there appears to have been little change since the early Sixties in Australia, New Zealand and Argentina, while consumption per head in the USA is growing quite slowly. Of the remaining countries, per capita consumption in the UK appears to be virtually static, while most other European countries exhibit a fairly steady growth. The increase has been particularly rapid in Italy which started from a considerably lower level than the other countries of Western Europe. A feature of the table is the extremely low level of meat consumption in Japan. Although there is a strong upward trend in Japanese consumption, the level is so low that it is likely to be many years before Japan approaches European levels.

The consumption of meat per head in any country is dependent on a number of factors. These include the level and distribution of consumers' incomes, the price of meat and of other commodities and also local customs, tastes and preferences. While in some countries such as India, local customs and beliefs are the dominant factors, in the majority of countries the most important determinant of the increase in meat demand is probably the growth in real disposable incomes. In countries with a low or moderate level of consumption, meat eating tends to show a very fast rate of growth as personal disposal incomes increase. On the other hand, the available statistics indicate that as per capita consumption reaches the higher ranges it tends to level off regardless of changes in income levels. Comparison of Australia and New Zealand on the one hand and Italy and France on the other in Table 1.1 illustrates this dichotomy.*

It is more difficult to illustrate the importance of price movements on demand for meat in general. This is because the prices of different meats follow different patterns, and it is not possible to define with any precision the price of "meat" as such. However, what evidence there is, suggests that overall consumption of meat is only moderately responsive to changes in the general level of meat prices relative to prices of other goods and services.

*See also FAO "Agricultural Commodity Projections 1970–80", (Table 2.6).

World Trade in Meat

Most of the world's meat is consumed in the countries where it is produced, and although the volume of international trade in carcase meat has expanded in recent years, it represents only about 5 per cent of world consumption. Before the war the proportion was about 8 per cent, but of a much smaller total consumption.

Very few countries are significant contributors to world trade in meat. Australia, New Zealand, Argentina, Uruguay, France, Netherlands, Denmark and Ireland are the main exporters, while USA, UK, West Germany, Italy, and in recent years Japan are the major importers. As might be expected, most of the exports of the European surplus countries go to the European importing countries, including the UK. The greater part of South American exports also goes to Europe. Australia and New Zealand primarily serve the US market, although significant quantities, especially of mutton and lamb are sent to Japan and UK.

Types of Meat

Just as consumption of meat in general is related to personal income, relative prices and local customs and preferences, so is the breakdown of meat consumption between the different types of meat. Although bovine meat predominates in world consumption, the proportion it represents of total carcase meat consumption varies widely. Thus in Argentina beef accounts for about 84 per cent of domestic meat intake, while in Denmark beef and veal together account for less than 40 per cent, and are well behind pigmeat as a proportion of total consumption. The proportion of beef and veal in total meat consumption in various countries for recent years is shown in Table 1.2.

In the case of individual meats it is possible to specify more precisely the relationship between consumption, incomes and relative prices. While local traditions and preferences tend to dominate when comparing meat consumption patterns between countries at any point in time, changes in consumption within each country can be related to changes in incomes and prices. These relationships are usually measured as income and price elasticities of demand. Thus the percentage change in consumption of a meat per person in a country associated with a 1 per cent change in real per capita income is known as the *income* elasticity of demand for that meat. Similarly the percentage change in consumption associated with a 1 per cent change in the price of a meat relative to all other prices is known as the price elasticity of demand for that meat.

Although it is easy to define income and price elasticities, it is difficult to

TABLE 1.2: *Proportion of beef and veal in total consumption of carcase meat*, 1962–1971*

Country	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971
				(Percentage)						
United Kingdom	41·1	43·1	39·5	37·9	38·3	40·0	38·3	39·8	40·2	38·3
Australia	47·1	48·7	50·9	51·1	49·0	46·3	45·6	44·4	44·0	42·0
New Zealand	45·1	46·3	44·7	47·4	47·8	48·7	47·7	45·5	44·4	n.a.
Canada	58·5	59·6	60·7	63·4	64·3	60·3	61·6	63·1	60·4	55·9
United States	58·0	58·6	60·3	62·5	63·7	61·8	61·9	61·7	62·9	60·4
Argentina	86·6	87·2	84·2	83·9	84·0	85·4	85·4	92·3	n.a.	n.a.
Ireland	31·7	32·7	31·1	28·9	30·4	32·5	32·9	31·5	31·3	31·9
Denmark	34·7	33·0	31·9	31·6	34·5	36·1	36·2	33·6	33·8	n.a.
Belgium	53·2	54·2	54·6	50·5	52·4	51·4	47·7	48·2	48·7	n.a.
France	55·4	56·1	55·7	54·4	51·2	50·8	50·0	50·8	49·6	n.a.
West Germany	39·0	40·7	39·1	38·0	39·7	37·7	37·5	37·9	38·0	n.a.
Italy	73·9	70·9	65·5	62·5	66·1	68·2	68·0	69·8	65·8	65·9
Netherlands	55·8	58·1	53·3	50·0	46·8	43·0	42·3	43·9	42·2	40·2
Japan	30·0	36·4	35·7	31·3	21·0	15·8	15·8	25·0	26·1	n.a.

*Poultry meat excluded. n.a. = not available.
Source: Commonwealth Secretariat Meat Reviews 1970 and 1971 issues.

estimate them accurately. However, various studies indicate that the income elasticity for meat in general is higher than that for most other foodstuffs. There are of course considerable variations from country to country, and in high income, high meat consuming countries such as USA, Australia and New Zealand, the income elasticity of meat tends to be low because saturation point has been virtually reached. In the original six EEC countries on the other hand, the income elasticity of meat has been estimated at 0.47,[1] indicating that a 1 per cent rise in real income tends to be associated with an increase of about ½ per cent in meat consumption.

With regard to specific meats, various studies indicate that in most countries the income elasticity of demand for beef tends to be higher than that for pork or mutton but lower than that for lamb. For example, the income elasticity for beef in the original EEC has been estimated by FAO as 0.52 compared with a pigmeat elasticity of 0.30.[1] An alternative study[2] gives the beef and pigmeat elasticities as 0.77 and 0.44, respectively. The income elasticity of demand for poultry varies greatly from country to country. In the USA it is very low, indicating an approach to saturation level, whereas in most European countries it is higher than for other meats, being estimated at 1.00 for the EEC "Six" in the FAO study quoted above.

The concept of price elasticity is more complex than that of income elasticity. Consumption of a particular type of meat is affected not only by its own price but also by prices of other goods, and in particular by prices of other meats. The effect on consumption of beef, for example, of a change in the price of, say, pork, is referred to as the cross-price elasticity between beef and pork.

The British National Food Survey Committee[3] calculated its own price elasticities for the major meats in the UK for the period 1956 to 1966, with the following results:—

Beef and Veal	−1.30
Mutton and Lamb	−0.52
Pork	−1.24
Poultry	−1.26

These figures indicate that beef, pork and poultry have high own-price elasticities, whereas that for mutton and lamb is relatively low. Thus according to the figures an increase of 1 per cent in the price of beef, pork or

[1]FAO "Agricultural Commodity Projections 1970–80". Rome 1971.
[2]Sorenson, L. and Hathaway, D.E. "The grain Livestock Economy and Trade Patterns of the European Economic Community with projections to 1970 and 1975". Institute of International Agriculture, Food, Nutrition and Rural Development, Michigan State University, 1968.
[3]Household Food Consumption and Expenditure, 1966, Annual Report of the National Food Survey Committee, HMSO, London.

poultry is associated with a decrease of about 1.3 per cent in the consumption of these commodities, whereas an increase of 1 per cent in the price of mutton and lamb is associated with a decline of about 0.5 per cent in its consumption.

In the same exercise an attempt was made to calculate the cross elasticities between the various meats, but the results were disappointing. All the coefficients derived were statistically insignificant at the 95 per cent level, with the exception of one which had a "perverse", negative sign. Despite the absence of statistical evidence, it can nevertheless be assumed that there must be some degree of positive cross elasticity between meats, with consumption of lamb for instance rising in response to an increase in the relative price of beef.

As in the case of income elasticities, the own price elasticities given above can be regarded as showing no more than approximate orders of magnitude, and cannot be used to provide accurate forecasts of the level of consumption of particular meats. However, they do indicate that the British market is very sensitive to changes in the relative prices of meat, and is subject to considerable changes in the composition of meat consumption in response to shifts in relative prices.* Thus the fall in the proportion of beef and veal in the UK market between 1963 and 1966 shown in Table 1.2 can be traced to the steep rise in beef prices between those years.

This experience in the UK and in other countries shows that if beef prices continue to rise relative to other meats, then these other meats, and in particular poultry, will tend to replace more and more beef in the human diet. That beef and veal prices have risen relative to poultry and pigmeat prices in EEC (Six) may be seen from Table 1.3. This table also shows how prices for cattle, pigs and poultry have moved compared with consumer prices in general, and demonstrates that while the real price (actual price divided by the consumer price index) of cattle rose between 1962 and 1968, the real prices of pigs and poultry fell substantially.

These changes in relative meat prices reflect the interplay of demand and supply factors over the period. The demand factors have been discussed already, and provide the context within which supply conditions can be said to determine the relative prices. A brief consideration of these supply conditions is therefore necessary to understand the relative price movements.

*Recent work by the British Meat and Livestock Commission indicates that the demand for manufacturing meat is much more price elastic than that for butchers' meat. The housewife tends to buy more or less the same quantity of butchers' meat each week unless there are very sharp price changes, whereas the manufacturers are very sensitive to meat price changes and will change the proportions of beef and pork in their products in response to very small changes in price. (Personal communications with Mr. Hilary Marks, Chief Economist, MLC).

TABLE 1.3: *Estimates of average annual changes in real producer prices for specified types of livestock in the EEC 'Six', 1962–1968*

	Average annual change in		
	Money price to livestock producers	*Consumer price index*	*Real producer price*
		(*Percentage*)	
Cattle	4·3	3·5	0·8
Calves	5·5	3·5	1·9
Pigs	1·1	3·5	—2·3*
Poultry	0·3	3·5	—2.9*

*Minus = decrease.

Source: Roberts, I.M. and Miller, G. L. "An Analysis of the EEC Market for beef and veal" Quarterly Review of Agricultural Economics, Vol. 24 No. 3, Page 139, July, 1971.

In the case of poultry and pigmeat the two-way relationship of supply and price is fairly normal. An increase in the price of these meats relative to the cost of producing them can be expected to result fairly rapidly in an increased supply, which in turn will itself tend to limit the increase in price. Since the early Sixties there have been far reaching changes in management and production techniques for both poultry and pigs, which have had the effect of substantially reducing the real cost of production of both types of meat. In consequence supplies have increased rapidly, and prices have risen by much less than the consumer price index.

The price/supply relationship with regard to sheep is also normal, as the value of the wool clip is small in relation to the value of the carcase. However, there have been no dramatic reductions in the cost of producing sheep, and consequently sheep numbers have not shown the same rapid increase as poultry or pigs. Nevertheless it appears probable that any substantial and sustained rise in mutton or lamb prices would result in an increase in sheep production.

The relationship between beef prices and cattle numbers is far more complex. This is the result of two factors: the very long production period for beef, and the fact that beef and milk are joint products of the cattle herd except in the case of pure beef herds. The precise relationship between milk prices, beef prices, the production of calves and the output of beef varies from country to country. However, in most European countries, including Ireland, the majority of calves are produced largely as a by-product of the dairy herd, and the size of the dairy herd depends much more upon the price of milk than upon beef and cattle prices. In these circumstances, and with the tendency over most of the past decade for European milk sup-

plies to be in surplus, the relative rise in beef prices has been reflected in only a small increase in cattle numbers in Europe. Even if future pricing and support policies succeed in weakening the link between milk prices and beef cattle numbers, the long period of production of beef cattle will ensure that the adjustment of European beef supplies to beef prices will be very slow, compared with the adjustment of other meat species. This long production period, allied to uncertainties concerning trade barriers, also militates against the rapid adjustment of imported supplies to changes in European beef prices.

Summary

Under the stimulus of rising population and real incomes, world demand for meat has been increasing steadily. This increase is likely to continue especially in Europe. If the relative prices of different meats were to remain constant, rising real incomes would be expected to result in consumption of beef growing more rapidly than consumption of meat as a whole.

However, relative prices have not remained constant in the past and are unlikely to do so in the future. The much shorter production periods, and major technical development in production techniques, have increased the production of, and reduced the costs of, poultry and pigmeat relative to beef. The resulting relative rise in beef prices has had the effect of diverting consumption from beef towards poultry and pigmeat in many European countries, including the UK.* The shift caused by the rapid changes in pig and poultry technology compared with that of cattle is unlikely to be as great in the coming ten years as in the past decade. However, the link between milk prices and cattle numbers, together with the greater difficulty and longer time involved in increasing beef production in response to higher beef prices, where these are relevant, is likely to ensure that beef prices continue to rise relative to those of other meats. Nevertheless, so far as most European countries are concerned, the growth in demand for meat as a whole, and the relatively high income elasticity for beef, should combine to bring about a continued rise in per capita "beef and veal" consumption in spite of the likely increase in relative beef prices.

*Between 1963 and 1965 beef prices in the UK rose by 9 per cent while those of bacon remained almost constant and those of poultry meat declined. In the same period the per capita consumption of beef declined by 17 per cent while that of pig and poultry meat increased by 9 per cent and 11 per cent respectively.

APPENDIX TO CHAPTER 1

APPENDIX TABLE 1a: *Numbers of livestock by species and world regions for selected periods (a)*

Species and Period	*Europe*	*USSR*	*North and Central America*	*South America*	*Asia*	*China Mainland*	*Africa*	*Oceania*	*World*
Cattle				(million head)					
1947–52 (average)	100·0	55·8	113·4	135·8	229·8	44·5	99·2	19·7	798·2
1960–65 ,,	117·0	83·5	151·7	169·0	275·0	61·2	130·2	25·4	1013·6
1969–70 ,,	124·5	95·0	168·4	197·7	288·7	63·2	151·0	30·0	1118·2
Pigs									
1947–52 ,,	69·2	19·7	55·5	35·6	20·9	68·4	4·5	1·9	295·5
1960–65 ,,	113·8	57·8	76·4	66·5	40·2	194·0	5·6	2·5	556·8
1969–70 ,,	130·3	56·1	81·9	80·6	48·0	220·0	6·5	3·2	626·6
Sheep									
1947–52 ,,	119·8	76·9	39·0	123·6	136·4	31·1	105·0	145·4	773·8
1960–65 ,,	134·0	133·9	37·3	121·2	177·4	64·5	126·0	211·4	1005·8
1969–70 ,,	128.7	130·7	28·0	123·1	205·4	70·6	149·1	237·3	1072·6
Goats									
1947–52 ,,	24·0	15·6	10·1	19·9	113·2	23·3	84·9	0·2	291·2
1960–65 ,,	14·5	15·1	15·5	26·5	142·2	23·7	103·8	0·2	362·8
1969–70 ,,	12·7	5·1	14·4	30·1	145·9	57·0	119·0	0·2	384·4
Buffaloes									
1947–52 ,,	0·5	0·3	—	—	65·6	121·0	1·2	—	88·7
1960–65 ,,	0·4	0·4	—	0·1	85·3	28·0	1·6	—	115·7
1969–70 ,,	0·3	0·5	—	0·1	92·5	29·3	1·8	—	124·5

(a) Excludes poultry for which reliable figures are not available.
Source: FAO Production Year Book, Vol. 24. 1970, Rome 1971.

APPENDIX TABLE 1b: *Production of the major meat types by world regions for selected years*

Meat in Dressed Carcase weight (a)	*Europe*	*North America*	*Latin America*	*Near East*	*Far East*	*Africa*	*Oceania*	*World*
				(000 *tonnes*)				
Beef and Veal								
1948–1952 (average)	4,178	5,288	4,643	375	893	1,428	820	20,680
1961–1965 ,,	7,188	8,898	5,771	646	1,226	1,893	1,226	31,735
1970 ,,	8,630	11,560	7,135	793	1,403	2,072	1,483	40,103
Pigmeat								
1948–1952 ,,	5,246	5,313	994	8	523	143	128	15,991
1961–1965 ,,	9,687	5,832	1,425	8	1,302	177	165	28,905
1970 ,,	11,343	6,187	1,744	18	1,788	253	225	33,369
Mutton, Lamb and Goat								
1948–1952 (average)	683	299	407	496	523	553	656	4,332
1961–1965 ,,	990	357	420	781	614	688	1,075	6,298
1970 ,,	1,026	260	473	869	671	852	1,335	6,886
Total Meat (b)								
1948–1952 ,,	10,107	10,900	6,044	880	1,939	2,124	1,605	41,003
1961–1965 ,,	17,865	15,087	7,616	1,435	3,143	2,758	2,466	66,939
1970 ,,	21,004	18,007	9,352	1,680	3,889	3,177	3,043	80,358

(a) Data relates to the production of meat from indigenous animals, i.e. including the meat equivalent of exported live animals and excluding the meat equivalent of imported animals.

(b) Total of the three types of meat shown, thus excluding poultry meat and other meats such as horse meat, rabbit and game.
Source: FAO Production Yearbook Vol. 24, 1970, Rome 1971.

APPENDIX TABLE 1C: *Estimated consumption per person of poultry meat in selected countries for recent years*

Country	*Average* 1955/56	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970
						lb.						
West Germany	4·1	9·3	11·0	12·6	11·7	12·8	13·4	14·3	15·2	16·1	16·7	18·3
Italy	4·1	7·9	9·1	10·2	11·7	12·1	16·1	16·3	16·1	n.a.	n.a.	n.a.
Denmark	6·8	7·2	7·7	8·2	7·7	8·4	8·6	8·8	8·6	8·6	n.a.	n.a.
United Kingdom	6·8	12·5	13·9	14·9	14·9	15·8	16·4	17·5	18·8	21·0	22·1	23·1
Ireland	11·9	11·0	11·4	11·7	13·4	15·0	16·1	18·6	18·3	21·2	22·6	22·1
Canada	24·9	27·7	31·1	31·0	33·0	35·1	36·7	39·3	40·7	39·7	42·8	44·8
United States	28·1	34·1	37·4	36·9	37·5	38·3	40·8	43·8	43·7	44·4	n.a.	n.a.
Australia	9·7	9·7	9·7	9·1	9·7	n.a.	11·5	13·8	16·4	18·6	19·8	n.a.

n.a. = not available.
Source: Commonwealth Secretariat.

CHAPTER 2

Beef and Veal: The International Background

Production of Beef and Veal

REGIONAL totals for world production of beef and veal were given in Table 1b of the Appendix to Chapter 1. As can be seen from this table, total world production increased from about 32 million tonnes* in 1961-65 to over 40 million tonnes in 1970, or by about 3.4 per cent per annum. Over this period the greatest increases have occurred in North America where production expanded by 6.3 million tonnes. The next highest increase of 4.4 million tonnes occurred in Europe, followed by Latin America with 2.5 million tonnes. Increases in the rest of the world have been much less marked. In the Far East, Oceania and Africa, the respective increases in each case over the 20 year period have been about 0.6 million tonnes. The production of beef and veal in some of the most important producing countries is given in Table 2.1. A few of these countries exclude the meat equivalent of live exports from their figures for production while others include them. For this reason the figures are not entirely comparable. However, for any particular country they show clearly the year to year trend. Reference to Table 2.1 shows that world production of beef and veal is dominated by three countries USA, USSR and Argentina in that order. Next in order of importance are France, Brazil, West Germany, United Kingdom and Ireland combined, Australia and Canada, with the other countries very much lower down the list.

Consumption

Consumption per head of beef and veal in the major consuming countries is shown in Table 2.2. It can be seen that Argentina and Uruguay have by far the highest per capita consumption, followed by the developed countries of North America and Oceania. European consumption on the whole is considerably lower. In some European Countries consumption has been growing quite rapidly while in others it has remained static. Thus for

*"Tonnes" refers to metric tons, whereas "tons" refers to long tons.

TABLE 2.1: *Estimated production of beef and veal in selected countries, 1962–1970*

EEC	1962	1963	1964	1965 (000 *tons*)	1966	1967	1968	1969	1970
Belgium Lux.	192	212	192	189	204	231	232	240	252
France	1,473	1,466	1,336	1,418	1,465	1,581	1,622	1,575	1,519
West Germany	1,121	1,166	1,118	1,075	1,146	1,148	1,159	1,241	1,261
Italy	671	623	540	539	546	581	589	592	n.a.
Netherlands	267	309	261	271	270	284	295	289	338
Total EEC (Six)	3,724	3,776	3,447	3,492	3,631	3,825	3,896	3,937	n.a.
United Kingdom (a)	904	929	862	818	854	907	891	857	933
Ireland (b)	124	127	111	111	133	219	190	195	213
Denmark	175	177	154	152	191	259	261	254	233
Total EEC (Nine)	4,927	5,009	4,574	4,573	4,810	5,210	5,239	5,243	
United States	7,282	7,746	8,679	8,803	9,189	9,365	9,633	9,732	9,928
Canada	633	686	753	854	847	843	889	723	722
Australia	791	914	986	1,010	931	865	890	920	994
New Zealand	282	293	287	271	287	297	339	371	386
Argentina	2,341	2,564	1,987	1,964	2,284	2,529	2,559	2,899	3,700
Brazil	1,158	1,173	1,139	1,292	1,430	1,491	1,525	n.a.	n.a.
Uruguay	268	302	385	403	257	238	285	n.a.	n.a.
Soviet Union	3,260	3,600	3,500	3,800	3,800	4,300	4,300	n.a.	n.a.
Japan	144	183	220	204	154	144	148	n.a.	n.a.
UK (c)	799	817	768	774	761	820	784	776	866
Ireland (d)	266	292	302	259	289	376	334	319	333

(a) Includes production from imported live cattle.
(b) Excludes production from exported live cattle.
(c) Excludes production from imported live cattle.
(d) Includes production from exported live cattle.

Source: CS Meat Review 1969 and 1970; OECD Meat Balances in OECD member countries, Paris 1971; and CSO, Dublin.

TABLE 2.2: *Estimated consumption per head of beef and veal in certain countries, for selected years*

Country	1956/1958	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971
						(lb.)					
Argentina	208	187	190	144	147	169	173	182	191	185	n.a.
Uruguay	194	n.a.	186	180	198	154	147	n.a.	n.a.	n.a.	n.a.
United States	95	95	99	105	105	109	110	113	114	117	116
New Zealand	112	106	111	106	110	109	110	107	107	104	n.a.
Canada	80	76	81	87	92	91	91	95	94	90	90
Australia	122	93	101	105	99	93	85	90	91	85	87
France	66	67	69	63	63	65	66	66	67	66	65
Belgium	45	50	58	54	52	54	56	53	54	56	n.a.
West Germany	39	46	50	47	46	48	48	50	51	53	53
Denmark	47	41	38	38	36	41	41	42	47	44	43
United Kingdom	53	51	53	47	44	45	48	45	47	47	46
Netherlands	38	47	48	40	40	44	46	44	43	43	43
Italy	25	34	38	36	35	45	49	49	51	54	54
Ireland	33	35	38	37	35	37	39	39	40	42	43
Japan	3	3	4	5	5	4	3	3	5	6	n.a.

n.a. = not available.
Source: Commonwealth Secretariat.

Europe as a whole there is some tendency for consumption to rise in contrast to the high consumption countries, which, with the exception of the USA, show no upward trend.

*Exports of Carcase Beef and Veal**

In pre-war years the world beef export market was largely dominated by Argentina. In 1938 that country exported about 438,000 tons of carcase beef and veal, which was about 58 per cent of total world exports. In that year also the next most important exporters were Australia, Uruguay, New Zealand and Brazil in that order, with Australia supplying about 16 per cent of total world exports.[1]

During and immediately after the war Argentinian exports remained at a relatively high level, but in 1950 a substantial decline occurred. By 1953 her exports were only about one fourth the 1938 level and she was only in second place to Australia, which exported in that year 156,000 tons as against 113,000 tons in 1938. After that date, however, Argentina recovered her former dominance and has retained it up to the present time. Countries with very much increased exports in recent years as shown in Table 2.3, are Brazil, Uruguay, New Zealand, France, Netherlands and Ireland. Since the early 1960s exports of beef from Australia, New Zealand, and France have about doubled, those from Ireland and Netherlands have increased threefold, while those from Brazil have increased even more dramatically.

The distribution of exports from the principal exporting countries is shown in Table 2.4. As can be seen, the large European exporters like France, Ireland and the Netherlands send most of their produce to other European countries; Ireland exporting mainly to UK, with France and Netherlands sending most of their beef to West Germany and Italy.

The United Kingdom is the largest single importer of Argentinian beef but the proportion going to this market has declined considerably over the years. In 1959 about 60 per cent of Argentinian exports went to the UK while in 1970 the proportion was under 15 per cent. Argentinian exports are now far more diversified than they were in the past with substantial quantities going to Italy, West Germany, Spain, Greece, USA, France, Netherlands and Belgium.

Australian and New Zealand exports go mainly to the USA and to a much lesser extent, to the United Kingdom. In recent years the Japanese market is taking some Oceanic beef but as yet the quantities taken are rather

* The available foreign trade statistics give figures for carcase beef and veal, but do not distinguish tinned meat as between beef, pigmeat and offals.

[1] See O'Connor, R., "The world meat situation with special reference to Ireland". Tech. Series No. 2, *Supplement to Irish Trade Journal and Statistical Bulletin*, June, 1961.

TABLE 2.3: *Exports of carcase beef and veal from the chief exporting countries, for selected years*

Country	1938	1960	1963	1965	1966	1967	1968	1969	1970
					(000 *tons*)				
France	1·5	61·5	97·4	64·4	86·2	89·8	152·3	122·7	112·6
Netherlands	6·1	36·8	60·7	70·4	57·8	65·4	83·5	94·9	112·7
Denmark	15·0	70·0	93·3	62·6	82·6	106·2	97·4	77·5	69·4
Ireland	0·2	47·2	60·7	54·2	68·9	145·6	115·3	119·8	138·2
(a)	(170)	(182)	(226)	(202)	(225)	(303)	(259)	(244)	(258)
Yugoslavia	0·9	15·8	67·8	64·5	75·0	77·5	81·5	72·3	47·2
Canada	2·5	8·9	8·9	36·9	27·8	14·2	24·0	22·7	40·3
USA	5·3	12·2	11·2	19·6	12·9	14·0	12·1	11·5	13·1
Argentina	438·2	278·0	528·3	350·0	394·8	376·4	250·9	418·9	371·0
Brazil	42·3	5·9	12·9	36·0	22·1	12·6	38·6	76·3	113·0
Uruguay	64·9	54·2	62·5	62·7	56·2	50·7	91·0	102·5	127·9
Australia	112·7	144·1	271·4	288·2	281·5	243·7	247·7	252·0	322·7
New Zealand	51·7	98·8	121.5	109·5	101.4	106·3	124·1	131·5	175·0

(a) Includes meat equivalent of exported live cattle.
Source: Commonwealth Secretariat Meat Reviews and CSO, Dublin.

TABLE 2.4: *Distribution of exports of carcase beef and veal, 1969 and 1970*

Importers	*Exporters*															
	Argentina		*Australia*		*New Zealand*		*Uruguay*		*Denmark*		*France*		*Ireland*		*Netherlands*	
	1969	1970	1969	1970	1969	1970	1969	1970	1969	1970	1969	1970	1969	1970	1969	1970
	(000 *tons*)															
United Kingdom	122·2	54·4	13·8	26·7	10·6	14·0	19·5	—	1·0	1·0	9·6	11·4	84·8	101·5	0·2	—
United States	24·0	25·1	201·4	231·1	96·5	88·0	—	—	—	—	—	—	31·9	30·7	a	a
Belgium	15·6	14·7	—	—	—	—	1·0	1·6	—	—	1·9	0·4	a	a	a	a
France	20·7	24·4	—	—	—	0·1	1·1	1·1	1·9	1·7	—	—	0·2	0·1	18·9	13·9
Greece	28·6	30·7	—	0·2	—	—	10·9	12·7	a	a	a	a	a	a	(a)	a
Italy	38·1	43·0	—	0·1	—	—	18·7	17·6	46·1	51·0	7·4	9·6	1·4	3·3	34·4	45·5
Netherlands	32·5	19·0	—	0·1	0·6	0·3	5·2	8·3	3·0	1·5	14·7	6·5	a	a	0·2	—
Spain	37·6	37·9	—	—	—	—	23·3	11·5	—	—	—	—	a	a	a	a
Switzerland	10·1	11·1	0·3	0·6	0·6	1·2	0·7	0·5	2·1	—	0·3	—	0·4	0·2	a	a
West Germany	25·3	43·6	—	0·1	—	—	7·8	22·5	6·3	2·6	83·7	61·3	a	a	31·7	43·6
Czechoslovakia	6·0	9·5	—	—	—	—	—	15·4	a	a	a	a	a	a	a	a
Japan	0·4	0·4	14·7	16·2	1·9	3·3	—	—	—	—	—	—	—	—	—	—
Total for above countries	361·1	318·8	230·2	275·1	110·2	106·9	88·2	91·2	60·4	57·8	117·6	89·2	118·7	135·8	85·4	103·0
Other countries	57·8	52·4	21·8	47·6	21·3	68·1	14·3	36·7	17·1	11·6	5·1	23·4	1·1	2·4	9·5	9·7
Total	418·9	371·2	252·0	322·7	131·5	175·0	102·5	127·9	77·5	69·4	122·7	112·6	119·8	138·2	94·9	112·7

(a) included, if any, in other countries.

Source: Commonwealth Secretariat.

small. In 1970 most beef from Uruguay went to West Germany, Italy and Czechoslovakia with smaller quantities going to Greece, Spain and the Netherlands. None of this meat went to the United Kingdom that year. It might be mentioned, that as a result of foot and mouth disease precautions, only boneless beef from South American countries is now allowed into Britain. This precaution has raised prices considerably on the British market, since cheap frozen South American carcases are no longer available.

Sources of imports into the chief importing countries are shown in Table 2.5. This illustrates the principal trade flows already discussed from the point of view of the major importers. Because they are taken from different basic sources, the figures in Tables 2.4 and 2.5 do not always correspond. With regard to the future, it is expected that there will be some important changes in the pattern and volume of trade, as the deficit between production and desired consumption in the developed countries of Europe and North America continues to grow.

Projections for Beef and Veal

Estimates of future "beef and veal" consumption and production have been made by two world bodies, FAO[2] and OECD.[3] The assumptions underlying the two projections differ to some extent, and the period covered by them is not the same. Nevertheless, the two are comparable in that they project trends in the same direction and of roughly the same order of magnitude when allowance is made for the different dates referred to and the different price assumptions made.

We have chosen the FAO study for this discussion rather than that of OECD as its coverage is wider and because the date to which it refers, 1980, is more relevant for our purposes. The most important assumptions used by the FAO are that population and personal income will continue to grow in line with past trends and that relative prices (between meat types and between all meat and other products) will not change over the period projected except in the cases of Denmark, Ireland and the UK, where prices are assumed to move into line with existing EEC levels. Also it is assumed that technology will continue to evolve as in the recent past. The projections are shown in Table 2.6.* They are presented in two blocks of four columns each, the first block referring to the base period 1964-66 and the second to the year projected, 1980.

[2]FAO Agricultural Community Projections 1970–1980. Vol. 11. p.81.
[3]OECD Agricultural Review, 1971, No. 4, p. 115.

*The price assumptions outlined account for the apparent change in trend between past experience, as illustrated in Table 2.2, and these projections. In the period covered by Table 2.2 relative beef prices were rising in most countries, whereas for the projections relative prices are assumed to be constant except in the cases already cited.

TABLE 2.5: *Sources of imports of carcase beef and veal into main importing countries, 1968–1970*

Exporters	*Importers*															
	United States			*West Germany*			*France*			*Italy*			*United Kingdom*			
	1968	1969	1970	1968	1969	1970	1968	1969	1970	1968	1969	1970	1968	1969	1970	
	('000 tons)															
Australia	198·2	219·2	238·6	—	—	0·1	—	—	—	—	0·1	—	24·9	17·3	31·3	
New Zealand	90·7	99·8	107·9	—	—	—	—	—	—	—	—	—	9·4	15·4	14·6	
Canada	20·8	19·6	35·9	—	—	—	—	—	—	—	—	—	—	—	—	
Ireland	25·3	29·5	30·9	—	—	0·4	0·1	0·2	—	—	—	—	90·2	85·2	102·0	
Belgium	—	—	—	4·2	3·8	6·6	0·7	0·9	0·9	—	—	—	—	—	—	
France	a	a	a	107·4	84·9	63·3	—	—	—	8·9	7·6	6·3	—	a	a	
Netherlands	a	a	a	25·4	31·7	43·6	5·6	18·9	13·9	40·1	34·4	45·5	0·2	0·2	—	
Denmark	a	a	a	7·7	6·5	3·0	2·1	1·7	1·7	38·9	45·0	43·3	—	0·5	0·3	
Sweden	a	a	a	1·4	1·6	1·2	0·2	0·2	0·2	4·9	2·6	—	1·3	3·3	1·1	
Hungary	—	—	—	—	—	—	3·4	3·8	3·1	6·6	5·2	8·0	—	—	—	
Yugoslavia	—	—	—	0·4	0·1	—	0·1	0·6	—	34·1	26·2	17·3	27·3	14·7	1·3	
Poland	—	—	—	—	—	0·1	0·4	0·6	0·1	4·2	5·5	1·7	—	—	—	
Argentina	26·2	22·9	25·7	20·9	40·5	44·9	7·1	18·1	19·4	24·4	27·7	32·2	34·3	122·6	57·5	
Uruguay	a	a	a	0·6	4·3	9·0	1·3	1·0	2·5	5·0	12·9	14·7	24·3	22·7	—	
Mexico	29·3	29·7	35·1	—	—	—	—	—	—	—	—	—	—	—	—	
Total for above countries	390·5	420·7	474·1	168·0	173·4	182·2	21·9	46·0	41·8	167·1	167·1	169·0	211·9	281·9	208·1	
other countries	60·4	69·8	75·3	1·5	16·3	0·2	10·7	26·5	29·4	78·4	89·7	116·7(b)	45·1	57·5	52·7	
Total	450·9	490·5	549·4	169·5	189·7	182·4	32·6	72·5	71·2	245·5	256·8	285·7	257·0	339·4	260·8	

(a) included, if any, in other countries. (b) includes 20,000 tons each from West Germany and Brazil.

Source: Commonwealth Secretariat.

Note: The figures in Tables 2.4 and 2.5 do not correspond exactly as they were derived originally from different sources.

The first column in each block relates to production, the third column gives figures for consumption, and the difference between these is designated "net import" for the base period and "balance" for the years projected. It is the columns of imports or balances which are the crucial elements of each block, since these show the extent of every major country's and region's surplus or shortfall in supplies. The countries are arranged so that they aggregate progressively down the page, eventually providing a world total, where this is appropriate.

Some of the projections for individual countries are hard to accept, even on the assumptions made. The most obvious example is that of Ireland, where it seems highly improbable that the negative effect on consumption of adjusting to EEC prices should so far outweigh the positive influence of continued economic growth. In our opinion, Irish consumption per capita is far more likely to be maintained, or even to increase slightly, than to fall from 37.8 lb. to 29.7 lb. as projected in the table. Nevertheless, despite these reservations we think that the majority of the projections, especially those at a more aggregate level, appear reasonable on the specific, rather artificial assumptions made by FAO.

Of course the projections made in the table will not be realised in fact. A significant world imbalance, such as is projected, simply cannot exist, for consumption of meat cannot exceed production, except very marginally for a very limited period. The pricing mechanism will work to avoid the imbalance by forcing prices sufficiently high to restore balance at a lower level of consumption than that projected. Thus by its own logic, the price assumption underlying the projections cannot be sustained if the projections themselves are at all accurate.

This does not imply by any means that the projections are without value. By estimating the likely pattern of consumption, production and trade on the artificial assumption that relative prices remain constant, the Study indicates the approximate degree of pressure on world beef prices. At the same time it shows those countries and areas where the balance to be imported by the end of the decade is likely to be largest, for although the absolute level in each case is too great, the relative position of each country could well prove quite accurate.

Thus, although the actual level of imports required by Germany and Italy in 1980 is unlikely to be as great as shown in Table 2.6, these two countries remain likely to be the largest European importers by that date, replacing the UK which was the largest European importer in the mid-Sixties. In the UK itself the rapid rise in the prices engendered both by transition to EEC and by the expected increase in world beef prices as a

TABLE 2.6: *FAO beef and veal balances for* 1964–1966 *and projections for* 1980

	1964–1966 *Average*				1980[a] *Projection*			
	Production	*Net Import*	*Consumption Total*	*Consumption Per caput*	*Production*	*Balance*[c]	*Consumption Total*	*Consumption Per caput*
		(000 tonnes)		*(lb.)*		*(000 tonnes)*		*(lb.)*
Belgium/Luxembourg	207	16	223	50·2	247	93	340	70·8
West Germany	1,033	236	1,269	49·5	1,458	340	1,798	60·9
France	1,436	−52	1,384	62·5	2,045	−120	1,925	77·0
Italy	495	272	863	37·0	730	837	1,567	59·4
Netherlands	239	−13	226	40·5	350	10	360	54·6
EEC (Six)	3,410	560	3,970	43·0	4,830	1,160	5,990	64·9
UK	808	496	1,304	52·8	1,176	231	1,407	52·1
Ireland	286	−236	50	37·8	451	−409	42	29·7
Denmark	232	−163	69	31·7	190	−123	67	27·7
EEC (Nine)	4,736	657	5,393	—	6,647	859	7,506	—
Other Northern European	578	6	584	—	659	127	786	—
Other Southern European	521	26	547	—	974	357	1,331	—
Western Europe	5,835	689	6,524	41·8	8,280	1,343	9,623	55·2
North America	9,730	537	10,267	105·4	14,093	1,198	15,291	132·7
Oceania	1,238	−456	782	122·8	1,941	− 727	1,214	142·6
Other developed countries	714	13	727	13·2	981	314	1,295	19·1
Economic: Class 1 (d)	17,517	783	18,300	58·3	25,295	2,128	27,423	75·02
Economic: Class 2 (d)	8,856	−878	7,978	11·4	15,301	−1,762	13,539	13·0
Economic: Class 3 (d)	6,627	−152	6,475	12·5	11,196	1,108	12,304	18·5
World	33,000	−247[b]	32,753	21·3	51,792	1,474	53,266	—

(a) Including adjustment of the original projections for UK, Ireland and Denmark in anticipation of accession to the EEC in January, 1973.
(b) Imbalance resulting from changes in stocks and use of conversion rates differing between some importing and exporting countries.
(c) This represents the difference between projected production and consumption.
(d) For the purpose of analysis the FAO divides the world into three Economic Classes. Class 1 refers to developed countries, Class 2 to the developing countries and Class 3 to the Eastern European and Asian Centrally Planned economics.

Note: "Production of meat is that obtained from the slaughtering of indigenous animals plus live animals exported, all expressed in terms of carcase weight equivalent. Trade in live animals and meat, in processed or unprocessed form, is expressed in carcase weight equivalent".

Source: FAO Agricultural Commodity Projections, 1970–1980 Vol. II, Page 81.

result of the shortage, can be expected to restrict consumption and encourage production to the point where the UK beef deficit will be considerably lower at the end of the Seventies than it was in the mid-Sixties.

In the light of the projections therefore, it appears inevitable not only that beef prices will rise above even the levels of early 1973, but also that there will be significant changes in the pattern of trade. The Continental European deficit, which will almost certainly grow in spite of the increase in prices, cannot be met without increased imports from overseas, most probably from Latin America. West Germany and Italy seem certain to displace the UK as a major market for Argentinian beef. Similarly, although under actual price conditions the US beef deficit is unlikely to increase by as much as is projected in Table 2.6, it could well grow sufficiently to force the USA to look beyond the present suppliers in order to meet its future requirements.

Chapter 3

The Market Situation for Beef and Veal

It was seen in Chapter 2 that the United States market is now the most important outlet for beef in the world. In 1970 this country imported almost 550,000 tons of carcase beef and veal compared with imports of 286,000 tons by Italy, 261,000 tons by UK and 182,000 tons by West Germany. Smaller importers were Spain 88,000 tons, France 71,000 tons, Canada 64,000 tons and Netherlands 43,000 tons. The demand situation in each of these countries is of interest to Ireland, and is described briefly below.

USA

The United States is far and away the largest beef producing and consuming country in the world. In 1970 she had 112.3 million cattle from which were produced 9,928,000 tons of beef and veal. Though the cattle population of the USA is growing at a faster rate than the human population, production cannot keep pace with consumption, and imports are growing every year. In 1956 consumption of beef and veal was 95 lb. per head of the population. Production was almost exactly equal to consumption, so that imports and exports almost cancelled each other out. In 1970 on the other hand, though production reached 108 lb. per head of the population and exports remained insignificant, imports were almost 550,000 tons because consumption in that year was 117 lb. per person. Nor is it likely that this level of imports will decrease seriously in the coming years. Consumption is not likely to level off for some years to come and during this time production will not keep pace with this growth. Hence it appears that present main suppliers like Australia and New Zealand will have little difficulty in disposing of their exports over the coming years even though they may be excluded from the EEC market.

Over the last 14 years the US market has proved a very valuable and remunerative outlet for Irish boneless cow beef, and we exported on average about 30,000 tons to this market each year. At the present time because of intensive stock building and a partial switch to continental markets, fewer cows are available for this trade and exports to the US declined to 7,000 tons

in 1972. Whether they return to their previous level again will depend on price levels in the USA and EEC. At the present time EEC prices are higher than US prices and most of the available cows are now tending to go to Europe. However, it seems quite possible that in a situation of world shortage US prices may be forced up to European levels. If this happens, it is likely that the Irish trade with the US will be resumed, as our cows seem to be particularly suitable for the US market.

UNITED KINGDOM

During the years up to and including 1961 the United Kingdom was the largest importer of beef and veal in the world. Since 1962 however she has been superseded by the USA as the major world importer. This situation has come about simply because US imports have increased whereas United Kingdom imports have declined, this decline being associated with increased home production and with reduced consumption due to higher prices.

The detailed breakdown of imports given in Table 2.5 of Chapter 2 showed that in 1970 Ireland supplied the bulk of British imports, with Argentina second on the list and Oceanic countries rather far down the line. It is a big change from past patterns to see Ireland superseding Argentina on the British beef market, a result which has come about due to increased Irish cattle numbers, to the beef subsidy arrangements associated with the Anglo Irish Free Trade Agreement, and to foot and mouth regulations in Britain which prohibited the import of "bone-in" carcases from South American countries.

Sources of British home killed beef are given in Table 3.1 which shows that supplies from UK bred cattle almost doubled between 1938 and 1963, since when they have remained fairly stable at about 800,000 tons per annum. The increase in production since pre-war years has come about as a result of two factors: —

(1) a substantial increase in cattle numbers over the period and

(2) a large decrease in calf slaughter, particularly in recent years.

Cattle numbers in the UK increased from 8.8 million in 1938 to 12.4 million in 1969 and to 12.8 million in 1971. In recent years due to various incentives the main increases have been in the beef rather than the dairy herd. Between 1968 and 1971 the dairy cow herd remained almost static at 3.23 million whereas the beef cow herd increased from 1.15 to 1.39 million cows or by about 20 per cent. The decline in calf slaughter has been much more dramatic. In 1956 almost 1.2 million calves were slaughtered in the UK, whereas in 1971 this number had been reduced to 257,000. The scope

TABLE 3.1: *Beef and veal supplies in the United Kingdom for selected years*

Year	*Net imports of live cattle expressed as beef*[a] (1)	*Home supplies* (2)	*Total home slaughterings* (1)+(2) (3)	*Net imports of carcase beef and veal* (4)	*Total supplies* (3)+(4) (5)	*UK home supplies as per cent of total* (2)/(5) (6)	*Cattle numbers* (7)
	(000 *tons*)					*per cent*	(*millions*)
1938	158	447	605	585	1,190	38	8·8
1960	105	703	808	349	1,156	61	11·8
1961	118	773	891	283	1,174	66	11·9
1962	105	799	904	323	1,227	65	11·9
1963	112	817	929	356	1,285	64	11·7
1964	94	768	863	334	1,197	64	11·6
1965	44	759	803	289	1,091	70	12·0
1966	93	761	854	286	1,139	67	12·2
1967	87	820	907	219	1,176	70	12·3
1968	107	784	891	254	1,145	69	12·2
1969	81	776	857	332	1,189	65	12·4
1970	67	865	932	251	1,183	73	12·6
1971[b]	119	817	936	235	1,171	70	12·8

(a) Estimated at 4·25 head per ton of beef.
(b) 1971 was a 53 week slaughtering year in UK.
Source: Commonwealth Secretariat.

for further reductions in calf slaughtering is therefore not very great as a certain number are always likely to be required for veal for domestic consumption and possibly for export. There is scope, however, for further increases in beef cattle particularly on the hill farms of Northern England, Scotland and Wales. If the beef incentive schemes are continued (which they will be during the EEC transitional period and probably afterwards) these increases are likely to continue. With increasing home production of cattle and the removal of the UK deficiency payments scheme, the demand for traditional Irish stores is likely to decline. However, as Britain is quite likely to develop a strong export trade in fat cattle with the continent she will probably continue to import Irish stores but probably of a lighter weight than at present. In future many stores are likely to go for finishing to the grain producing areas, as in times of surplus production it would be more profitable to feed surplus grain to cattle (particularly young cattle) than put it into intervention (i.e. sold to Commission at intervention prices).

THE EEC MARKET FOR BEEF AND VEAL

The European Economic Community has gradually built up a Common Agricultural Policy (CAP) which was finalised in June 1968. The regulations governing this policy set out all arrangements covering prices and foreign trade and apply to live cattle and calves and to beef and veal. It provides for the free circulation of these products within the community and is aimed at ensuring stability of EEC markets, growth in production, and security and fair returns to the producers. These aims are to be achieved by the joint operation of three measures: —

(a) A controlled price system, the main elements of which are a single, uniform guide price and provisions for intervention buying.

(b) Protection from imports through the use of duties and levies.

(c) Subsidisation of exports to allow sales of surplus produce on the world market.

The Community has in the last few years had great difficulty in pursuing its aim of increased beef production due to the large and unsaleable surpluses of dairy produce which have built up. This build up is a consequence of high milk prices and the close link between dairy and beef farming in the EEC. A number of other factors also contribute to the difficulty of encouraging beef production without at the same time increasing milk production. These factors include the relative profitability of milk production, the structures and size of farms, and the price relationship between coarse

grains and animal products. At present (or indeed at any realistic price levels), dairying gives a much higher profit per acre than beef production. It will, therefore, be very difficult to encourage a significant proportion of farmers to switch from dairying to beef. This is especially so, given the high proportion of small farms in the Community whose operators are dependent on a very high income per acre in order to enjoy a reasonable standard of living. What this means is that in the Community the "beef" industry will continue to be dependent on dairying as the main supplier of its most essential input namely calves, so that any significant increase in beef production will inevitably require that the size of the dairy herd be increased. Also high prices for grain relative to animal products encourages grain production on large holdings which would be very suitable for beef cow herds.

It is not immediately clear whether or not EEC cattle numbers will change over the next decade. Much depends on shifts in future policy. At the moment the Council of Ministers of the EEC are considering a whole range of proposals which would provide grants for beef production in herds not selling milk. These grants or production incentives are aimed at achieving substantial growth in the output of beef without a corresponding growth in milk production.

However, the policies devised must be put into effect by the individual member states and it is likely that some will adopt these policies to a greater extent than others.* Thus the future level of "beef and veal" production in the EEC countries may be strongly influenced by distinctly national considerations. We discuss below, therefore, the likely trends in each country, taking account of the differences which exist between the member states and of the different consumer patterns which occur within each country. Before going on to the country discussion however, it should be said that two distinct beef markets are beginning to emerge within the Community as a whole, one for high grade beef destined for direct consumption and one for lower grade beef for manufacturing purposes. Requirements for the former are increasingly being met from European sources whilst the latter come largely from South America. Although statistical evidence is scanty, it appears that in recent years consumption of beef in processed form may have grown more rapidly than prime beef in most European countries. This trend seems likely to continue although, with the exception of Germany, the proportion of processed beef in total beef consumption is less than twenty five per cent.

*The grants will have to be exceptionally high before small farmers can forgo the sale value of the milk, seeing that they are already getting good prices for calves from existing dual purpose breeds.

*FRANCE**

The pattern of French trade in cattle and beef products is complex due to the existence side by side of import and export trades in a wide variety of products. In 1970 France exported 113,000 tonnes of beef and veal, the bulk of which went to West Germany (see Tables 2.3 and 2.5), while in the same year she imported 71,000 tonnes some of which came from West Germany. Though France exports beef fore-quarters to Germany for the manufacturing trade, and imports German hind-quarters for her own prime beef trade, the French processing industry utilises about 100,000 tonnes of beef per annum. She also exports and imports large numbers of live cattle and calves.

Cattle Supplies

Cattle numbers in France rose steadily from the end of the Second World War to the early 1960s. Since that time there has been only a very slight increase in total numbers which in December 1971, stood at 21,803,000 head. The cow population in France over the past 10 years has been almost static. Numbers increased slowly between 1965 and 1968 to 11,203,000 head of which 8.5 million were dairy cows and 2.7 million were beef cows. However, since 1968, total cow numbers have remained steady at a fraction above 11 million. Thus the EEC cow slaughter policy, whilst it may have been the cause of the slowdown in the rate of increase in numbers, did not actually cause a decrease in the number of cows. There has been a tendency, which became marked in 1970, for the number of dairy cows to decline, and for these to be replaced by beef cows.

Imports

Imports of live cattle into France increased from around 10,000 head in the mid 1960s to 53,000 head in 1969 but there has been a decline of 10,000 a year since then, with imports in 1971 standing at 33,000 head valued at just £3 million. Calves make up around two-thirds of this trade and it has been variations in this category which have been responsible for the recent fluctuations. The calves are obtained mainly from Belgium and Holland. The other cattle, which are imported in small numbers and mainly for breeding, come from a wide variety of countries. Imports of "fresh and chilled" beef increased between 1966 and 1971 from 27,000 tonnes to 43,900 tonnes. Hindquarters imported from West Germany constitute the bulk of this trade. There has been a more rapid rate of increase in frozen

*In preparing this section we have relied heavily on Report on France published by The Irish Livestock and Meat Board, November 1972.

beef imports over the period. These rose from 9,200 tonnes in 1966 to 24,500 tonnes in 1971. As might be expected, most of this frozen beef originates in South America. The total value of beef and veal imports in 1971 was about £41 million.

Disposal

Disposal of cattle and calves is both by home slaughter and by live exports. The following table shows the numbers killed in France, for each category of stock, in recent years.

TABLE 3.2: *Slaughterings of cattle in France*, 1966–1971

Year	*Calves*	*Adult Males*		*Adult Females*	*Total*	*Calves as per cent of total kill*
		Entire	*Castrate*			
			'000 *head*			*per cent*
1966	4,343	199	1,053	2,209	7,804	55
1967	4,454	214	1,159	2,380	8,207	54
1968	4,476	257	1,059	2,583	8,375	54
1969	4,156	263	907	2,582	7,908	53
1970	4,004	290	869	2,706	7,869	51
1971	3,911	348	925	2,739	7,923	49

Note: "adult" in this context means over one year and "adult females" includes both cows and prime heifers. "Calves" are all animals under one year.
Source: Ministére de l'Agriculture.

This table shows declines in the numbers of calves slaughtered for veal and of steers slaughtered for beef, and increases in the numbers of adult bulls and females slaughtered.

Exports

The number of live cattle exported from France each year is increasing rapidly. The bulk of these cattle, more than half of which are calves, are exported to Italy. In 1971 exports of calves amounted to 469,000 head and of other cattle to 375,000 head. Together these trades were worth about £80 million.

The export trade in beef and veal was worth £69 million in 1969 (veal accounts for only a very small part of this trade). The sales to West Germany were about 85,000 tonnes out of total beef and veal exports of 122,000 tonnes. Other established markets for French beef are Italy and Holland.

Home Consumption

The *per capita* consumption of beef and veal has reached a plateau of about 66 lb. in recent years and opinions differ as to future trends. The FAO, which assumes that relative prices between meats in 1980 will be the same as those of today, projects that per caput consumption will increase. OECD, on the other hand, assumes that relative prices will *continue to shift* according to recent trends and project that the increase in consumption will be only slight. The FAO figure is 77 lb. per person by 1980, whereas those of the OECD are 71 lb. by 1975 and 74 lb. by 1985. Most of the increase is expected to be in manufacturing beef, with prime beef remaining fairly constant and consumption of veal declining.

Projected Overall Demand

Using an average of the FAO and OECD projections already mentioned, total consumption of beef alone in 1980 should be 1,480,000 tonnes compared with 1,128,000 tonnes in 1969. Consumption of bovine meat should move from 1,523,000 tonnes to around 1,810,000 tonnes over the eleven year period, or an increase of 19 per cent. The crucial question arises as to where this meat is going to come from. The seven year period up to 1980 is sufficiently long for changes to occur in the supply position, but in view of the absence of expansion over the past decade it is doubtful if all the increased requirements will come from home production which was only 1,519,000 tonnes in 1970. Therefore, unless there is a drastic change in policy, France can be expected to become a net importer of beef by 1980.

The extent to which Ireland will break into the French trade will depend a good deal on our future breeding policy. In time of scarcity the trade is prepared to take whatever is available, and we are sending some beef there at present, though at prices lower than those for the best quality French beef. The French trade however prefers very lean beef, and in normal times will purchase such beef in preference to our fatter type cattle. Hence, unless we are prepared to produce some of the leaner breeds we cannot expect to break permanently into the French market and even when we occasionally do so with traditional breeds, prices received will be relatively low.

BELGIUM

Though Belgium carries on a good deal of international trade in live cattle and beef, on balance she is almost self sufficient in bovine meat. In the period 1966 to 1970 the shortfall in requirements was only 5,000 to 8,000 tons per annum which was supplied mainly by Argentina, while in 1971 exports were slightly greater than imports (see Table 3.3). Practically

all meat imported into Belgium goes for manufacturing purposes. The prime trade which is for very lean beef is supplied mainly by home bred cattle or by suitable live imports coming mainly from France, Netherlands, West Germany and recently from UK and Ireland.

Cattle Supplies

Cattle numbers in Belgium rose slowly between 1966 and 1970 to almost 2.9 million head. However, over the last two years they have tended to decline. Numbers of female breeding stock were also at a maximum of about 1.1 million in 1970, and they also have declined since then. Imports of live cattle into Belgium are greater than exports. However, this gap is narrowing and in 1971 net imports were only 7,000 head compared with 43,000 the previous year. Total slaughterings over the past 5 years were fairly steady at something over 1 million each year, of which about three fourths were mature cattle and one fourth calves.

Consumption

No statistics are available for the current consumption of veal. However, assuming that the level of consumption is close to the level of production, it is in the region of 5.5 lb. per head. Thus per caput consumption of all bovine meat was around 57 lb. per head in 1969. The FAO projects that this figure will rise to 71 lb. per head by 1980. The OECD on the other hand is not nearly so optimistic and projects a figure of only around 60 lb. due to the considerable rise assumed in the price of bovine meats relative to other meats.

The type of beef normally required by the Belgian market is very similar to that of France and the same comments apply to the two countries regarding trade with Ireland. The Belgian trade is rather small and, while it should not be overlooked, it can largely be considered as an extension of the French market.

*ITALY**

Italy is an expanding industrial country with a population of just under 53 million people. The greater part of the wealth however, is located in the Northern and Central areas while the Southern region is underdeveloped both agriculturally and industrially. Despite this serious regional imbalance the economy as a whole has realised more rapid annual growth rates than those of other EEC members. Income per capita is increasing at an average

*In preparing this section we have drawn liberally on "A Report on the Market for Cattle and Beef in Italy" prepared by the Irish Livestock and Meat Board, June, 1972.

TABLE 3.3: *Trade in live cattle, beef and veal between Belgium and other countries, 1969–1971*

	1969	1970	1971		1969	1970	1971
IMPORTS:	*(Numbers)*			*EXPORTS:*	*(Numbers)*		
Live Cattle From:				*Live Cattle To:*			
France	77,300	71,474	83,225	France	27,158	22,258	15,873
Hungary	8,708	2,804	—	W. Germany	1,295	2,937	4,112
Netherlands	30,385	16,418	5,609	Italy	74,979	58,064	50,203
UK	1,794	15,099	9,451	Netherlands	6,675	1,924	7,758
W. Germany	33,366	16,162	2,949	Other Countries	17,309	12,599	26,410
Other Countries	39,442	19,392	10,162				
				Total	127,416	97,782	104,356
Total	190,995	141,349	111,396				
	(Tons)				*(Tons)*		
Beef and Veal From:				*Beef and Veal To:*			
Argentina	10,225	11,715	7,324	France	994	488	449
Brazil	3,089	77	2,494	W. Germany	3,990	6,447	7,649
France	2,035	278	1,398	Italy	—	530	697
Netherlands	1,932	1,888	1,873	Netherlands	7,056	5,732	10,499
Sweden	961	600	—	Other Countries	3,540	3,944	3,971
Uruguay	141	534	1,240				
Other Countries	2,185	3,334	7,189	*Total*	15,580	17,141	23,265
Total	20,568	18,426	21,518				

Source: Commonwealth Secretariat Bulletin April, 1972.

annual rate of 5.5 per cent, and Northern Italy is now one of the most highly developed areas within the EEC.

Livestock production is by far the most important sector of Italian agriculture, accounting for 40 per cent of the value of argricultural output in 1970. (The statistics are, however, rather suspect and must be taken with caution.) Despite this comparatively high contribution, cattle numbers do not appear to have expanded within the last decade. In fact, during this period the numbers have actually declined from 9.8 million in 1961 to 9.4 million in 1971. The composition of the cattle population in 1971 was as follows: —

	(000)
Milch Cows	3,640
Other Cows	849
Breeding Heifers	650
Calves for Slaughter	1,100
Young Bulls for Slaughter	2,300
Other Cattle	902
Total Cattle	9,441

Despite the decline in cattle numbers over the past decade, national consumption of both beef and veal has continued to rise as the figures in Table 2.2 show. The shortfall in home supplies is being met by dead meat imports and by the importation of increasing numbers of live cattle and calves (viz. 750,000 head in 1963 and 2.25 million in 1971). In former years most of the live imports were mature cattle for immediate slaughter, but nowadays the bulk of imports are young cattle and calves for further feeding on concentrates and milk powder. This situation has developed as a result of EEC import concessions for calves and young cattle to consume surplus grain and milk powder.

Young Bull Beef

Recently, considerable expansion has occurred in the development of feedlots for the production of young bull beef, and at the present there are some 500 specialised production units in Central and Northern Italy. Throughput in these feedlots can vary from 700 to around an average of 5,000 cattle per annum. On average there are 2½ changes of animals in the feedlots per annum and about 95 per cent of the animals entering the feedlots are young bulls imported mainly from Poland, Rumania and Czechoslovakia.

The most suitable animals for use in this system are young bulls 4 to 5 cwt. liveweight, of beef or dual purpose breeds e.g. Charolais, Brown Swiss, Friesian or Simmental. The animals are fed to appetite on a ration containing 50-60 per cent maize silage and 40-50 per cent concentrates, and are fattened to about 9½ cwt. liveweight at 14 to 18 months old. Irish single suckled calves of the proper breeds would be very suitable for this market and a trade with Italy for such cattle could well develop in future years particularly for young bulls of Friesian or Charolais type. Hereford or Aberdeen Angus type calves would not be suitable for this trade.

Veal

There has been a steady increase in the demand for veal in Italy over the years and it is a very popular meat. Although large intensive veal producing units with an annual turnover of 10,000 calves have developed, there is still a good deal of production carried out under traditional systems by small farmers.

The calves enter the system between 7 and 14 days old and are slaughtered at a liveweight of around 400 lb. producing a veal carcase of 260 lb. The age of the calves at slaughter is around 140 days and the average daily

liveweight gain is between 2.5 and 3 lb. The breeds which have been found most suitable for veal are the Friesian, Simmental, Charolais and Brown Swiss in that order. The majority of calves are imported from France and Germany. As young calves are poor travellers the export of Irish calves to Italy does not appear to be a viable proposition even if prices were suitable (which they are not). In 1972 prices for dropped calves in Ireland were higher than those for similar calves in any of the continental countries. High calf prices in Ireland are due to a strong demand for feeder cattle of all types (particularly for cheap summer feeding off grass) and to an embargo on imports of calves from outside our island. While this embargo remains, calf prices will tend to be relatively high in this country.

Beef and Veal Imports

Italy is a large importer of carcase and vacuum packed beef. Expansion of such imports has shown a dramatic increase in the 1960s from 97,000 tonnes in 1959 to 305,000 tonnes in 1971. Of the 1971 imports about 37 per cent were veal, most of which came from Denmark and the Netherlands with some coming also from Eastern Europe.

Fresh and chilled beef from fully grown cattle is imported chiefly in the form of pistola hind-quarters.* Yugoslavia and the other Eastern European countries are the principal suppliers of this category, but France, West Germany and Argentina also ship substantial tonnages. Imports of frozen beef for the manufacturing industry which amounted to 66,000 tonnes in 1971 come mainly from South American countries, particularly Argentina.

Imports from Ireland

Before the EEC beef and veal regulations came into effect in 1964 there was a fairly substantial market in Italy for Irish cattle and beef, the latter being imported in the form of pistolas. Imports of livestock were chiefly in the form of fat cattle but a few thousand light stores were imported in 1966 and 1967 when prices were depressed in Ireland. Our largest trade with Italy in recent years was in 1964 when we exported 7,000 tons of beef and 10,000 live cattle and in 1972 when exports were 3,800 tons of beef and 21,500 cattle. These trades are likely to develop further as we move towards the full benefits of membership of the Common Market but, unless we can supply the right type of cattle, the prices received are likely to be relatively low. Quotations for October 1972 were £18 per cwt. for Irish Friesian

*Well trimmed hind quarters cut at the sixth or seventh rib with kidney knob left in and channel fat removed.

slaughter cattle in Italy compared with £28 per cwt. for young Italian bulls† also of the Friesian type.

*WEST GERMANY**

Though West Germany is a highly industrialised state with a population of 61.5 million, it also has about 1.4 million farm holdings of which about 68 per cent are under 25 hectares in area. The total number of cattle in the country in 1970 was 14.7 million of which 5.6 million were cows. Beef balances (excluding veal) in two recent years were as follows: —

	1969	*1970*
	(*000 tonnes*)	
Domestic Production (excl. prod. from imported cattle)	1,084	1,142
Imported (including beef from imported animals)	231	206
Exports	52	48
Home Consumption	1,263	1,300
Degree of self sufficiency	85.6%	87.8%
Consumption per head (lb.)	45.8	46.4

In West Germany there are two distinct beef markets, one for prime (butchers') beef and the other for manufacturing beef. Home production is the chief source of supply for the fresh beef market and the country is becoming increasingly self sufficient in this type of beef. However she still takes a good deal of Argentinian vacuum packed meat for this trade. On the other hand domestic supplies of manufacturing beef are declining. In 1969 it was estimated that the total consumption of manufacturing beef was about 500,000 tonnes, of which 20 per cent (100,000 tonnes) were imported. The cow population is falling and if this trend of declining numbers continues, it is estimated that by 1975 at least 200,000 tonnes will be imported. It is felt however that price will be a critical element in this trade. German manufacturers normally blend beef and pork in their products and a rise in beef prices relative to pork will thus lead to increased pork consumption.

As regards the quality of the meat, German manufacturers tend to prefer Latin American range-fed beef to European cow beef. They hold that the two are not strictly comparable. The range fed beef is leaner and drier and

†Personal communication with CBF, October, 1972.

*In preparing this section we relied heavily on "Report on West Germany", prepared by The Irish Livestock and Meat Board.

yields a better flavoured product. Also, frozen boneless beef, mainly forequarters from prime cattle, is being increasingly used for processing because it is easy to process and because there is a reduced EEC levy on beef for processing compared with prime beef. At present this latter point is not important, since there are no variable import levies on prime beef, due to the very high reference prices.

In general, German tastes for prime beef are similar to those in other continental countries, but unlike the latter there is a small exclusive trade in Germany for "marbled" meat from Angus, Hereford and Shorthorn breeds, most of which comes from Argentina at present. This could be a very useful trade for us when we attain full advantage of EEC membership but it will be a trade not too easily broken into. Though the Germans import a good deal of beef, they would very much prefer to produce their own beef either from home bred or imported live animals. This to a certain degree is forced preference designed to protect the complex of municipal abbatoirs by the imposition of a levy on any meat slaughtered or purchased outside the area of each specified abbatoir. At present the levy is 0.95p per lb. deadweight, but it is supposed to be reduced gradually until it is eliminated completely in 1976. While this duty is in operation it will be difficult for us to sell prime beef in Germany as the demand for live cattle imports is likely to continue. Nevertheless, we should try every means of breaking into it with first class vacuum packed beef.

Live Imports

Prior to the implementation of the EEC beef and veal marketing regulations in 1965 the West German market was an important one for Irish cattle as the following figures show: —

Exports of Live Cattle from Ireland to West Germany.

	(*numbers*)
1962	11,900
1963	15,500
1964	32,500
1965	59,900
1966	29,000
1967	5,600
1968	1,200

Since 1965 the drop in imports of mature cattle from Ireland as well as from Britain and Denmark was compensated for to some extent by increased

home production and increased imports from other EEC countries. Imports of live calves from Eastern Europe have played an important role also. In total, imports of mature live cattle dropped from 502,000 in 1965 to 144,000 in 1970 while in the same period imports of calves rose from 2,000 to 36,000 and dead meat from 147,000 to 183,000 tonnes. Most of the increases in the dead meat imports were in the form of fresh meat and veal imports from other EEC countries with frozen meat imports remaining fairly static.

THE NETHERLANDS

The Netherlands beef industry is essentially a by-product of the dairy industry, and given the limited land resources of the country there is little likelihood that the position will change. The only exception is with veal production which has grown rapidly in the last few years although production was down somewhat in 1972. This increased production of veal was due both to increased numbers of calves slaughtered and to increased slaughter weights. The cattle population has, however, remained relatively static at around 4 million head since 1966. The overall beef balances (excluding veal) in the Netherlands for some recent years show a very stable pattern as follows:—*

	1967	1968	1969
		(000 *tonnes*)	
Domestic Production	194	193	184
Domestic Slaughter (a)	205	205	198
Imports (b)	53	62	70
Exports	18	27	28
Consumption	240	240	240
Domestic Slaughter as percentage of consumption	85·4	85·4	82·5
Per Capita Consumption (lb.)	42	42	41

(a) Excludes slaughter of imported cattle.
(b) Excludes meat from imported cattle.

Imports of fresh beef and frozen boneless pieces which are of about equal quantity form the bulk of the Netherlands imports. The fresh beef comes mainly from France and Belgium, while the frozen pieces which go for manufacturing come almost entirely from South American countries.

The Netherlands consumer is not very quality conscious as regards beef, price rather than quality being the determining factor. For this reason fore-

*For more detailed discussion see "The Market for Manufacturing Beef in the UK and the European Economic Community", International Trade Centre, UNCTAD/GATT, Geneva, 1971.

quarter beef, which would normally be utilised by manufacturers, is consumed as fresh meat by the domestic sector. Like other Europeans the Netherlands consumers prefer very lean beef and for that and other reasons this country is not very likely to become an important market for Irish beef.

Summary of the EEC Situation

The various data for imports and exports by the EEC countries in 1971 are summarised in Tables 3.4 and 3.5, Table 3.4 showing the situation in the original six countries and Table 3.5 that in the enlarged nine country area. As can be seen from Table 3.4 there was considerable trade between the "Six" countries in 1971 both for live cattle and calves and dead meat. In all, over 1 million calves, half a million cattle and 270,000 tonnes of beef and veal moved about among them. In addition the "Six" exported 11,000 live cattle and calves and 67,000 tonnes of beef and veal to third countries, importing from third countries 177,000 calves, 869,000 live cattle, 75,000 tonnes of veal, and 318,000 tonnes of beef. On balance in that year the meat equivalent of live and dead imports exceeded exports by 514,000 tonnes. The corresponding figure for 1964/65 was 560,000 tonnes.

Table 3.5 shows that 1.1 million calves, 1.3 million large cattle and 465,000 tonnes of beef moved within the "Nine" countries in 1971. In addition the "Nine" exported to third countries 28,000 cattle and calves and 93,000 tonnes of beef and veal. Imports by the "Nine" from third countries in 1971 were however 157,000 calves, 796,000 cattle, 28,000 tonnes of veal and 418,000 tonnes of beef. On balance the meat equivalent of live and dead imports exceeded exports by 519,000 tonnes. The addition of the three extra countries, therefore, made little difference to the overall beef balance in 1971, though as shown in Table 2.6 it would have increased the deficit in 1964/66. Since that time however British meat imports have declined, while Irish and Danish exports have increased.

It is impossible to predict with any certainty the manner in which the market for beef imports into the continental EEC will develop in the remainder of the Seventies. As was shown in Table 2.6, at constant relative prices the beef deficit in the original EEC would greatly increase by 1980, necessitating a large expansion in imports. However, it seems certain that beef and veal prices will rise substantially in the course of the decade, in relation both to the general price level and to the price of other meats.*

*The large rise in continental prices of beef and veal in 1972 and the early part of 1973 must be regarded as part of this process of adjustment to conditions of shortage. As accurate consumption figures are not yet available, this immediately past period can be thought of as being "in the future", from the point of view of our discussion, which basically concerns changes from the 1971 situation. In any case, after a possible period of price stability or even temporary decline, prices can be expected to resume their upward trend in future years.

The important uncertainties concern just how far beef and veal prices will rise, and how much effect the price rise will have on the deficit, through restraining consumption and encouraging domestic production. A further complicating factor is how far measures to increase the pure beef herd, already taken by the Commission or which it may take in the future, will succeed in increasing the production of beef within the continental EEC countries.

It is the authors' opinion that per capita consumption of beef on the continent will grow somewhat in spite of the likelihood of very high prices. However, the consumption of veal may fall. When allowance is made for the fact that population is expected to increase by between 4 and 5 per cent between 1970 and 1980, total beef consumption should grow quite substantially.

On the supply side, the increases in domestic continental production which can be expected in response to both high prices and Community incentives appear quite limited. Despite efforts to divert cows from dairying to pure beef production, the dairy herd will remain the dominant source of calves for the foreseeable future. Thus the milk price will continue to influence continental beef production to a greater extent than the beef price. With the milk surplus seemingly endemic, increases in milk prices can be expected to be strictly circumscribed, and any increase in the number of calves born is likely to be very modest.

It thus seems certain that there will still be a substantial overall beef deficit in the six original EEC countries in 1980, and the authors' tentative prediction is that this deficit will be rather larger than it was in 1971. The major deficit countries will be Italy and Germany, although in fact all six countries will take substantial imports of beef or cattle with some, especially France, continuing also to export large quantities.

Varied markets should thus be available for exports of Irish cattle and beef to continental Europe. In particular, feeder cattle of suitable breeds are likely to be in strong demand. It should also be possible to establish steady markets for well marketed and well presented lean prime beef, and possibly also for considerable quantities of manufacturing beef. Nevertheless, because of differences in national tastes, it appears probable that the UK will continue to be the main outlet for the more traditional type of Irish beef and cattle.

TABLE 3.4: *Imports and Exports in 1971 for EEC (six countries)*

	Exports by EEC countries						*Imports by EEC countries*						*Net Imports*
	Calves (1)	*Other Live Cattle* (2)	*Meat Equiv.* of (1)+(2) (3)	*Veal* (4)	*Beef* (5)	*Total* (3)+(4)+(5) (6)	*Calves* (7)	*Other Live Cattle* (8)	*Meat Equiv.* of (7)+(8) (9)	*Veal* (10)	*Beef* (11)	*Total* (12)	(12)—(6) (13)
	Numbers ('000)			'000 *tonnes*			*Numbers* ('000)			'000 *tonnes*			
(a) EEC (Six)	1,083	512	140	101	174	415	1,075	509	141	103	169	413	—2
Third countries of which													
United Kingdom	—	—	—	*	33	33	20	4	1	*	5	7	—26
Denmark	—	—	—	—	—	—	*	65	18	47	9	74	74
Austria	*	*	*	—	4	4	8	71	18	*	4	22	18
Yugoslavia	*	—	—	—	1	1	2	73	11	3	30	44	43
Poland	—	—	—	—	—	—	88	208	40	1	10	51	51
E. Germany	—	—	—	—	—	—	25	81	18	—	1	19	19
Czechoslovakia	—	—	—	—	—	—	8	12	3	7	3	13	13
Hungary	—	—	—	—	4	4	1	217	58	1	13	72	68
Romania	*	—	*	—	8	8	19	104	17	5	13	35	27
Bulgaria	—	*	—	—	—	—	6	27	4	5	2	11	11
Brazil	—	—	—	—	—	—	—	—	—	*	41	41	41
Uruguay	—	—	—	—	—	—	—	—	—	1	39	40	40
Argentina	—	—	—	—	—	—	—	—	—	1	123	124	124
Other countries	5	5	1	1	16	18	—	7	2	4	25	31	14
Total Third Countries	6	5	1	1	66	68	177	869	240	75	318	584	516
World	1,089	516	141	102	240	483	1,252	1,378	281	178	487	997	514

(a) Intra EEC trade (six countries) *Less than 500

Source: Agra Europe June 21, 1972.

TABLE 3.5: *Imports and Exports in 1971 for the nine countries of expanded EEC*

Country	*Exports by EEC (Nine)*						*Imports by EEC (Nine)*						*Net Imports*
	Calves (1)	*Other Live Cattle* (2)	*Meat Equiv. of* (1)+(2) (3)	*Veal* (4)	*Beef* (5)	*Total* (3)+(4)+(5) (6)	*Calves* (7)	*Other Live Cattle* (8)	*Meat Equiv. of* (7)+(8) (9)	*Veal* (10)	*Beef* (11)	*Total* (12)	(12)—(6) (13)
	Numbers ('000)			'000	*tonnes*		*Numbers* ('000)			'000 *tonnes*			
(a) EEC (Nine)	1,099	1,313	329	148	317	794	1,098	1,287	327	154	308	789	—5
Third countries of which													
Austria	*	—	*	—	4	4	8	71	14	—	4	18	14
Australia	—	—	—	—	—	—	—	—	—	—	30	30	30
Argentina	—	—	—	—	—	—	—	—	—	—	161	161	161
Brazil	—	—	—	—	—	—	—	—	—	—	49	49	49
Bulgaria	—	—	—	—	—	—	6	27	6	5	2	13	13
Czechoslovakia	—	2	*	—	—	2	8	12	3	7	3	13	11
E. Germany	—	—	—	—	3	3	25	81	18	—	1	19	16
Hungary	—	—	—	—	4	4	1	217	45	1	13	59	55
New Zealand	—	—	—	—	—	—	—	—	—	—	14	14	14
Poland	—	—	—	—	—	—	88	208	46	1	10	57	57
Romania	*	—	*	—	8	8	19	104	22	5	13	40	32
Uruguay	—	—	—	—	—	—	—	—	—	2	39	41	41
United States	—	—	—	—	31	31	—	—	—	—	4	4	—27
Yugoslavia	*	—	*	—	1	1	2	73	15	3	30	48	47
Other Countries	12	14	4	2	40	44	—	2	1	4	45	50	6
Total Third Countries	12	16	4	2	91	97	157	796	170	28	418	616	519
World	1,111	1,329	333	150	408	891	1,255	2,083	497	182	726	1,405	514

(a) Intra EEC (nine countries) trade. *less than 500.

Sources: Agra Europe June 21, 1972; Meat & Dairy Produce Bulletin, Commonwealth Secretariat, London Vol. XXV, Nos. 2–5.

Chapter 4

Irish Cattle Production and Disposal

As can be seen from Figure 4.1, total cattle numbers in Ireland increased considerably over the past century, rising from a little over 2 million in the early 1860s to 4.4 million in 1921. After that there followed a sharp decline to 3.9 million in 1926, from which level there was a faltering but continued improvement to 4.2 million in 1944. Cattle stocks were again reduced to 3.9 million in 1948, but since then the numbers have increased dramatically, reaching a record number of 6.5 million in 1972.

The increase during the 1960s in total cattle numbers can be attributed mainly to government policies in relation to cows. Among these might be mentioned the Calved Heifer Subsidy Scheme introduced in 1964 in connection with the Second Programme for Economic Expansion. Under this scheme farmers were paid £15 for each permanent increase in cow numbers obtained by introducing extra calved heifers into their herds. This scheme, along with increased prices for milk, had the effect of increasing cow numbers from less than 1.4 million in 1963 to 1.7 million in 1969 when it was terminated. Since then, the Beef Incentive Bonus Scheme, continuing increased prices for milk, and expectations of higher prices under EEC conditions, have contributed to further increases in cow numbers, so that by 1972 they had reached the record level of 1,895,000.

Coupled with the increase in cow numbers over the years there has also been an increase in the number of calves reared per cow. In 1861 the number of cattle under 1 year on farms in June was only about a third of the number of cows on farms at the same time. In 1972 on the other hand there were about 86 calves per 100 cows on the national farm. There is always a possibility that there may have been some aberrations in the early statistics but this is rather unlikely, as there is a great stability about the figures all the way through, with permanent changes coming about only very slowly. More likely reasons are:

(1) An increase in the numbers of calves born per 100 cows per annum, due to better control of certain diseases and to better nutrition of

cows and calves. Also there has probably been an improvement generally in management, particularly in getting cows in calf again quickly.

(2) A decline in the mortality of young calves and

(3) A decline in the slaughter and export of calves.

There is still some room for improvement in the present ratio of 86 calves per 100 cows but the scope is limited.

Cattle Output

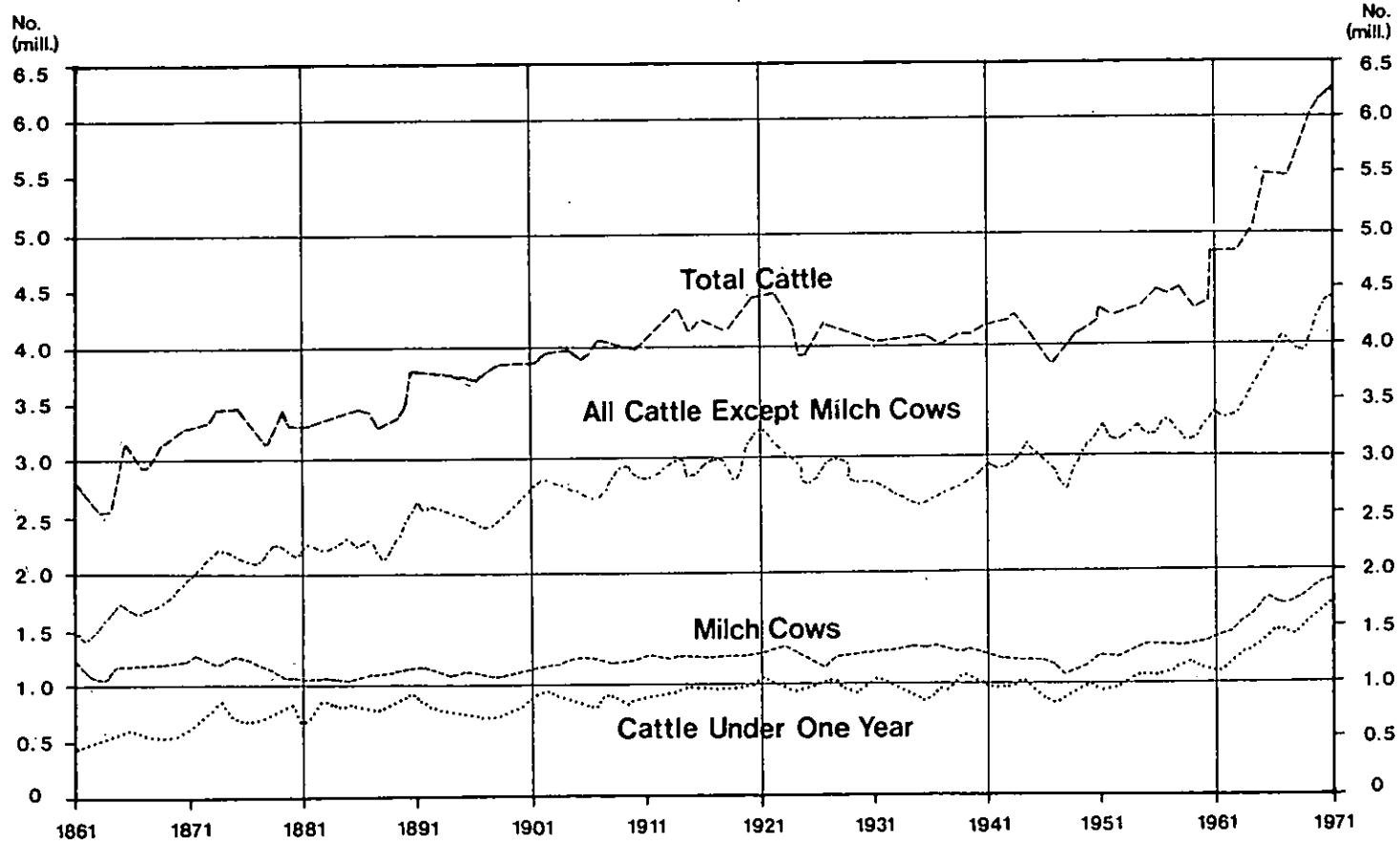
Though the total number of cattle on Irish farms in 1972 was over 6 million, the output of cattle in that year was only about 1.7 million. This arises because cattle take a number of years to mature and the numbers available each year for slaughter or export are only about one-quarter of the total cattle stock. This relationship between stocks and output is shown in Table 4.1, but in order to understand this table it is necessary to explain clearly what output is. Output of cattle in any year is defined as live exports plus slaughtering for domestic consumption and export, less live imports. Changes in stocks of cattle on farms between the beginning and end of the year are usually included in output also. It follows from this definition, that output, including stock changes in any year must be equivalent to births less mortality. Since mortality is fairly constant from year to year, and births are a function of the number of cows, it follows also that there is a close relationship between cattle output and cow numbers. This relationship is also shown in Table 4.1.

Despite the close connection between cow numbers and cattle output there is some variation from year to year in the cattle output/cow ratio. This arises for the following reasons:—

(1) The cows are counted in June whereas the output relates to the calendar year. Births after June are, therefore, included in the figures for stock changes. This can affect the ratio in years when the normal seasonal calving pattern is upset, as happened during the early years of the calved heifer subsidy scheme when it is suspected that a high proportion of the heifers calved after June.

(2) The figures for stock changes included in output are based on the January livestock enumeration. As this is only a 25 per cent sample, the results must inevitably contain a sampling error. Fortunately however, errors, if any, in stock changes cancel out over time and for this reason trends in the cattle output/cow ratio are best studied by using

Figure 4.1: *Cattle Population, 1861–1971*



Source: CSO Dublin.

TABLE 4.1: *Relationship between cows and cattle output*, 1953–1972

Year	*Milch Cows* (a)	*Cattle Output**	*Output as percentage of Cows*	*Three year moving acreages*			*Dairy Cows* (b)	*Other Cows* (c)	*Increase in Milch Cow Numbers*
				Milch Cows	*Cattle Output**	*output as per cent of Cows*			
	('000)	('000)	*Per cent*	('000)	('000)	*per cent*	('000)	('000)	*Per cent*
1953	1,174	955	81·3	—	—	—	748	425	—
1954	1,204	1,015	84·3	1,192	1,006	84·4	773	430	2·6
1955	1,198	1,048	87·5	1,196	1,003	83·9	772	426	—0·5
1956	1,187	947	79·8	1,207	1,016	84·1	788	398	—0·9
1957	1,236	1,052	85·1	1,227	1,014	82·6	823	413	4·1
1958	1,260	1,042	82·7	1,256	1,072	85·3	801	459	1·9
1959	1,272	1,121	88·1	1,272	1,076	84·6	782	489	1·0
1960	1,284	1,064	82·9	1,282	1,094	85·3	799	484	0·9
1961	1,291	1,096	84·9	1,295	1,116	86·1	816	474	0·5
1962	1,309	1,186	90·6	1,307	1,159	88·6	859	451	1·4
1963	1,323	1,194	90·2	1,344	1,224	91·1	888	434	1·1
1964	1,400	1,292	90·8	1,423	1,298	91·2	943	457	5·8
1965	1,547	1,409	91·1	1,510	1,358	90·0	1,014	534	10·5
1966	1,582	1,374	86·9	1,566	1,370	88·7	1,055	528	2·3
1967	1,568	1,328	84·7	1,586	1,361	85·9	1,119	449	—0·9
1968	1,607	1,384	86·0	1,611	1,370	85·0	1,164	444	2·5
1969	1,657	1,401	84·5	1,654	1,411	85·3	1,152	505	3·1
1970	1,699	1,449	85·3	1,713	1,467	85·6	1,124	575	2·5
1971	1,782	1,550	87·0	1,792	1,559	87·8	—	—	4·9
1972	1,895	1,679	88·6	—	—	—	—	—	—

(a) =Cows of all kinds in State (June enumerations).
(b) =Cows from which milk is sold (estimated).
(c) =(a)—(b).
Note: *Output includes stock changes.

Source: Irish Statistical Bulletin, formerly Irish Trade Journal and Statistical Bulletin, June and September issues, 1954–72 and CSO

moving averages rather than yearly figures. Such moving averages are given in Table 4.1 and show that there was little variation in the ratios between 1954 and 1960, the cattle output being on average about 84 per cent of the June cows in those years. After 1960 however, the ratios show a steady increase to over 90 per cent in 1964 and 1965 when they started to decline again to about the pre-1960 level.

(3) The changes in the ratios in the early 1960s appear to be associated mainly with the Bovine Tuberculosis Eradication scheme. Under this scheme, which really got under way in 1959-60, there was massive culling of old semi-infertile cows which in ordinary circumstances would have been retained for another year. Also cows were culled immediately on completion of lactations so that there were few dry cows on farms in these years. In addition culled cows were quickly replaced by calved heifers with the result that the calving percentage of the national herd was raised considerably. With the completion of the scheme in 1965 however, traditional patterns of culling reasserted themselves but with the introduction of the Brucellosis scheme the output/cow ratio is tending to increase again. This scheme will no doubt effect a permanent improvement in calving percentage as also to some extent will efforts aimed at reducing calf mortality. The scope for improvement from these schemes may not however be as great as is sometimes suggested and in view of the calf-cow ratio in Northern Ireland* (where brucellosis is eradicated) it is felt that a permanent cattle output/cow ratio in the Republic of 90 per cent for future years would be a very optimistic projection. A ratio of 89 per cent would probably be more realistic and even this is unlikely to be attained on a permanent basis for some years to come.

Productivity of the Irish Cattle Herd

In this context we define productivity as the output (in any calendar year) in tons of beef—or beef equivalent of live cattle—per 100 cattle of all kinds (including cows) on farms, in June of that year. We ignore milk output in this study though it has been referred to elsewhere by one of the authors. In a previous paper O'Connor[1] showed that, compared with Denmark, the productivity of Irish cattle in terms of both meat and milk was very low. For the year 1957/58 the production from Denmark's 3.2 million cattle

*The figures for Northern Ireland are not entirely comparable with those in the Republic as the seasonality of calving is somewhat different in the two areas.

[1]O'Connor, R., "The World Meat Situation with Special Reference to Ireland"—Technical Series No. 2—*Supplement to Irish Trade Journal and Statistical Bulletin*, June 1961.

TABLE 4.2: *Cow numbers as a percentage of total cattle population in selected countries for the most recent year available*

Country	*Source and date**		*Cow Numbers* (000)	*Cattle numbers* (000)	*Cows as percentage of cattle numbers per cent*
Italy	IRVAM	January 1971	4,489	9,441	47·6
West Germany	CS	June 1971	5,501	14,498	37·9
Belgium	CS	May 1971	1,031	2,840	36·3
Netherlands	AE	August 1971	1,877	4,030	46·6
Denmark	AE	April 1971	1,129	2,798	40·4
United Kingdom	CS	June 1971	4,614	12,835	36·0
Ireland	CSO	June 1971	1,782	6,142	29·0
USA	IMS	January 1971	49,947	114,470	43·6
Poland	AE	June 1971	6,042	11,077	54·5
Czechoslovakia	AE	June 1971	1,870	4,400	42·5
New Zealand	IMS	January 1971	3,796	8,819	43·0

**Sources:* AE Agra Europe.
CS Meat and Dairy Produce Bulletin, Commonwealth Secretariat.
IMS International Market Survey, Meat and Livestock Commission, England.
IRVAM Instituto per Recherche e Informazioni di Mercato e la Valorizzazione Della Produzione Agricola—Roma.

was 1,120 million gallons of milk and 233,000 tons of beef and veal including the meat equivalent of live exports. The corresponding output from Ireland's 4.4 million cattle in the same year was only about 570 million gallons of milk and 268,000 tons of beef and veal.

The low output per cow from the Irish cattle herd may be attributed mainly to the late ages at which our cattle are slaughtered or exported. In fact in June 1971 there were about 200,000 dry cattle aged 3 years old and over on Irish farms. The large number of such cattle on farms hinders the expansion of cow numbers and so limits the number of calf births and the production of milk. Compared with many other economically advanced countries the proportion of cows in our national herd is low, as the figures in Table 4.2 show. The fact that young calves are not slaughtered in Ireland contributes to this low ratio, though it is not entirely responsible for it. The position could be improved considerably by having the animals ready for final sale at younger ages.

As might be expected, the ages at which our cattle are slaughtered or exported tends to reduce substantially the productivity of our feed resources. Figures calculated from Sheehy[2] show that a 9 cwt. animal fattened at 17 months of age requires only 3.6 lb. of Starch Equivalent (SE) per lb. live-weight gain, whereas a 12½ cwt. animal fattened at 3½ years of age requires about twice this amount (7.1 lb. SE per lb. live wt. gain). It should be stated of course that animals fattened at early ages must be kept thriving from birth and this requires first class hay and silage together with liberal grain feeding during the winter months. At prices ruling for cattle in Ireland up to fairly recently it did not pay to feed very much grain and therefore we were forced to adopt a low output, low input system of production. Nevertheless, there was little excuse even in those years for keeping steers or heifers up to four years of age. Even with our existing feed and price structure it was both more productive and more profitable to have the cattle ready for slaughter or export at about 2½ years old. Indeed cattle could be finished off at this age on grass and grass products with little or no grain feeding. To do this, the grass products (hay and silage) for winter feeding had to be good, and since many people were unable to have good winter keep the fattening period became very much stretched out, with most of the summer weight gain being lost during the following winter. We can see, therefore, that climatic conditions favourable for grass growing do not automatically confer a great comparative advantage on all Irish farmers. This advantage accrues only to summer grazers and to those who have learned

[2]Sheehy, E. J., *Animal Nutrition*—Macmillan and Co. Ltd., London, 1955.

to make good winter feed. For the remainder (who form a high proportion of our farmers) winter cattle production is not a very profitable undertaking unless the price structure makes winter grain feeding profitable.*

In the latter situation the cattle can be marketed at younger ages and cow numbers relative to total cattle can be increased. In other words, if all our dry cattle could be slaughtered or exported before they are three years old we could keep extra cows on the land which heretofore was occupied by the older animals. A good deal hinges therefore on whether or not grain feeding of cattle is profitable and this depends ultimately on the selling price per cwt. of finished cattle relative to the cost of 1 cwt. crushed grain.

In a recent paper O'Connor[3] showed that when the Irish cattle/feed price ratio (i.e. expected price of 1 cwt. live wt. of beef, relative to the price of 1 cwt. of barley meal) was 6/1 or greater, it paid to feed a small amount of grain along with medium quality silage to young cattle in wintertime, regardless almost of the cost of silage. The amount of grain to be fed depends on the magnitude of the ratio. Within limits the greater the ratio the more grain which can profitably be fed. Under EEC conditions (despite the high grain prices) it is expected that the cattle/grain price ratio in spring will be at least 9/1; hence grain feeding in winter should be moderately profitable (particularly for young bulls), cattle should be ready for slaughter at earlier ages, and the productivity of our cattle herd should increase. In relation to the winter feeding of cattle, it should be stated that the difference between spring and autumn prices is also an important determinant of profit magnitudes. This aspect of the question is discussed in Chapter 5.

It has been estimated[4] that under EEC price conditions, and taking account of better productivity of land and animals, the country should be carrying about 2.3 million cows in 1978. In the same year the output of cattle including stock changes from these cows should be about 2.0 million animals. It is estimated that about 460,000 of these will be cull cows and the remainder "clean" cattle (steers and heifers). We next consider how these cattle will be disposed of.

Disposal of Output

The disposal of the Irish cattle output for the years since 1953 is shown in Table 4.3. As can be seen from this table, output including stock changes increased from 955,000 in 1953 to 1,679,000 in 1972 or by over 70 per cent.

*There is little or nothing to be gained by feeding grain to cattle in summer.

[3]O'Connor, R. "The Implications for Cattle Producers of Seasonal Price Fluctuations"—ESRI, Paper No. 46, 1968.

[4]O'Connor, R., "Projections of Irish Cattle and Milk Output under EEC Conditions". *Economic and Social Review*, Vol. 3, No. 3, 1972.

TABLE 4.3: *Details of cattle output*, 1953–1972

	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972
	No. (000)																			
Live Exports																				
Store Cattle	397	484	471	488	747	595	404	317	427	430	566	637	438	398	620	593	534	505	592	490
Fat Cattle	49	124	139	180	78	52	79	220	289	140	91	150	146	206	27	16	5	12	7	90
Cows	10	7	9	6	5	5	6	4	6	5	5	6	12	11	8	11	7	10	15	17
Calves	*	*	*	*	1	*	*	1	1	1	1	1	1	11	16	6	6	2	2	*
Total Live Exports	456	617	619	675	831	653	488	542	722	575	663	794	597	625	671	625	553	529	616	597
Dead Meat Exports	183	254	167	155	207	232	289	362	446	394	393	284	289	413	733	586	598	666	673	550†
Total Exports	639	871	786	830	1,038	884	777	904	1,168	970	1,055	1,078	886	1,038	1,404	1,211	1,151	1,195	1,289	1,147†
Live Imports	1	1	1	13	113	94	75	45	159	102	140	148	101	75	157	135	129	163	93	100†
Net Exports	638	870	785	817	925	790	702	859	1,009	868	915	930	785	963	1,247	1,076	1,002	1,032	1,196	1,047†
Domestic Consumption	183	168	176	177	180	183	199	186	200	197	211	207	203	206	221	232	235	240	243	237†
Output (excl. Stock Changes)	821	1,038	961	994	1,105	973	901	1,046	1,208	1,065	1,126	1,137	987	1,169	1,468	1,308	1,258	1,273	1,439	1,284†
Changes in Stock	+134	−23	+87	−48	−52	+83	+220	+18	−112	+121	+68	+155	+442	+204	−140	+76	+143	+176	+111	+395
Output (incl. Stock Changes)	955	1,015	1,048	946	1,052	1,057	1,121	1,064	1,096	1,186	1,194	1,292	1,409	1,373	1,328	1,384	1,401	1,449	1,550	1,679†

*Less than 500. †Preliminary estimates obtained from the CSO.

Source: Irish Statistical Bulletin, formerly Irish Trade Journal and Statistical Bulletin, June issues, 1954–72 and CSO.

Output is broken down into four main categories: live exports, dead meat exports, domestic consumption, and changes in stocks of cattle on farms. Each of these items is discussed below.

Live Exports

Live exports consist of store cattle, fat cattle, cows and calves. Table 4.3 shows that the numbers of such exports have varied from 456,000 in 1953 to 597,000 in 1972. The highest number of live cattle exported in post-war years was in 1957 when 831,000 went out though this number was nearly reached again in 1964 when 794,000 were exported. The bulk of the live exports are store cattle for further fattening in the United Kingdom but in some years there was a fairly sizeable number of live fat prime cattle exported, particularly during the Bovine Tuberculosis Eradication campaign in the early 1960s when the export of such cattle was subsidised. Live fat exports expanded again between 1964 and early 1966 when the EEC market was opened for a period to non-member countries. This market was again opened in 1972 when approximately 87,000 prime fat cattle were exported. As Table 4.3 shows, the number of other live cattle exported (i.e. cows and calves) is small though in recent years the number of cows exported has increased somewhat. Up to 1972 these cows went mainly to Britain and Northern Ireland for breeding purposes and milk production, but in 1972 about 12,000 fat cows were exported to the Continent. Fat cows, are however mainly slaughtered at home for the boneless beef trade.

Store Cattle

The Irish store cattle trade has been studied fairly exhaustively over the years both here and in Britain. The most recent study has been the Report of the Store Cattle Study Group[5] appointed by the Minister for Agriculture and Fisheries, which presented its findings in 1968. As this is a very comprehensive report we have drawn heavily on it for this section of our study.

Store cattle exports have always gone almost completely to the United Kingdom, though since 1964 some small lots have been exported to countries on the continent of Europe and in 1966 some 5,000 young stores were exported to the United Arab Republic, together with about 4,000 calves. Store cattle are now being exported to Italy. Of the store cattle which go annually to the United Kingdom about 50 per cent go to England, 30 per cent to Northern Ireland, 16 per cent to Scotland and 4 per cent to Wales. Store exports usually comprise approximately 74 per cent bullocks, 25 per cent heifers and 1 per cent bulls and cows.

[5] *Report of the Store Cattle Study Group*—Department of Agriculture and Fisheries, April 1968.

The shipment of store cattle from this country to Britain is a long established trade going back to the 17th century and probably much earlier. O'Donovan[6] states that in a discussion in the English House of Commons in 1620 reference was made to imports of 100,000 head of cattle each year from Ireland.

During the first thirty years of the present century an average of 450,000 store cattle per annum were exported from Ireland (32 counties) while in the same period fat cattle exports averaged about 330,000 and the export of other cattle was about 51,000 head. Total cattle exports in those years averaged 830,000 per annum (Store Cattle Report[7]).

Since 1930 exports of live cattle of all kinds have tended to decrease, particularly in the period 1930-1950 when annual exports of cattle averaged only 530,000 per annum. This decline however has only been in exports of fat cattle and other cattle; store exports have shown an upward trend in this period. An important reason for the upward trend in store cattle exports since 1930 was the acceptance from 1934 onwards of these cattle for fatstock payments in the UK after residence in that country for a minimum qualifying period of 2 to 3 months. This payment did not apply to Irish cattle exported to UK for immediate slaughter and for that reason many cattle which heretofore went out as live fats were now exported as stores. Though there have been many changes in trade agreements with Britain in subsequent years,* this condition obtained up to our accession to EEC in 1973. During this period whenever there was an embargo on store imports, (as happened during the BTE scheme when some British farms were attested and Irish farms were not), cattle which would normally have gone as stores, were exported as fat cattle for immediate slaughter. Thus it can be seen that the store and fat trades are by no means completely distinct and separate. According to the state of the market and subsidy arrangements, animals can be switched fairly easily from one category to the other. Even at any one time the difference can be rather tenuous, with a "fat" beast sometimes requiring feeding for some weeks to restore weight or condition lost in transport. Moreover the definition for statistical purposes of live cattle leaving Ireland can be quite arbitrary, and there is no guarantee that all animals classified as stores are in fact entering the British farming sector while all beasts classified as fat are destined for immediate slaughter.

[6]O'Donovan, J.; *The Economic History of Livestock in Ireland*, (Dublin 1940).

[7]*Op. cit.*, p. 22.

*Under the 1948 Trade Agreement with Britain the prices of Irish fat cattle imported for immediate slaughter and also those for carcase beef (both of which were purchased by the British Ministry at fixed prices from 1940 to 1954) were linked to the prices of Irish stores fattened in the UK. From then until decontrol in 1954 the increases in prices for UK home bred cattle were more or less automatically applied to Irish stores and appropriate equivalent increases were made in the prices of Irish fat cattle imported to the UK for immediate slaughter and in those for Irish beef.

Future of Store Trade

Under Common Market conditions the genuine store cattle trade with the UK is likely to continue, though perhaps on a smaller scale than at present due to increased British home production and the termination of UK deficiency payments which benefited the Irish store trade. Traditionally British farmers purchased finished cattle, kept them on farms for a few months, making little or no weight gain and eventually selling in the hope that the deficiency payments would enable profits to be made. Sometimes farmers did well from the transactions and other times not so well, but seeing that the trade has continued over the years farmers on the whole must have been satisfied with it.

With the permanent disappearance of the deficiency payment system however British farmers will have to compete on level terms with factory buyers. They seem to have been doing this quite successfully since March 1971 when deficiency payments last operated. This success was probably due to continuously rising prices in that period. It is doubtful however if the trade in heavy store cattle will remain profitable when prices settle down at some equilibrium level. Hence in future "finished" cattle are unlikely to go out as stores. These animals will go for immediate slaughter either at home or abroad with lighter cattle than heretofore going as stores. The number of these lighter cattle going out will depend to some extent as to whether Britain itself will develop a live export trade to the continent.

It is possible, of course, that in future cattle will also go to the continent for further feeding, but if this happens they will have to be of a suitable type for the continental trade. It is doubtful if our traditional type store will ever be favoured on the continent but a trade which seems likely to develop in future years is the export of young bulls (around 5 cwt.) of Charolais, Fleckvieh (Simmental), Limousin or Friesian type.* A factor encouraging trade in animals of this weight over the next few years is the more favourable EEC tariff rates on young store cattle† as compared with mature animals. Young bulls are used extensively in continental feed lots and could be ideally supplied from our single or multiple suckled herds. This trade is, however, not likely to become very substantial. At the high prices ruling for milk, few farmers will be willing to feed this commodity to calves. A price of 20p per gallon for whole milk is equivalent to a price of about £8.68 per cwt. for a balanced meal, which is more than twice as high as the price of calf meal within the Common Market. Some small number of farmers will of

*At the present time veterinary regulations make it rather difficult to export store cattle to the continent.

†These favourable rates apply to young male cattle weighing between 484 and 660 lb. At present the custom tarriff is completely suspended on such animals.

course prefer suckling to dairying in view of the lower labour requirements of the former enterprise. Also some well-reared calves fed on milk replacer may be used for this trade.

Fat Cattle

Up to the advent of the "Economic War", in 1933 fat cattle were exported almost exclusively to the United Kingdom. Between 1933 and 1939 some diversification of exports took place. With the advent of the world war however, exports were once again directed exclusively to the UK and it was not until 1945 that exports of any consequence to other countries again took place. Since the war annual exports of fat cattle both to UK and other countries have varied considerably as the figures in Table 4.4 show.

Fat Cattle Trade with Britain

As can be seen from Table 4.4 there was a steady stream of about 100,000 to 200,000 fat cattle exported to the United Kingdom each year during the 1930s. Throughout the war years numbers declined very much but by 1949, and up to 1951, we were back again to pre-war levels. Since 1951 however, fat exports have been rather erratic with large numbers going out in some years and very small numbers in other years. This fluctuation in numbers has been due to a number of factors.

Because of the link with British payments the store trade had a distinct advantage over other trades, and the numbers which went out as stores depended very much on economic and weather conditions in Britain. In periods of drought, demand for stores for grazing is usually poor. Similarly, if the fodder situation is unfavourable the demand for stores for winter feeding is not good. Also if the economic outlook in Britain is poor or if there are credit restrictions, farmers become reluctant to purchase feeder cattle. In these circumstances the cattle become available for the live fat traders or for the dead meat trade.

Up to the mid 1950s the dead meat industry in Ireland was rather underdeveloped and, hence, in those years most of the cattle which did not go out as stores were exported as live fats. With the development of meat factories however, other buyers came on the scene and the live fat trade became further squeezed. This can be seen from the export figures for 1957 to 1959.

In 1960 however, the live fat trade recovered again. In March of that year all of Britain was brought under compulsory Bovine Tuberculosis Eradication and imports of untested stores were prohibited. As many areas in Ireland were not fully attested at that time the store trade was badly hit.

TABLE 4.4: *Fat cattle exports from Ireland, 1932–1972*

Year	*UK*	*Other Countries*	*Total*	*Year*	*UK*	*Other Countries*	*Total*
	(000)				(000)		
1932	214	1	215	1952	82	33	115
1933	222	8	230	1953	31	18	49
1934	118	9	127	1954	108	16	124
1935	140	21	161	1955	130	9	139
1936	134	23	157	1956	112	68	180
1937	121	19	140	1957	48	30	78
1938	141	18	159	1958	37	15	52
1939	134	5	139	1959	64	15	79
1940	97	—	97	1960	195	25	220
1941	200	—	200	1961	255	35	290
1942	82	—	82	1962	126	14	140
1943	4	—	4	1963	66	25	91
1944	20	—	20	1964	60	90	150
1945	14	3	17	1965	64	82	146
1946	11	24	35	1966	158	48	206
1947	52	58	110	1967	18	9	27
1948	19	47	66	1968	11	5	16
1949	102	32	134	1969	3	2	5
1950	146	33	179	1970	2	10	12
1951	137	35	172	1971	6	2	8
				1972	4	86	90

Source: CSO, Dublin.

Untested fat cattle for immediate slaughter continued to be accepted in Britain however, if sent to designated slaughterhouses, and many of the "unattested stores" therefore went out as fats during the years 1960 to 1962. This trade was aided by a scheme of guaranteed payments for untested and reactor cattle which could not go out as stores. The payments scheme concluded in 1962, and thereafter the number of live fats going to Britain declined considerably except for a period round 1966 when EEC regulations effectively prevented imports of cattle and beef to the European Community. In these conditions it became very difficult to export beef or even store cattle to any market and we were glad to be able to ship some live fats to Britain, even at low prices.

A decision of the Irish government in February 1965 to subsidise beef exports at the same rate as the UK, followed by the signing of the Anglo-Irish Free Trade Area Agreement (AIFTA) in June of that year, did not help the live fat trade with Britain. Under the terms of the AIFTA (in addition to retaining our store cattle link) we received the full British subsidy on 25,000 tons of carcase beef while the Irish government contributed a further amount so that total beef exports to Britain were supported at almost as high a level as the British rate. This payment on dead meat exports has enabled the factories to compete successfully with the live fat trade and as can be seen from Table 4.4 the latter trade declined considerably between 1967 and 1971.

Fat Cattle Trade with the Continent

As can also be seen from Table 4.4, the fat cattle trade with other countries (mainly European countries) had always been substantially less than that with Britain until 1970. The continental trade in live cattle developed during the "Economic War" with Britain in the 1930s and by the outbreak of war in 1939 we were exporting annually about 20,000 cattle to the European mainland. The trade ceased entirely during the war years but revived thereafter and in 1947 we exported 58,000 animals. After 1947 the trade declined somewhat again and it has since remained somewhat erratic. Until 1972 the largest exports to the continent were in 1964 and 1965 when 90,000 and 82,000 were exported respectively. These exports took place at a time when there was a shortage of cattle in Europe and before a common organisation was established by the EEC for the marketing of beef and veal. Regulations were introduced in November 1964 to provide protection for the domestic beef markets of member countries through the operation of customs duties and a variable levy system. Their implementation adversely affected our exports of fat cattle and carcase beef

and in the five years 1967 to 1971 inclusive exports of fat cattle to the continent were negligible.

With Ireland and Britain joining the Common Market however, this situation may alter. The dismantling of British deficiency payments and the reduction of continental tariffs and levies will generate very strong demand by foreign meat packers for Irish live cattle, as happened in 1972, and our factories are going to face severe competition for their raw materials. In the next chapter we shall examine the effect of this competition on our dead meat industry.

Health

All of the discussion above, about the prospects for trade in live cattle has been based on the assumption that the health of our cattle stocks will be satisfactory from the point of view of international veterinary requirements. Specifically the successful completion of the Brucellosis eradication scheme, and prevention of any significant reappearance of bovine tuberculosis have been assumed. If these assumptions are not met, not only would live exports be drastically affected, but the export of beef could also be placed in jeopardy.

Although of less fundamental significance, and not allowed for in our projections, the discovery of a feasible and economical method of eradicating liver fluke disease would be of great benefit to the Irish cattle and beef industries, and research to this end should receive a high priority.

Dead Meat Exports

Carcase Beef

The export of carcase beef is a long established trade but it is only within the last twenty years that it has become of any great economic significance. In the 1920s and 1930s the volume of trade was very small, the heaviest annual export in these decades being in 1928 when the quantity exported was 4,350 tons or the equivalent of 17,500 cattle.[8]

Throughout the 1940s trade in carcase meat continued to remain small except in 1941 when, due to foot and mouth disease, an embargo was placed on the importation of live cattle into Britain. Exports in that year reached 16,000 tons or the equivalent of about 64,000 cattle, but declined in the following year to about 6,000 tons and remained at this low level throughout the 1940s.

[8]Report of the Survey team established by the Minister for Agriculture on Beef, Mutton and Lamb Industry. Stationery Office, Dublin, April 1963. Prl. 6993.

Exports of carcase beef expanded rapidly in the early 1950s (see Table 4.5) reaching a peak of 44,000 tons in 1954. The factors responsible for this expansion were: —

(1) more favourable price arrangements for carcase beef than heretofore with the British Ministry of Food, as a result of a trade agreement between the British and Irish Governments signed in 1948 and which lasted until decontrol of food in 1954
(2) the opening up of the American trade in 1951 and
(3) the development of a trade with continental Europe.

After decontrol of food in Britain in June 1954 carcase beef prices were no longer supported by Britain and as a result of this, coupled with a contraction of US imports, trade in carcase meat declined seriously and did not again reach the 1954 level until 1960 when 51,000 tons were exported. After 1960 quantities remained fairly constant at between 55,000 and 80,000 tons until 1967 when there was a sudden expansion in exports to 152,000 tons or the equivalent of about 700,000 cattle. In the following years exports declined somewhat from this very high level but they rose again to a peak of 151,000 tons in 1971 and declined to 127,000 tons in 1972. Of the latter amount 61 per cent went to the UK, 13 per cent to USA and to US forces on the continent, while 23 per cent went to the seven continental countries of the enlarged EEC and the remaining 3 per cent to other countries.

The main expansion in our carcase beef exports has been in the trade with Britain which increased from 19,000 tons in 1964 to 102,000 in 1971. This remarkable increase came about mainly as a result of the 1965 Anglo-Irish Free Trade Area Agreement through which Britain supported (by means of her deficiency payments scheme) 25,000 tons of Irish beef and the Irish government the remainder.

As can be seen from Table 4.3 all of the increased cattle output in recent years is going out as dead meat rather than as live cattle. At the present time the cattle equivalent of our dead meat exports is about 50 per cent of total cattle and beef exports compared with less than 40 per cent in 1962 and only 20 per cent in 1957. Furthermore, Irish carcase beef exports accounted for about 42 per cent of total UK beef imports in 1971, compared with only 5 per cent in 1963 and earlier years. The British trade is mainly in the form of fresh or chilled carcases but in recent years a trade in primal cuts of vacuum packed beef has developed.

In its early years the American (mainly USA) trade was in both carcase beef and boneless cuts. Nowadays this trade is entirely in the boneless form,

TABLE 4.5: *Exports of beef, 1950 to 1972*

Year	Carcase and boneless beef (a)						Canned beef (b)
	to UK	to rest of EEC '9'	to US and Canadian forces in Europe (c)	to US and Canada	to rest of world (d)	Total	
	tons						
1950	3,123	—	n.a.	419	2,858	6,400	9,025
1951	6,470	1,980	n.a.	6,459	1,416	16,325	11,087
1952	14,280	1,970	n.a.	6,556	2,796	25,602	17,848
1953	21,837	6	n.a.	2,709	1,794	26,346	10,387
1954	37,122	2,194	n.a.	1,530	2,716	43,562	9,036
1955	12,276	1,550	n.a.	1,091	2,191	17,108	11,963
1956	7,373	5,075	n.a.	1,063	2,504	16,555	9,710
1957	2,519	11,009	n.a.	4,297	10,432	28,257	7,968
1958	2,855	6,704	n.a.	15,728	3,180	28,467	7,623
1959	6,785	5,624	n.a.	23,461	2,042	37,913	7,275
1960	15,266	2,803	3,493	28,795	644	51,001	8,854
1961	33,031	4,435	2,887	38,264	204	78,821	7,971
1962	20,662	2,960	1,462	33,209	5,647	63,940	5,659
1963	16,989	2,201	4,635	37,076	4,761	65,662	5,123
1964	19,814	20,489	3,386	8,076	2,039	53,804	4,489
1965	28,612	19,250	558	4,838	2,319	55,577	4,109
1966	42,095	7,767	624	21,514	630	72,630	4,245
1967	108,786	2,417	113	39,445	874	151,635	4,238
1968	89,790	370	—	28,910	765	119,835	5,083
1969	84,947	1,769	—	36,734	1,430	124,880	3,400
1970	101,627	4,386	1,446	33,647	1,734	142,840	3,109
1971	101,987	803	5,528	33,924	9,089 (e)	151,331	3,016
1972	77,295	29,558	9,531	7,159	3,364	126,907	3,264

(a) Exports calculated in "bone-in equivalent".
(where "bone-in" equals "boneless" plus 15 per cent).

(b) It is difficult to be consistent in the construction of a series for canned beef since (1) some export list categories, covering beef in airtight containers, also include such other foods as mutton, pork and cereal and (2) the export list classification has been altered over the period covered by this table. The only categories included are those containing beef only: The CSO export list numbers of these were:

1950 and 1951	058
1952 to 1959	211–70
1960 to 1962	211–70 and 211–71
1963 to 1971	012–50 and 012–59

(c) Prior to 1960 this was included with the EEC countries.

(d) Including those European countries not members of the enlarged EEC.

(e) Of which almost 8,000 tons went to Israel.

Source: CSO, Dublin.

suitable for manufacturing purposes (sausages, hamburgers etc.) and derived mainly from lean cow carcases. The US trade is arranged on a quota basis and has been remarkably steady at between 25,000-39,000 tons since 1960, except for the four years 1964, 1965, 1966 and 1972 when the amounts exported to this market declined substantially. The decline in 1964 to 1966 was due to two causes. As a result of the calved heifer subsidy scheme the

cow culling rate was reduced in those years and there were therefore fewer cows available for slaughter. The second cause was the temporary opening up of the EEC market for live cattle and beef. Prices on this market were higher than those available in the USA and as a result most of the available supplies were switched to the European trade. With the closing of the EEC market in 1966 supplies moved back again to the US market where we were rather lucky to retain our quota after failing to fulfil it for the two previous years. The decline in 1972 has been due to the relatively high prices on European markets and to a significant reduction in the cow culling rate in that year.

Except for the years 1957, 1964, 1965 and 1972 continental European trade has been very small and even when we are full members of the EEC there will be problems in breaking into this market on a permanent basis. Most European countries prefer very lean meat both for the high class trade and for manufacturing purposes. They find traditional Irish and British beef much too fat and will only buy it if supplies are very short. Even then they prefer to buy live fat animals rather than dead meat and to dress these animals. In addition there would appear to be some slight consumer preference for locally slaughtered as opposed to imported beef of the same type (i.e. the freshness factor).

In early 1972 when beef on the continent was very scarce continental buyers were very active in Ireland looking for suitable slaughter cattle of the Charolais and Friesian type. In the six months January-June 1972 about 37,000 fat cattle (including 10,000 cows) and 3,000 tons of beef were exported to EEC countries. It is estimated that 23,000 of the cattle and about half the dead meat were shipped in the month of June when all customs duties and levies were temporarily abolished. During the period July to December 1972 a further 60,000 fat cattle and 26,000 tons of beef were exported to EEC countries.

The high proportion of live cattle compared with dead meat purchased by continental traders is a rather disturbing feature of the EEC trade. For various reasons, including the EEC tariff discrimination in favour of live imports, prices paid in 1972 by continental buyers of live cattle were higher than Irish factories could pay for the same animals, and this, coupled with a shortage of slaughter cows and heifers (due to herd building), has resulted in greatly reduced slaughterings in Irish factories in 1972.

Slaughter of Cows

As can be seen from Table 4.6 the Irish dead meat trade has been built up substantially on cow slaughter. For most of the 1950s and early 1960s

cows made up about two thirds of total cattle slaughtering. Subsequently, though the numbers of cows slaughtered tended to increase, the proportion of cows in the total "kill" declined to about one third in 1970 and 1971. In 1972 however, due to stock building the number of cows slaughtered dropped by about 100,000, and factories which depended considerably on cow slaughtering were in fairly serious trouble in that year. This situation however is only a temporary set back. Cow culling must return to normal patterns very shortly and with the increase in cow numbers which has taken place in recent years the numbers available for slaughter should increase accordingly. Furthermore, as a result of higher milk prices, farmers will strive for higher yields and the culling rate will inevitably increase. If, therefore, we have around 2.3 million cows in 1978 (as predicted by O'Connor[9]) then the number available for slaughter in that year (assuming a 20 per cent culling rate) should be about 460,000. The danger is that some of these may go as live exports to the continent. Considering however our experience of cow slaughtering and the virtual absence of a live cow export trade in the past, there is every reason to feel confident that cow slaughtering will remain a very viable industry in future and continue to provide a solid base for the whole dead meat trade. We discuss the viability of the dead meat industry in more detail in Chapter 5.

Canned Beef

Exports of canned beef commenced in 1938 but initially were on a small scale. After 1939 exports to Britain increased rapidly and remained at a high level throughout the war years, reaching a peak of about 16,000 tons in 1942. After 1947 exports declined but revived again to a peak of about 18,000 tons in 1952 when other meats were scarce. Exports have been decreasing fairly steadily since 1956 to the low level of 3,260 tons in 1972. Sales of canned beef to countries other than Britain have always been negligible. Small quantities of corned beef are however regularly exported to Germany.

DOMESTIC CONSUMPTION OF BEEF

The figures in Table 2.2 show that consumption of beef and veal in Ireland has risen from 33 lb. per person in 1956/58 to 43 lb. in 1971. This is a considerable increase in such a short period but nevertheless we are still among the lowest consumers in the table with the exception of Japan. The low beef consumption is however counter-balanced by relatively high consumption of mutton and pigmeat so that our total meat consumption (other than poultry) is now higher than that in the UK, Netherlands, Belgium or Italy, and close to that in West Germany and France.

[9] *Op. cit.* p. 467.

TABLE 4.6: *Annual slaughterings of cows and other cattle at export premises for years* 1950–1972

Year	*Cows*	*Other Cattle*	*Total Cattle*	*Cows as percentage of total*
		(000)		*percent*
1950	90,000	26,300	116,300	77·4
1951	116,400	71,600	188,000	62·0
1952	155,500	98,900	254,400	61·1
1953	192,600	101,200	193,800	47·8
1954	112,400	150,800	263,200	42·7
1955	128,700	53,600	182,300	70·6
1956	123,400	59,700	183,100	67·4
1957	162,900	48,600	211,500	77·0
1958	184,600	43,300	227,900	81·0
1959	227,600	91,500	319,100	71·3
1960	245,000	131,800	376,800	65·0
1961	214,700	256,200	470,900	45·6
1962	269,500	133,600	403,100	66·9
1963	228,500	175,200	403,700	56·6
1964	160,900	141,100	302,000	53·3
1965	162,600	149,500	312,100	52·1
1966	225,700	173,800	429,500	59·5
1967	306,800	445,900	752,700	40·8
1968	267,900	353,200	621,100	43·1
1969	254,900	378,100	633,000	40·3
1970	232,400	465,200	697,600	33·3
1971	260,100	448,200	708,300	36·7
1972	163,100	420,600	583,700	27·9

Source: Department of Agriculture and Fisheries.

Because of our low beef consumption and small population, total consumption of cattle in the country at present is only about 240,000, and with rising beef prices the prospects for increases in this number in the short term are not very bright. As can be seen from Table 2.6 FAO estimate a decrease in consumption of 16 per cent between 1964/66 and 1980 but we cannot accept this figure as being realistic. Preliminary estimates suggest that consumption in 1972 may have been down marginally on 1971 but, even if this is true, it may be no more than a temporary decline engendered by the exceptionally rapid increase in prices during the year. Prices of certain cuts of beef, mutton and pigmeat for the years 1965 to 1972 are given in Table 4.7 and show that between these two years beef prices increased by about 72 per cent compared with 57 per cent for mutton and only 39 per cent for pigmeat. Over the same period the consumption of beef increased by about 21 per cent compared with increases of only 6 and 11 per cent respec-

TABLE 4.7: *Retail prices of certain cuts of beef, mutton and pigmeat in recent years*

	1965		1966		1967		1968		1969		1970		1971		1972
	Feb.	*Aug.*	*Feb.*	*Aug.*	*Feb.*	*Aug.*	*Feb.*	*Aug.*	*Feb.*	*Aug.*	*Feb.*	*Aug.*	*Feb.*	*Aug.*	*Feb.*
								p/lb.							
Beef															
Round Steak	26·0	26·7	26·0	26·7	25·7	25·3	27·9	29·2	30·4	32·7	33·1	36·6	37·9	41·8	45·3
Sirloin Steak	30·3	30·5	29·7	30·3	29·3	29·7	32·5	34·5	35·5	38·8	39·2	43·9	45·4	51·5	55·1
Rib Steak	20·6	21·3	20·7	20·6	19·7	19·3	21·8	22·2	23·1	24·2	25·2	27·2	28·3	30·7	33·9
Corned Beef	12·4	12·4	12·1	12·0	11·6	11·4	12·4	12·5	12·5	13·2	13·6	15·0	15·9	17·7	18·9
Mutton															
Leg (whole)	20·8	20·9	20·4	20·8	20·7	20·2	21·6	23·5	23·5	25·7	26·4	28·8	29·3	31·3	33·2
Loin Chops	24·9	25·1	24·4	25·2	25·2	24·9	26·7	28·1	28·8	31·4	32·3	35·8	36·6	39·4	42·1
Neck	11·0	10·7	10·7	10·2	10·0	9·5	10·5	10·7	10·0	10·4	11·0	11·7	12·0	12·1	13·6
Pork															
Shoulder (whole)	20·2	20·1	20·4	20·6	21·3	21·5	22·0	22·6	22·6	22·8	23·7	25·3	25·5	27·1	28·8
Sausages	16·1	16·1	16·1	16·4	16·6	16·9	17·1	17·2	16·6	16·8	17·3	18·9	19·0	19·4	21·2
Bacon															
Streaky Rashers	21·9	22·0	21·9	23·0	23·0	23·4	24·1	24·3	25·2	25·3	25·8	27·7	28·1	29·1	30·7
Ham uncooked	24·0	23·9	24·2	25·0	25·4	25·7	26·7	27·2	27·0	27·6	28·5	30·4	31·3	32·7	34·6
Shoulder (whole)	14·6	14·9	15·0	15·2	15·1	15·4	15·4	15·7	15·5	15·7	15·8	17·5	17·6	18·4	18·9
								Indices February 1965=100							
All Beef	100·0	101·8	99·1	100·3	96·6	96·0	105·9	110·2	113·7	122·0	124·4	137·4	142·8	158·7	171·6
All Mutton	100·0	100·0	97·9	99·1	98·6	96·3	103·7	109·9	109·9	119·1	122·9	134·6	137·4	146·0	156·8
All Pork	100·0	99·7	100·6	101·9	104·4	105·8	107·7	109·6	108·0	109·1	113·0	121·8	122·6	128·1	137·7
All Bacon	100·0	100·5	101·0	104·5	105·0	106·0	109·4	111·1	111·9	113·4	115·9	125·0	127·3	132·6	139·2
All Pig Meat	100·0	100·2	100·8	103·5	104·8	106·3	108·8	110·5	110·4	111·8	114·8	123·8	125·5	130·9	138·6

Source: Irish Statistical Bulletin

tively for mutton and pigmeat. These changes indicate that, apart from strictly temporary reactions, Irish meat consumption is not very responsive to price. Therefore even if beef prices continue to increase in future years relative to those of other meats, this appears unlikely to have as adverse an effect on beef consumption as FAO predicts. Indeed a good deal will depend on movements in national income. If real per capita incomes increase rapidly we would expect beef consumption to go on rising in spite of its increasing relative price.

Practically all the beef consumed in the state is slaughtered by butchers or in the Dublin Abbatoir. In recent years the factories are taking over some of this trade but as late as 1971 less than 5 per cent of home beef consumption was slaughtered in factories. This proportion is likely to increase considerably in future years but because of our low population it must remain (for the immediate future at any rate) a very low fraction of factory output.

Stock Changes

The figures given for stock changes in Table 4.3 relate to the increase or decrease in numbers of cattle on farms between the beginning and end of each year as determined at January livestock enumerations. The changes in cattle stocks reflects both trading conditions and farmers' stock building decisions. If trading conditions are good and there is no unusual holding back of heifers for breeding, sales off farms are likely to be heavy and there should be a decline in cattle numbers on farms between the beginning and end of the year. On the other hand, if trade in cattle is poor due to low prices, or if there is an unusual number of heifers held back for breeding then the number of cattle on farms will be likely to increase between the

TABLE 4.8: *Percentage distribution of milch cows by breed, 1960–1971*

Breed	1960	1962	1964	1966	1968	1970	1971
				Percentage			
Shorthorn	77	74	69	61	61	40	36
Friesian	6	10	15	24	35	46	50
Other*	17	16	16	15	14	14	14
Total	100	100	100	100	100	100	100

*Mainly Hereford and Aberdeen Angus.

Source: CSO, Dublin.

beginning and end of the year. As can be seen from Table 4.3 there has been systematic stock-building throughout the 1960s with the exception of two years, 1961 and 1967. Cattle going into stocks would be available for sale if they were not held back for breeding or other purposes, hence they enter into cattle output and are valued at sale prices in calculating the output value.

BREEDS OF CATTLE

Since 1960 breeds of milch cows in the state have been collected annually at the June enumeration of crops and livestock. The proportions in the different breeds* for a number of selected years are given in Table 4.8.

As can be seen from Table 4.8, over three quarters of the total cows in the state in 1960 were of the Shorthorn breed with only about 6 per cent of Friesians and 17 per cent of all others (mainly Hereford and Aberdeen Angus). By 1971 these proportions had altered dramatically. In that year 50 per cent of the cows were Friesians, while Shorthorns were reduced to 36 per cent with other breeds at 14 per cent. A somewhat similar (though not comparable) picture of the breed situation is available from the artificial insemination figures issued by the Department of Agriculture and Fisheries,† which show that in 1971 Friesian and Hereford inseminations were about the same at 38 per cent each. Aberdeen Angus with 11 per cent came next on the list, while Shorthorns accounted for less than 8 per cent with Charolais 4 per cent and Fleckvieh (Simmental) 0.4 per cent. During 1972 there was a dramatic change in these proportions. Friesian inseminations jumped to 57 per cent, while Hereford inseminations declined to 19 per cent. Angus inseminations declined slightly from 10.9 to 9.5 per cent while those of Charolais and Fleckvieh increased to 5.2 and 2.2 per cent respectively (see Table 4.9).

*For those not familiar with livestock the following is a brief description of the more common cattle breeds in Ireland.

Shorthorn: the traditional Irish breed, mainly a dual purpose animal (i.e. suitable for milk and beef production).

Hereford and Aberdeen Angus: primarily beef breeds.

Friesian: large dual purpose breed.

Charolais and Limousin: Large continental beef breeds.

Fleckvieh (Simmental): Large dual purpose continental breed.

Very often these breeds are crossed with one another to give some particular type of calf.

†Only about five ninths of the cows in the state are inseminated each year. Also the figures for inseminations refer to breed of bull used and not to breed of cow served.

TABLE 4.9: *Percentage distribution of cattle artificial inseminations by breed, 1969–1972*

Breed	*Year*			
	1969	1970	1971	1972
	Percentage			
Shorthorn	9·3	9·4	7·7	6·9
Friesian	37·2	36·6	38·1	57·1
Hereford	38·8	38·1	38·4	18·7
Angus	11·1	11·5	10·9	9·5
Charolais	3·0	3·9	4·0	5·2
Fleckvieh*	—	—	0·4	2·2
Others	0·6	0·5	0·5	0·4
Total percent	100·—	100·—	100·—	100·—
Total number '000	1,022	1,033	1,024	1,888

*Commonly called Simmental.
Source: Department of Agriculture and Fisheries.

We might now summarise the breed situation by saying that over the past decade Friesians have become the principal breed in the country taking over steadily from the Shorthorn. Up to 1971 both Hereford and Angus breeds more or less held their own, remaining at about one-seventh to one-sixth of the total cow population, but in 1972 the insemination figures show a rapid swing away from Herefords towards Friesians. This change is no doubt associated with the very significant increase in milk prices consequent on our entry into EEC and no doubt also with the demand for very lean meat in that market. The fat Hereford type beef which was popular in the past seems to be losing its appeal. Contrary to expectations there has not been a very dramatic increase over the past year in Charolais inseminations, though finished Charolais cross cattle command a premium on the market over Herefords and Friesians. Neither are Charolais bulls being used for natural mating. Because of their exceptionally high cost, it would be very uneconomic to run Charolais bulls with suckler herds. Calving difficulties are also making Charolais cattle unpopular and unless these can be solved the breed will not increase substantially. Farmers are not prepared to risk the loss of a £200 cow even for the sake of a £20 better calf. In Britain the calving problem has been solved to some extent by selection of bulls, and this will no doubt happen here also. When this happens and bulls become relatively cheaper (i.e. cross breds being allowed) the breed can be expected to expand to the present Hereford/Angus level.

CHAPTER 5

The Irish Fresh Meat Industry

IN the Census of Industrial Production carried out annually by the Central Statistics Office, the animal slaughtering industry is divided into two major sections, namely "Bacon Factories" and "Slaughtering Preparation and Preserving of Meat other than by Bacon Factories". The latter, which we refer to as the Fresh Meat Industry, includes all the factories whose main enterprise is the slaughter of cattle and sheep. Pigs are also slaughtered in some of these factories and so some pigmeat is included in the factory returns. Similarly, the small numbers of cattle and sheep slaughtered in the bacon factories appear in the returns for that industry.

Though the fresh meat industry only accounts for about 2 per cent of the net output of transportable goods in the country, nevertheless it is an important industry in many ways. In 1969 it produced gross output to the value of about £63 million, purchased livestock and other materials to the value of £55 million, and gave employment directly to almost 4,000 people who received over £3 million in wages and salaries. Moreover, because of its geographically scattered nature, it is an important source of employment and income in many small towns throughout Ireland. Details of the industry for the years 1960 and 1969 are given in Table 5.1 below.

As can be seen from this table, the value of gross output by this industry more than trebled between 1960 and 1969, as did also the cost of materials, the value of net output, and value of wages and salaries. The number of establishments however only increased from 37 to 44 over the period,* while the total workers engaged increased from 2,600 to 3,900. The total number of cattle slaughtered over the period increased from 377,000 to 633,000.

Despite the achievement of rapid growth in the 1960s, the fresh meat industry is beset by several persistent problems. These problems and their implications are discussed in the following sections.

Predominant Dependence on Exports

It is a well known fact that exporters of most commodities like to operate

*A number of these factories slaughter very few if any cattle. Returns from the Department of Agriculture and Fisheries show that there were only 23 factories in the state which slaughtered 1,000 or more cattle in 1971.

TABLE 5.1: *Summarised details of fresh meat industry for* 1960 *and* 1969

	1960	1969
	£(000)	
Gross Output	19,441	62,770
Cost of Materials	16,360	54,681
Net Output	2,329	8,090
Salaries	174	593
Wages and earnings	821	2,690
Total salaries and wages	995	3,283
Remainder of net output	1,334	4,807
	No.	
Number of establishments	37	44
Total industrial workers	2,329	3,390
Administrative, clerical and technical staff	267	490
Total numbers engaged in mid October	2,596	3,880
Average work force per factory	70	88
	£	
Net output per employee	897	2,085
Volume of production index	100	213·5
Number of cattle slaughtered (000)	377	633

Source: Irish Statistical Bulletin, CSO, Dublin, June 1963 and September 1971 issues.

from a well established home market, so that in times of external trade difficulties they are not left completely devoid of a market for their output. In the case of pigs, most of which are slaughtered in factories, more than half the total output is sold on the home market. With sheep and cattle on the other hand, virtually all of the home consumption is slaughtered by butchers outside of factories and only about 5 per cent of the factory output of both these species is consumed at home. In any case the home market for beef is very small in comparison with our total cattle production. For example in 1971, the total number of cattle (including imports) disposed of was 1,532,000 and of these only 243,000 were consumed on the home market, the balance being exported either live (616,000) or dead (673,000). The insignificance of the home market is therefore a fact of life with which our meat factories must continue to live. Indeed, even if all the small butchers were eliminated (which is unlikely to happen for a long time), the number of cattle required for home use when spread over all the factories would be very small and would not constitute a firm home base. Our factories must therefore continue to depend almost exclusively on an export trade.

Transport

Complete dependence on export markets is more serious for some commodities than for others but it is especially serious for a perishable commodity like beef. For that reason a reliable transport system is essential for the trade.

Transport delays do not prove much of a problem for meat shipped to Britain, but they were fairly serious during 1972 for meat sent to the continent. Most of the meat going to Europe is now shipped in refrigerated trucks and at times during 1972 there was a great dearth of these. Irish meat was transported for the most part by British, French, Dutch and even Finnish trucks. Some meat packers whom we interviewed complained about the standards of service they received from many of the transport companies both Irish and foreign, particularly the larger ones. The problem here appears to be that some of these companies did not manage to reconcile the need for reliable and flexible service over a long and unfamiliar route with the existence of rigid legal and trade union rules.

However, it should be borne in mind that the re-opening of the continental beef trade is a fairly recent occurrence and there has not yet been time for transport facilities to adapt fully to the new situation. Moreover, since the trade re-commenced in 1972 it has been hampered by the lack of direct ferry links with the continent. The development of links such as the Rosslare/Le Havre ferry should enable many consignments to avoid the long drive across England and the double sea journey. Direct links, together with greater experience and the probable availability of greater numbers of refrigerated trucks, should greatly ease the problems of transporting meat to the continent over the next few years.

Even so there would appear to be some dangers inherent in overdependence on foreign hauliers, who have little commitment to the Irish beef trade. As the fleets of these hauliers are diverted to other business, temporary shortages of transport would seem likely to recur from time to time. There would thus seem to be advantage in ensuring that a considerable proportion of the necessary transport capacity is in Irish hands. An investigation of the comparative costs and profitability of Irish as against foreign hauliers is beyond the scope of this paper. We would suggest however that such a study should be made. If it should emerge that the development of adequate Irish transport capacity is being inhibited by factors under Irish control, such as differential rates of taxation or licencing, or shortage of suitable finance, then a case should be presented to the relevant authorities to remedy the situation.

In addition to problems of delay and unreliability, the cost of transport is also a factor very relevant to the meat industry. Relative costs of transporting

live animals and carcase meat and offals are discussed in Appendix A. In general it appears that meat and offals have only a very small advantage over live animals in transport costs in the UK, but enjoy a fairly substantial transport cost advantage with regard to most continental destinations. With changing transport technology it is somewhat hazardous to project relative transport costs into the future, but it would appear that the differential in favour of the dead trade is much more likely to widen than to narrow in the coming years.

Local Preferences

Another problem associated with the export of beef, even where transport conditions are good, is the preference for locally killed beef as against that coming from far distances, and particularly from overseas. Opinions differ as to the importance of this factor but most of the meat people to whom we talked claimed that locally killed beef always tends to fetch higher prices than imported meat of similar quality.

This differential can however vary considerably in different markets, and it is often as high as 0.8p per lb. as between Irish and home killed beef on British wholesale markets. This is equivalent to £4.50 per animal or something over 2 per cent of the cost price. This differential may be due to several causes. Though the quality of the two beefs when tasted may be the same, they may not look exactly alike due to different methods of butchering and different colour of flesh (known as the "freshness factor"), and to difference of breed and consequently different conformation of fat/lean ratios. Plain prejudice may also be a factor arising from political or racial problems or from past marketing performance by the seller (i.e. lack of continuity of supply or failing to deliver to specification). The type of market on which the meat is sold can also influence the differential considerably. If the beef is sold directly to retail outlets as some of the Irish beef is now sold in Britain, the price differential between Irish and British beef is very small and can be attributed largely to the "freshness factor". Where the beef is sold on wholesale markets on the other hand the price differential can be high, as in such cases a number of other factors mentioned above also come into play.

However, it is felt that if the seasonal variability of supply discussed below could be overcome most of the other problems could be ironed out, particularly on the British market. The efforts of CBF in projecting a quality image for Irish beef should help considerably in this direction as also should the sale of vacuum packed meat. The latter has a very fresh appearance when taken from the packs and should command as high a price as locally killed

beef. A number of our factories are selling an increasing amount of prime beef in this form and this is a development to be welcomed. Further research in this area is being carried out by An Foras Taluntais and this should also have a significant effect on the marketing of our beef abroad.

EEC Tariffs

A further disadvantage presently facing the Irish factories vis-a-vis the live trade is the structure of EEC tariffs. The full EEC common tariff is 20 per cent on meat and 16 per cent on live cattle. At the present time both tariffs are halved, so that Irish beef must face a tariff of 10 per cent and Irish cattle one of 8 per cent.

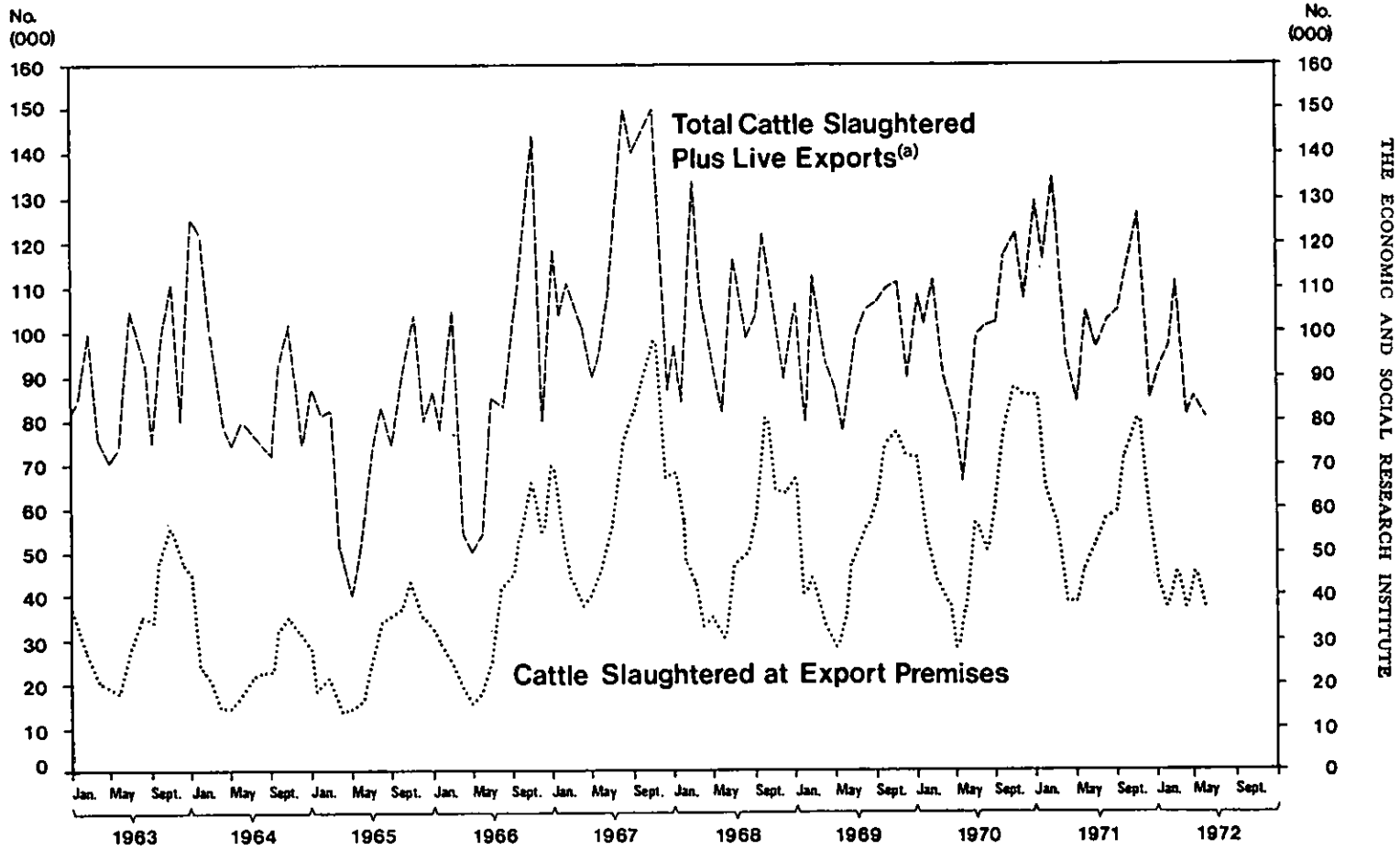
At first sight the difference of 2 per cent of the value of the carcase (or the live animal) may appear to be of little significance. In fact however, it represents a serious barrier to meat exports. The factory must pay the same price for an animal as the live exporter. Thus the extra tariff, amounting in the case of a £200 carcase to £4 must be met from the factory's margin. Allowing for the value of offal, this margin is of the order of £20. Thus what appears to be a nominal tariff difference of 2 per cent on the total value of the product is in fact an effective tariff of about 20 per cent on the value added by the factory, which places the factories at a strong disadvantage relative to the live trade.

Of course the differential will disappear over time as the tariffs against Ireland are phased out over the next five years. In the meantime, however, the situation could get worse if the EEC reverts to the full tariff level. In the circumstances it would appear sensible for the relevant Irish authorities to prepare a case for the more rapid phasing out of the differential, on the grounds that the protection of continental slaughtering plants in areas of high employment to the detriment of Irish meat factories in areas of low employment, runs counter to Community social and economic policies.

Seasonality of Supply

Because of the nature of the Irish climate there is a considerable seasonality in the supply of cattle for slaughter and export. Grass grows abundantly in the country and is cheap to produce, hence summer and autumn grazing is favoured highly by both cattle and dairy farmers. As against this, the production of winter feed is relatively expensive so that farmers try as far as possible to minimise winter feeding. The extent to which they can do this is of course limited, since both cows and young cattle have to be carried throughout the year. However, by timing different forms of production, farmers aim at having a very high proportion of their feed requirements

Figure 5.1: (a) *Cattle slaughtered at export premises and* (b) *Cattle slaughtered at export premises plus certain live exports* on a monthly basis for years* 1963–1972



(a) See footnote to Table 5.2

TABLE 5.2: *Seasonality of cattle disposal*, 1963–1971

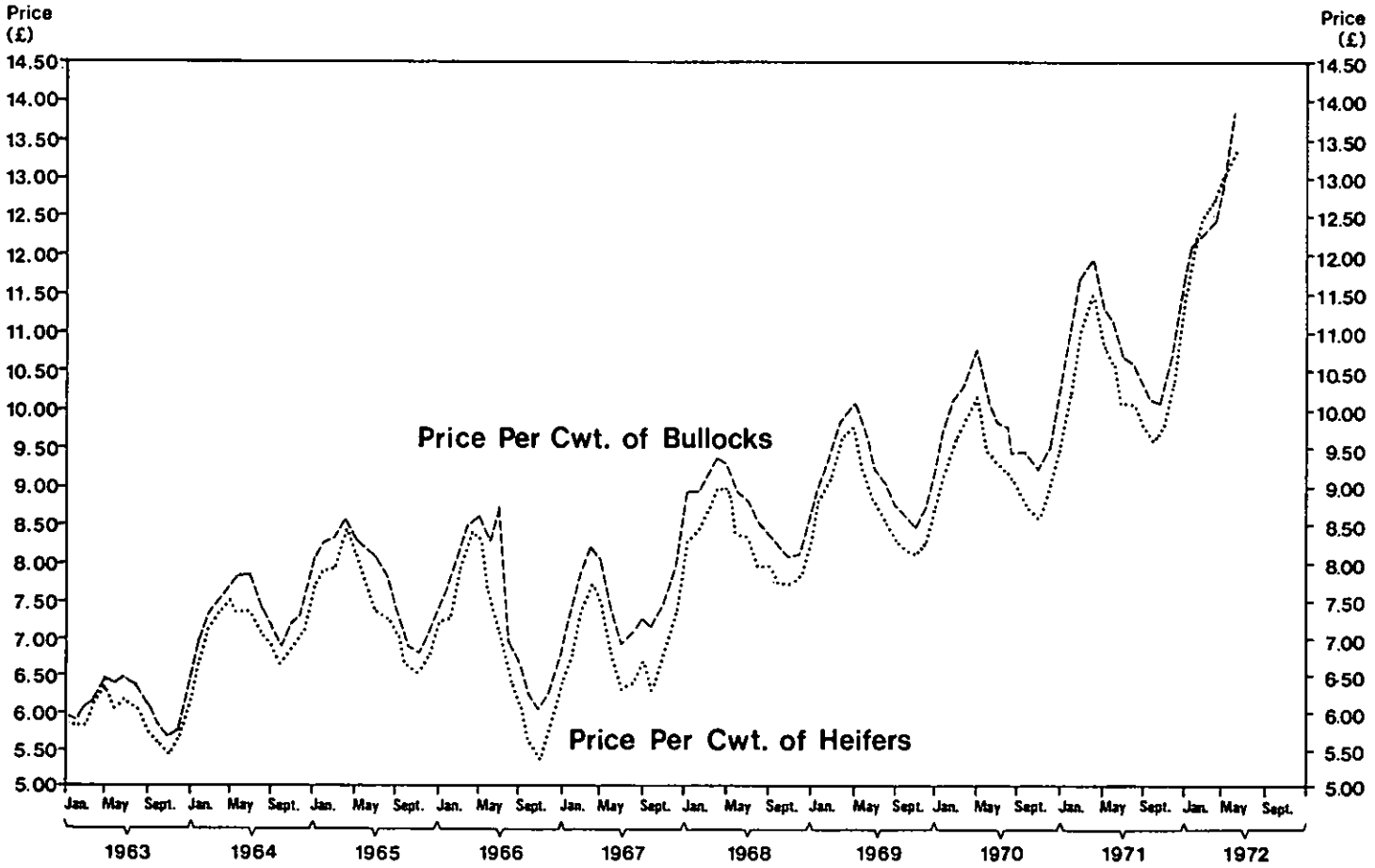
Year and quarter		Live* exports	Factory Slaughter Cows	Factory Slaughter Other cattle	Factory Slaughter Total	Total disposal	Live* exports	Factory Slaughter Cows	Factory Slaughter Other cattle	Factory Slaughter Total	Total disposal
		Number (000)					*Per cent*				
1963	1	171	60	38	98	269	26·1	26·1	21·7	24·2	25·3
	2	162	31	26	57	220	24·7	13·5	14·9	14·2	20·7
	3	177	40	56	96	273	27·0	17·4	32·0	23·7	25·8
	4	144	99	55	154	298	22·0	43·0	31·4	38·0	28·1
1964	1	264	52	39	91	355	33·5	32·5	27·5	30·2	32·6
	2	187	24	23	47	233	23·7	15·0	16·2	15·5	21·5
	3	167	32	34	66	233	21·2	20·0	23·9	21·9	21·4
	4	170	52	46	98	268	21·6	32·5	32·4	32·4	24·6
1965	1	184	38	29	67	251	31·6	23·4	19·0	21·5	28·1
	2	99	20	20	40	140	17·1	12·3	13·1	12·9	15·6
	3	142	38	51	89	231	24·4	23·4	33·5	28·5	25·9
	4	157	65	51	116	272	26·9	40·0	33·5	37·0	30·4
1966	1	181	52	35	87	263	30·1	20·3	20·2	20·3	26·0
	2	104	33	20	53	157	17·2	12·9	11·6	12·4	15·2
	3	164	66	46	112	276	25·4	25·8	26·6	26·2	26·8
	4	164	102	72	174	338	27·2	39·9	41·6	40·5	32·8
1967	1	165	83	84	167	333	25·6	27·2	18·8	22·2	23·8
	2	166	45	75	120	286	25·6	14·8	16·8	16·0	20·5
	3	190	77	135	212	402	29·4	25·2	30·2	28·2	28·8
	4	125	100	153	253	378	19·3	32·8	34·2	33·6	27·0
1968	1	150	70	90	160	307	24·8	26·0	25·6	25·7	25·0
	2	185	40	58	98	283	30·5	14·9	16·5	15·8	23·1
	3	166	71	83	154	320	27·3	26·4	23·6	24·8	26·1
	4	106	88	121	209	315	17·5	32·7	34·4	33·6	25·6
1969	1	153	58	91	149	302	28·5	22·7	23·4	23·5	25·8
	2	151	40	68	98	249	29·5	15·7	17·5	15·5	21·2
	3	147	79	97	164	311	27·3	28·2	23·6	26·4	26·5
	4	71	85	138	223	293	13·2	33·3	25·6	35·2	25·1
1970	1	150	58	112	170	322	29·6	24·9	24·3	24·4	26·6
	2	133	30	74	104	237	25·9	12·9	16·1	15·0	18·6
	3	135	54	111	169	303	26·2	23·2	24·1	24·3	25·0
	4	94	91	163	254	348	18·4	39·0	35·4	36·4	28·8
1971	1	171	70	141	211	382	28·8	26·9	31·5	29·8	29·4
	2	162	43	79	122	284	27·3	16·5	17·6	17·2	21·8
	3	147	60	105	165	312	24·7	23·1	22·3	23·3	23·9
	4	115	87	123	210	325	19·3	33·5	27·5	29·6	24·9

*Includes only the categories:—Bulls, Fat and Store; Bullocks, Fat; Heifers, Fat; Bullocks, Store; Heifers, Store; Cows, Fat and Store.

Source: Department of Agriculture and Fisheries.

supplied by grazing. For example, the bulk of manufacturing milk is produced off grass in summer and autumn with only liquid supplies being produced in winter. Similarly, as can be seen from Table 5.2 and Figure 5.1,

Figure 5.2: *Average price per cwt. of 8–9 cwt. heifers and 10–11 cwt. bullocks at livestock auction marts (excluding Dublin) on a monthly basis for years 1963–1972*



the bulk of cattle slaughtered at factories are prepared for sale off grass in autumn and winter, with much smaller numbers coming to market in spring and early summer. Over the years shown in Table 5.2 the proportion of cattle slaughtered in the second quarter was never greater than 17 per cent of the annual total, and was as low as 12 per cent in 1966. There appears, however, to have been a slight increase in the proportion slaughtered in the second quarter in recent years but it is not very significant. Exports of live cattle on the other hand are spread more evenly throughout the year and do not display any pronounced pattern. Generally the highest exports however seem to be in the first quarter in preparation for the early grass in Britain, and the lowest in the fourth quarter when the British grazing season is finished.

As is to be expected, seasonality of supply when demand is relatively constant gives rise to price seasonality. When large numbers of fat cattle come to market in autumn, prices drop substantially, whereas in spring when cattle are scarce prices are generally very high. Average monthly prices per cwt. of 10-11 cwt. bullocks and 8-9 cwt. heifers at livestock marts for the years 1963 to 1971 are shown in Figure 5.2, which shows that, in practically all years, prices are at their lowest in November. In some years the seasonality pattern is masked to a certain extent by changes in the overall price level, but generally speaking the drop in prices per cwt. liveweight of fat bullocks between spring and autumn of the same year, and the rise in prices between autumn and the following spring, has been in the region of 12-13 per cent. Over the past decade seasonal changes in prices of younger cattle, and in prices on the Dublin Market, have however been much greater than this, i.e. in the region of about 20 per cent.

Seasonality of cattle prices within the original EEC countries is not nearly as marked as is the seasonality pattern in Ireland. Table 5.3 shows that on average for the three years 1969-71 Irish prices varied by 20 percentage points from 112 per cent of average in April to 92 per cent in November. The shape of the Irish price curve (and that of the UK) has been determined greatly by the shape of the UK guaranteed price curve* and a large element of the price increase in March and April has been due to seasonal increases in the UK guaranteed price. There is no seasonal variation built into the EEC guarantee system and in fact none of the original EEC countries has much seasonal variation in market prices. Amongst the "Six", Belgium and the Netherlands had the widest seasonal spreads, prices in both these countries varying from 106 per cent of average in May to 96-97 per cent in November.

*Of course, the pattern of the UK guaranteed prices itself reflects the long standing supply pattern in the UK and Ireland based largely on the relative cost conditions of winter and summer feeding.

TABLE 5.3: *Average monthly prices of all classes of cattle combined in EEC (Six) Countries compared with those for bullocks in Dublin market for the years* 1969–1971

Month	*Belgium*	*West Germany*	*France*	*Italy*	*Netherlands*	*Ireland*
			(£ per cwt. liveweight)			
January	14·5	13·8	14·1	14·1	13·9	9·7
February	14·5	13·9	14·1	15·4	14·3	10·3
March	15·1	14·0	14·4	15·4	14·6	11·1
April	15·7	14·0	14·4	15·6	14·9	11·6
May	16·1	14·1	15·0	15·7	15·4	11·4
June	16·1	14·4	15·0	15·8	15·2	10·8
July	15·9	14·3	15·0	15·7	14·8	10·4
August	15·8	14·3	14·9	15·7	14·8	10·2
September	15·3	14·0	14·8	16·0	14·2	9·9
October	14·7	13·8	14·4	16·0	14·1	9·6
November	14·8	13·8	14·4	16·0	14·1	9·6
December	14·8	14·0	14·6	16·0	14·4	9·9
Year	15·3	14·0	14·6	15·7	14·6	10·4
			(Percentage)			
January	95	99	97	98	95	93
February	95	99	97	98	98	99
March	99	100	98	98	101	107
April	103	100	100	99	103	112
May	106	100	102	100	106	110
June	106	102	103	100	104	104
July	104	102	103	100	102	100
August	104	102	102	100	101	98
September	100	100	102	102	98	95
October	97	98	99	102	96	93
November	97	99	99	102	97	92
December	97	100	100	102	99	96
Year	100	100	100	100	100	100

Source: EEC prices taken from Prix pour les Bovine et pour la Viande Bovine, Document de Travail Communante Economique Europeenne, Brussels, January 1971 and June 1972. Irish Prices are those for all bullocks at Dublin Auctions, published in the *Irish Statistical Bulletin*, CSO, Dublin.

In West Germany the spread was only 4 percentage points from 102 per cent in June and July to 98 per cent in October, while in Italy it was only 4 points with the highest prices occurring in the September to December period and the lowest in January, February and March.

In view of the very narrow seasonal price spreads in Europe it is sometimes wondered if the present Irish pattern will remain when we are full members of the EEC. It is not easy to forecast what will happen in this regard but various points must be kept in mind in this connection. In the first place the seasonality patterns shown in Table 5.3 are misleading for the purpose under review, namely, of assessing the feasibility of winter fattening. The figures given in this table relate to finished cattle, whereas

the farmer is interested not only in these prices but in the prices of feeder (store) cattle as well. Unfortunately, European figures are not readily available for the price of such cattle.

The point of the argument is that, even if there is no seasonality pattern in the price of finished cattle, the opposite may be the case for unfinished animals, and this applies particularly in Ireland where cattle are fed largely on grass and grass products. Under our conditions all dry cattle in the State cannot be sold for slaughter in autumn; the younger and the older unfinished animals will have to be carried over the winter. Now since winter feeding is much more expensive than summer grazing, the demand for unfinished cattle in autumn will not be very great, and as a result prices for such cattle will be relatively low compared with the selling price of finished cattle in spring. For similar reasons there will be a strong demand for feeder cattle in spring and prices per cwt. for these animals are bound to be higher than those for finished cattle in autumn. Hence the pattern of grass growth in Ireland combined with the length of time it takes cattle to mature, will inevitably cause and maintain a seasonality pattern in the prices of feeder cattle, thus making it profitable to dispose of some finished cattle at all seasons of the year.

A second point to be made is that, at the price levels obtaining in past years, it took a substantial price increase between autumn and spring to make winter fattening of cattle a profitable proposition. In other words, the winter feeder had to get fairly large price increases as well as liveweight gains in order to make profit from the operation. It can be said that within certain limits the price rise determined whether or not the operation should be undertaken at all, while the selling price of the cattle relative to the cost of different feeds determined the most profitable level of feeding. At the present time, however, we are in a completely new situation. Prices have risen to very high levels and at these prices farmers can afford to take a much lower price rise than heretofore while still making a reasonable profit from winter fattening. Indeed, at present beef prices and beef/feed price ratios, it would be moderately profitable to fatten cattle over the winter even though there were no price rises between autumn and spring. The profits under those conditions would however be much less than those from summer grazing and therefore most farmers would more than likely opt for the latter system. As indicated above, however, it is unlikely under Irish climatic conditions, that prices of either feeder or of finished cattle will remain the same between autumn and spring. There is bound to be some rise over the winter and every extra unit increase is an added bonus for the winter feeder. Hence, with high beef prices, high beef/feed price ratios and even a modest price

seasonality pattern, winter fattening could become an economic proposition for many farmers, particularly for those who already have suitable housing for those who are short of land.

The further development of winter feeding systems in Ireland will require the injection of very considerable sums of capital. To some extent this can be met out of farmer's own resources, but additional provision will also need to be made. One way of doing this would be to channel FEOGA* grants into the construction of feed lots for large scale wintering of cattle. Factories themselves must also be prepared to cooperate in this regard by supplying capital and expertise to reliable farmers. They should also be prepared if necessary to adopt closer integration such as the renting of cattle to farmers for fattening. The types of contractual arrangements with farmers which have been tried in the past have not been successful and are not likely to be so in future.

Factory Throughput and Utilisation of Existing Capacity

Factory Throughput

Table 5.4 gives a classification of factories which slaughtered cattle in 1971, by the number of cattle, sheep and livestock units slaughtered. The table deals with the twenty-eight factories which slaughtered more than one hundred cattle in 1971. Of these, five factories had a very small throughput, slaughtering less than 1,000 cattle each, while only five factories slaughtered 50,000 cattle or more in that year. This latter group accounted for about 55 per cent of all cattle slaughterings in the state.

In terms of livestock units, eight factories slaughtered less than 5,000 and the average throughput for this group was only 1,938, i.e. less than 40 livestock units per week. On the other hand, seven factories slaughtered more than 50,000 livestock units each and accounted for about 64 per cent of the livestock units slaughtered in all the factories under review.

Two main points are apparent from this: —

(a) A small number of large factories accounted for a very high proportion of slaughtering, while the total contribution of the very small factories (under 5,000 livestock units slaughtered) was almost negligible as a proportion of total slaughterings.

(b) Only about a quarter of the classified factories have a size of operation of 1,000 livestock units or more per week. This is generally considered to be the minimum size of operation which can benefit from economies of scale and make most profitable use of offal.

*FEOGA: The Agricultural Guidance and Guarantee Fund of the EEC.

TABLE 5.4: *Classification of factories by number of livestock units slaughtered in 1971*

	Number of cattle slaughtered						
	Less than 100	100–1,000	1,000–10,000	10,000–30,000	30,000–50,000	50,000+	*All Factories*
Number of factories	*	5	6	7	5	5	*
Total number of cattle	17,554	3,673	23,899	96,685	177,526	383,357	701,077
Average per factory	*	735	3,983	13,812	35,505	76,671	*
Percentage of total	2·5	0·5	3·4	13·4	25·3	54·7	100·—

	*Number of sheep slaughtered in cattle slaughtering premises***					
	Less than 100	100–2,000	2,000–10,000	10,000–50,000	50,000+	*All Factories*
Number of factories	*	5	5	6	5	*
Total no. of sheep	5,947	3,774	23,858	131,194	468,746	633,519
Average per factory	*	755	4,772	21,865	93,749	*
Percentage of total	0·9	0·6	3·8	20·7	74·0	100·—

	Number of animals slaughtered†					
	Less than 100	100–5,000	5,000–20,000	20,000–50,000	50,000–100,000	*All Factories*
Number of factories	*	8	5	8	7	*
Total no. of animal units	19,536	15,505	61,327	242,314	573,663	912,345
Average per factory	*	1,938	12,265	30,289	81,952	*
Percentage of total	2·1	1·7	6·7	26·6	62·9	100·—

*Includes animals slaughtered by licencees of Dublin Corporation Abbatoir and by firms slaughtering less than 100 animals a year.
**Factories slaughtering sheep only are excluded. There were 7 such factories in operation in 1971 slaughtering about 235,000 animals.
†A slaughter unit is taken as 1 bovine animal or 3 sheep.
Source: Department of Agriculture and Fisheries with the kind permission of the "Irish Fresh Meat Exporters Society".

Capacity Utilisation

There are two measures of capacity utilisation: —

(i) "Average Capacity Utilisation Percentage" (ACU), which is total annual slaughtering as a percentage of available annual capacity.

(ii) "Peak Capacity Utilisation Percentage" (PCU) which is calculated by relating slaughterings in some peak period (i.e. week, month or quarter) to the available capacity in that period.

It is generally agreed* that there is a great deal of over-capacity in the "Fresh Meat Industry". This is inevitable because of the high degree of seasonality in cattle output. Slaughtering capacity must be sufficient to handle peak supplies and therefore some capacity must go unused for the remainder of the year. PCU is therefore the best guide to the degree of surplus capacity which exists in the beef processing industry, although ACU is also an important measure.

The "Irish Fresh Meat Exporters Society"† estimate that in 1971 the annual cattle slaughtering capacity of factories, at peak operation throughout the year was approximately 1.7 million head. In that year a little over 700,000 cattle were slaughtered, so that on these figures ACU for the year was only 42 per cent. The percentage capacity utilised for the quarter of peak slaughterings in 1971 was 50 per cent and for the slackest quarter the figure was 29 per cent.

We are of the opinion, however, that these figures for ACU and PCU are not entirely realistic for the purpose of this review. The figure of 1.7 million is obtained by taking the maximum numbers which could be slaughtered in a week and multiplying by fifty one. The result of this exercise greatly overstates the numbers which could or would be slaughtered in an actual situation. Slaughtering capacity is limited by the amount of chilling and holding space available and we have estimated on the basis of discussion with people close to the trade, that the effective capacity (allowing for normal holding periods) in 1971 was probably as low as 1.3 million cattle. On the basis of the latter figures ACU in that year was about 54 per cent, and PCU 65 per cent, with the percentage slaughtered in the slackest quarter being about 38 per cent.

Both of the above estimates for capacity utilisation percentage indicate a great deal of overcapacity in the beef processing industry. The latter estimates show that there was about 35 per cent overcapacity in the busiest

*The existence of overcapacity is constantly stressed by the "Irish Fresh Meat Exporters Society" and others.

†Personal communication with "Irish Fresh Meat Exporters Society".

quarter of 1971, but in 1972 when total cattle slaughterings by factories fell to about 584,000, the average capacity utilisation was only 45 per cent, and about 42 per cent of available capacity went unused even in the quarter of peak slaughterings. These figures tell us nothing about individual factories or whether there is a relationship between type of factory and capacity utilisation.

The extent and nature of overcapacity in individual factories was investigated by the "Irish Livestock and Meat Board" for the year 1969. Results were obtained for ACU and PCU on a weekly basis for 17 plants. Sixteen of these slaughtered cattle, but two were considered abnormal* in certain ways and were omitted in compiling the results of the study. The figures for the utilisation of cattle slaughtering capacity were as follows: —

	Percentage Capacity Utilised in 1969†				
	80+	60–80	40–60	20–40	*Under* 20
	Number of Factories				
PCU	4	4	5	0	1
ACU	0	0	7	5	2

These figures show that only 4 of the factories had less than 20 per cent overcapacity in their peak slaughtering week, which means that the other 10 definitely had a problem of poor utilisation of capacity. As can be seen, there was a great variation in both PCU and ACU between factories. No significant relationship was found between the size or pattern of factory operation and the percentage capacity utilisation. The most that can be said is that the lowest values for PCU and ACU were recorded for a few factories with a very small throughput, whereas the factories with the largest throughput tended to have intermediate rather than high values for both average and peak capacity utilisation.

The above findings tend to show therefore that size of factory is not necessarily a criterion of efficiency. Most of the very large factories are working well below capacity and for this reason, their total costs per animal may be higher than those of a medium sized plant which utilises its capacity more fully and which, at the same time, is large enough to make the most profitable use of offal.

It has sometimes been suggested that the industry should be rationalised by closing down some of the smaller factories. The success of such a policy

*One was only coming on stream with new equipment in 1969 and the other had abnormally high ACU and PCU for sheep.

†The figures for available capacity in this study are estimated on the same basis as the 1·7 million referred to above and are thus likely to be an overstatement of the actual situation.

in reducing overcapacity is open to question for three reasons. In the first place, it is quite possible that many of the smaller factories are more efficient in most ways than some of the larger ones. Secondly, as can be seen from Table 5.4, even if all the factories slaughtering between 100 to 10,000 cattle per annum in 1971 were closed down, it would release only about 27,500 cattle for the other 17 factories. It seems therefore, that if any major rationalisation of capacity is to be brought about, it could only come through the closure of some medium or large capacity factories.

However, the main reason for questioning the suggestion is that it is by no means certain that any reduction of capacity will be necessary. The throughput of the factories is a function of the number of cattle in the country and of the proportion of these cattle which is domestically slaughtered. The number of cattle seems certain to rise in future years, and a moderate improvement in the ratio of cattle slaughtered to cattle exported live would thus suffice to provide the factories with sufficient supplies to utilise their present capacity. Whether sufficient supplies will in fact be obtained by the factories depends on their future ability to compete successfully with live exporters in the prices offered for cattle. It is not yet clear that they will be able to do so, but on the other hand it is too soon to take the definite decision that they will not. Improvements in the transport situation, better marketing and higher production efficiency, all of which appear quite possible, would significantly strengthen the competitive position of the factories, while a rise in throughput would in itself tend to lower unit costs and thus improve competitiveness still further.

The Effect of Price Seasonality

It is clear from the relationship between average and peak capacity utilisation discussed above that the seasonality in cattle supplies places a severe strain on the slaughtering industry. Most factories employ large staffs, many of them highly skilled. Most of these must be retained throughout the year, otherwise they may not be available when required at peak periods. Hence there is a more or less constant wage bill to be met all the year round, in spite of the great variations in throughput.

The problems of supply seasonality are compounded by seasonality in prices. Prices of cattle are very high in the spring, mainly because of the scarcity of finished cattle at that time of year, but also partly because of intense competition between factories to obtain the limited supplies available. Unfortunately for the factories these high prices cannot be passed on fully to consumers, and thus in the spring tight margins tend to coincide with low throughput.

This fact is borne out by the figures in Table 5.5, which show the relationship between export prices of "fresh and chilled" beef and the estimated amounts paid by the factories for the cattle which produced this beef in different seasons in a number of recent years. These ratios have been calculated with and without subsidy in order to show the effects of export subsidies on factory margins from the slaughter of prime cattle.

Similar ratios to those given in Table 5.5 are shown in monthly form in Figure 5.3 and give a clearer picture than the table of the seasonal pattern of factory margins and of the effect of the export subsidies. In interpreting this graph it is necessary to be aware of a crude "rule of thumb" which states (rightly or wrongly) that the factory is generally satisfied if it receives for the beef *carcase* the amount it paid for the live animal from which the carcase was produced, the value of by-products being sufficient to cover all costs and leave a reasonable profit. It follows from this that, if the value of the carcase is greater than the cost of the animal, the factory is likely to be doing better than normal, whereas if it is much less than this the factory is likely to be doing worse than normal and could be making a loss.

If we accept this "rule of thumb" as having some validity, then a ratio of 1.0 would represent normal profits, ratios greater than 1.0 would represent greater than normal profits while ratios less than 1.0 would represent less than normal profits or even losses. The "rule of thumb" is of course very crude, as variations in the price of hides and offals can have a considerable influence on the profitability of the factories.*

The validity of the rule of thumb however does not alter the shape of the graph, and hence the seasonality pattern displayed is likely to be reasonably accurate. Like Table 5.5 the graph shows that, during most of the years displayed, the ratios tend to be highest in the autumn period and lowest in the spring months. When subsidies were included, the ratios were very high in the second half of 1966, and again in 1967 at a time when prices paid to farmers were low, but since then both the "with" and "without" subsidy ratios, particularly the latter, have tended to be rather low. In the latter years however, there were "good" as well as "bad" periods and in order to see if the good counterbalanced the bad we show the annual ratios both "with" and "without" subsidies in Table 5.6. We also show in this table a similar ratio for frozen boneless beef and animals (mainly cows) producing this

*The validity of the rule of thumb depends very much on the price of by-products. At the present time prices for many of the latter items are high and help to compensate for a relatively low beef/cattle value ratio. Average return per bullock for by-products rose from about £9 in 1965 to about £20 in 1972.

TABLE 5.5: *Relationship between quarterly export values of fresh and chilled beef and estimated amounts paid by factories for cattle producing this beef*, 1963–1971 (a)

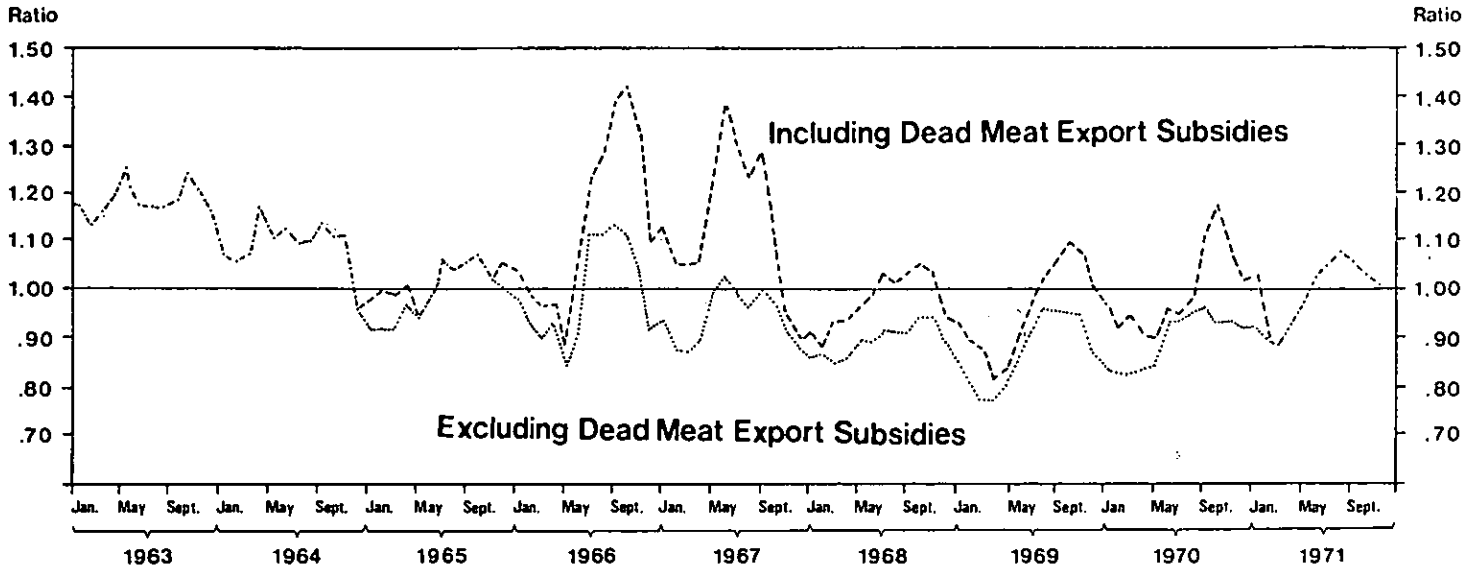
Year	*RATIO without export subsidies* Quarter (b)				*RATIO with export subsidies* Quarter (b)			
	(i)	*(ii)*	*(iii)*	*(iv)*	*(i)*	*(ii)*	*(iii)*	*(iv)*
1963	1·14	1·20	1·16	1·19	1·14	1·20	1·16	1·19
1964	1·09	1·11	1·10	1·10	1·09	1.11	1·10	1 ·10
1965	·92	·93	1·02	1·04	·97	·98	1·02	1·04
1966	·97	·88	1·04	1·08	1·02	·93	1·14	1·34
1967	·90	·91	·98	·95	1·08	1·10	1·28	1·10
1968	·87	·86	·89	·92	·89	·93	1.00	1·02
1969	·85	·77	·91	·94	·91	·84	·96	1·06
1970	·84	·82	·93	·93	·96	·92	·95	1·10
1971	·90	·91	1·03	1·01	·99	·91	1·03	1·01

(*a*) Annual data for amounts paid by factories and for export value of beef obtained from CSO. Information on subsidies obtained from the Department of Agriculture and Fisheries.

(*b*) Quarterly ratios obtained by distributing annual ratios in proportion to quarterly prices per cwt. of fresh and chilled beef divided by quarterly weighted average prices per cwt. of 10–11 cwt. bullocks and 8–9 cwt. heifers at livestock marts other than Dublin. (March issues of Irish Statistical Bulletins).

Figure 5.3: *Ratio of monthly export values of fresh and chilled beef to estimated amounts paid by factories for cattle which produced this beef*

(1963–1971)



(a) See text and footnote

beef.† As can be seen from this table the "without" subsidy ratio for fresh and chilled beef was 0.98 or greater in the four years 1963 to 1966, but was less than this figure in all subsequent years, being very low (0.86) in 1969. When subsidies are included however, the ratios were increased to 1.0 or over in 1965, 1966 and 1967, but since then they have been less than 0.99 in all years except 1971. At the time of writing, figures are not available for all of 1972 but, judging by the results to date, it looks as if the ratio for that year also will have been relatively low.

The low ratios for fresh and chilled beef in recent years have been counteracted somewhat by the figures for frozen boneless beef which, for the years since 1967, have been equal to or greater than the "with subsidy" ratio for fresh and chilled beef. The frozen boneless beef trade therefore, though relatively small in size, has in most recent years provided a firm base for the dead meat industry.

The figures in Table 5.6 are of course averages for the whole dead meat industry and therefore tend to conceal as much as they reveal. Our investigation of individual factories for 1972 (when the industry as a whole was going through a bad time) has shown that all factories were not equally affected. Those which produced cow beef were all affected to a greater or lesser extent by the shortage of cows for slaughter, the few which depended mainly on cow beef being very seriously hit. The shortage of cows was, of course, not the only reason for the trouble in that year. Margins for prime beef were also very tight resulting in reduced profits for all factories but hitting very hard at the less efficient concerns, some of which were only saved from bankruptcy by the non repayable Government loan which was given to all factories in 1972. It should be stated however, that all factories did not need a share of this loan to safeguard employment.

There is no doubt but that 1972 was a particularly difficult year for the dead meat industry but it is unlikely that the same combination of adverse factors as applied in that year will persist. As stated in Chapter 4 the number of cows available for slaughter will increase substantially in future years and these should continue to provide the necessary solid base for the industry. Also the unhappy experiences of 1972 could well have had a salutory effect on the management of some of the factories.

Disposal of Offals

As already stated, variation in the price obtained for offals can have a significant influence on factory profitability. It is therefore necessary to

†In recent years firm monthly prices are not available for cows and hence we could not calculate seasonal ratios for frozen boneless beef.

TABLE 5.6: *Ratios of annual export values of (a) fresh and chilled beef and (b) frozen boneless beef to amounts paid by factories for cattle producing this beef, 1963–1971*

Year	*Fresh and chilled beef*			*Fresh and chilled and frozen boneless beef*	
	Without subsidy	*With subsidy*	*Frozen boneless Beef**	*Without subsidy*	*With subsidy*
1963	1·17	1·17	0·85	0·96	0·96
1964	1·10	1·10	0·85	1·02	1·02
1965	0·98	1·00	0·86	0·95	0·97
1966	0·99	1·11	0·95	0·98	1·04
1967	0·93	1·14	1.02	0·96	1·10
1968	0·88	0·96	1·02	0·93	0·98
1969	0·86	0·94	0·99	0·91	0·96
1970	0·88	0·98	0·98	0·91	0·98
1971	0·96	0·99	0·99	0·97	0·99

*No subsidy paid on exports of frozen boneless beef.

Source: Department of Agriculture and Fisheries, and CSO, Dublin.

consider briefly the main features of the offal trade and the course of prices in recent years.

The general title of "offals" covers almost all of the by-products of the meat industry. A detailed breakdown of the items included is given in Appendix B. In 1960 the output of offals and by-products ("fats, offals and skins") by "Meat Factories" was worth £2.7 million out of a gross output for these factories of £19 million and in 1969 the corresponding figures were £8.4 million and £63 million respectively. The values include some production from pigs and sheep, and so cannot be taken as referring to cattle slaughtering alone.

Offal production, in terms of value, was therefore about 14 per cent of the gross output of the 'Fresh Meat Industry' in those years and this proportion has been very consistent in the interval. Because of the magnitude of this item, the profitability of individual factories depends greatly on how efficiently offals are utilised. A few of the larger factories have their own digester units which, with the present high prices for both meat and bone meal and tallow, gives such plants an immediate advantage over smaller factories. The latter, because of low throughput, must sell the unprocessed waste materials (soft joss, bones and blood) to meat and bone meal manufacturers. Also in the case of "other edible offals", which are used for pet food manufacture at home and abroad, larger factories are in a position to be more efficient than smaller ones, since the former can pack, freeze and export the material themselves, whereas the latter have not the necessary facilities and must sell their edible offals fresh.

The value of offal and by-products in the past was greatly reduced by the very high proportions of warbled hides and infected livers. The incidence of warbled hides is now only 1-2 per cent, but up to 90 per cent of cow livers and 60 per cent of prime cattle livers must still be rejected and therefore go to pet food manufacturers at low prices.* It is estimated that the loss, due to livers being infected, on a total years slaughtering of about 700,000 cattle could be well in excess of £500,000.†

We have been unable to obtain comparable figures for the values of individual offals over time, but average realised values of total offal per bovine animal slaughtered in a few fairly representative factories from 1966 to 1972 are available and are given in Table 5.7. Figures for average price per

*Infected livers are no longer bought by the pharmaceutical industry.

†Diseased livers affect our live exports also. Michael Behan has listed this fact as one of the reasons why Irish bred cattle fetch lower prices than British bred cattle at British Marts. (see Behan, M., Effect of weight on the prices of British and Irish fat cattle, *Irish Journal of Agricultural Economics and Rural Sociology*, Vol. No. 19).

TABLE 5.7: *Value of offal per average bovine for representative factories and price per cwt. of 10–11 cwt. bullocks for years 1966/67 to 1972/73*

	Value of offal per average bovine (a) £	*Price per cwt. of 10–11 cwt. bullocks (b)* £	*Index (1966=100)*	
			Offal value	*Cattle prices*
1966/67	7·93	6·93	100	100
1967/68	6·64	8·33	84	120
1968/69	8·81	8·53	111	123
1969/70	10·23	8·90	129	128
1970/71	9·61	9·61	121	139
1971/72	10·93	10·61	138	153
1972/73	20·00	13·30	251	192

(a) Value of offal calculated for the 'financial year' ending 31 March.

(b) Calendar year prices used for bullocks are taken from March issue of Irish Statistical Bulletin. The calendar year refers to the first year mentioned opposite price.

cwt. of 10-11 cwt. bullocks at Livestock Auction marts (excluding Dublin) for the corresponding years are also given in this table for comparative purposes.

This table shows that, over the whole period given, the value of offals per bovine animal has increased to a greater extent than the liveweight value of cattle. However, the main increase in offal prices has come about in the last year or so and indeed between 1966 and 1971 offal prices decreased relative to cattle prices. The big increase in offal values recently has been largely due to hide prices which have increased substantially in the past year as leather has regained, at least temporarily, the popularity it lost to synthetic substitutes during the previous few years. Actually, the price of ox hides has risen from about £5.30 in January 1972 to about £13.50 in January 1973, which is an increase of about 155 per cent in the past year.

With regard to the future it seems probable that offal prices will remain subject to substantial variations from year to year, and it would appear to be imprudent to base projections on the expectation that offal prices will continue to increase, or even to maintain their present level.

Competition for Supplies from Live Exports

There has always been strong competition for cattle between the live exporters and the meat factories. This competition has been for so called "store" as well as for fat cattle. A high proportion of the stores going to Britain are really finished animals ready for slaughter, but even if they were small feeder cattle, every store going out alive is a potential loss to the dead trade. The competition between the live and dead trade is regarded by farmers as being to their advantage and many would argue that this competition is essential, if the farmer is to get the best possible price for his animals. It is not clear, however, that such competition is necessarily in the best interests of the country as a whole, since there is a loss in potential "value added" on every animal exported alive. Also, live exporting is somewhat of a hazardous business giving relatively low and unstable employment as the live exporters have low overheads and go in and out of business as trade warrants. This contrasts with the factories which have to maintain permanent staffs, whose livelihoods are continually threatened by the live exporters.

There was a strong case nationally for live exports during the period when our stores were linked with British fatstock Guarantee Payments and we had no other really good outlet for either cattle or meat. During that period our farmers gained substantially from British exchequer payments. In the last year or so, however, cattle prices became so high that deficiency

payments were no longer in operation and on 31st March this year these payments were replaced completely by the EEC system, with the intervention price replacing the guaranteed price. In these circumstances a live store or fat cattle trade in itself does not appear to have any special advantages over the dead meat trade from the farmer's point of view. The farmer's real interest is that there should be sufficient competition among purchasers to maintain the highest possible prices, and that no single purchaser should have anything approaching a monopoly position in any locality. The live trade provides a guarantee of such competition, and it is this, rather than any inherent quality of the trade itself, which accounts for farmers' support for it.

The Economic Contribution of the Fresh Meat Industry

We now examine how the live and dead trades compete from the national standpoint. To do this we have recourse to the 92 sector Irish Input-Output Table which was compiled by the Central Statistics Office for 1964[1] This table is now somewhat out of date in many respects, but the initial results obtained have been adjusted on the basis of the most recent figures for the cattle slaughtering industry and for increases arising in Agriculture so that the final results can be considered fairly realistic for present conditions. They do not, however, cover future structural and technological changes in the industry, so that expansion or contraction in future years need not necessarily produce proportionate changes in employment or income arising.

The objective of the exercise is to determine for 1971 the value added to the whole economy in the form of wages, salaries and profits, and the levels of employment generated respectively by the live cattle and dead meat exported in that year. We also estimate the effects on the economy of sending out all dead meat exports in the form of live cattle, on the assumption that the live exporters would pay the same price for these cattle as did the meat factories. The figures obtained while not full multiplier effects do include the values of first, second and subsequent rounds of interindustry transactions. This exercise is based on the assumption that there are unemployed resources in the economy and that in the absence of the cattle slaughtering industry the resources employed therein would not be used elsewhere. It is felt that this assumption is justified under present Irish conditions.

The derivation of the results from the input-output tables is a technical

[1]Input-Output Tables for 1964, Prl. 985—Compiled by the Central Statistics Office, Dublin, January 1970.

problem which is outside the scope of this paper* and so we confine our remarks to saying that, when certain initial calculations were made and the results adjusted as described above, we found that £1 of final demand for live cattle exports in 1971 generated in the whole economy £0.5209 in Gross National Product and £0.1043 in wages and salaries alone. In the same year £1 final demand for home produced cattle slaughtered, generated £0.6285 in Gross National Product and £0.2029 in wages and pensions. The latter coefficients relate only to cattle slaughtering and to the industries supplying it with inputs. They do not include the incomes generated by the industries using the by-products of cattle slaughtering such as fellmongery, tanning, oils and paints etc. These by-products industries are discussed later.

A point to note is that the coefficients for cattle slaughtering include GNP generated in rearing the cattle slaughtered. Hence in order to get the actual coefficients for cattle slaughtering *per se* we must deduct those for live exports from the corresponding ones for cattle slaughtering. The various coefficients are tabulated below: —

Amounts generated in 1971 *by* £1 *final demand for*

	Live exports	*Cattle slaughtering*	*Difference (i.e. cattle slaughtering per se)*
GNP arising	0·52089	0·62850	0·10761
Wages and salaries	0·10432	0·20287	0·09855
Remainder of GNP	0·41657	0·42562	0·00905

The value to the economy (based on the above data) for live and dead cattle exports in 1971 is given in Table 5.8. As can be seen from this table, farmers received £52.7 million for the 616,000 live cattle exported in 1971. Of this amount £27.5 million was retained within the economy in the form of GNP and the balance went either to pay indirect taxes less subsidies or to purchase imports (other than live fat cattle imports which are treated separately). Wages and pensions generated by the live exports were estimated at £5.5 million and, when this amount is divided by the average earnings of a worker in manufacturing industries in 1971, the estimated number of

*For those who may be interested, the procedure is to post multiply the row vectors of the technical coefficients for wages, pensions and profits by the relevant column vectors of the inverse matrix. Thus to determine the wages and pensions generated by a unit of final demand for slaughtering we post multiplied the row of technical coefficients for wages and pensions by the column vector for cattle slaughtering of the inverse matrix. Similarly for the other items. See Miernyk, W. H., 'The Elements of Input-Output Analysis. Random House/New York 1965, p. 150.

hired workers supported both directly and indirectly was about 5,200. This number does not include farmers and unpaid family workers. The number of these employed would be additional to the 5,200 hired workers.

TABLE 5.8: *Value to economy of live and dead cattle exports in* 1971

	Live exports	*Dead meat exports*			*Dead meat if exported as live cattle*
		Home Produced	*Imported*	*Total*	
Number of cattle ('000)	616	599	74	673	673
Output Value of Exports (£'000)	52,742(a)	60,613(b)	6,446(b)	67,059(b)	64,650(c)
GNP generated ('000)	27,473	38,095	694	38,789	30,565(d)
Wages and Salaries generated (£'000)	5,502	12,297	635	12,932	6,121
Approximate Number of workers supported by wages and salaries (e)	5,215	11,220	548	11,768	5,802

(a) Amount received by farmers for live exports (Irish Statistical Bulletin, Table 7 June 1972).
(b) Estimated amounts received by factories for fresh, chilled, frozen and tinned meat, plus hides and offal exported from Home produced and Imported Fat Cattle (Export and Import values from Trade Statistics of Ireland, December, 1971).
(c) Estimated amount received by farmers for home produced cattle slaughtered in factories (plus c.i.f. value of imported fat cattle) calculated from data in Table 7, p. 82 Irish Statistical Bulletin, June 1972 and December 1971 issues of Trade Statistics of Ireland.
(d) These figures were obtained by applying the coefficients for live exports to the value of home produced cattle slaughtered (i.e. to £58·678 million). This assumes that the re-export of live fat imports would generate no added value in the economy.
(e) Numbers supported by the dead meat exports were obtained by deducting total earnings of workers in the beef slaughtering industry (CSO) from total wages and salaries given in Table 5.8, dividing the remainder by average earnings in manufacturing industry in 1971 and adding the resulting figures to the numbers employed in beef slaughtering in 1971. Numbers supported by live exports estimated on the basis of average earnings of all workers in manufacturing industries in 1971. (Irish Statistical Bulletin 1972 issues).

The estimated amount received by factories for all dead meat plus hides and offal exported in 1971 was £67.1 million. Of this amount £60.6 million was estimated to come from home produced cattle and £6.5 million from imported fat cattle. When the relevant coefficients were applied to these figures (0.62850 to the value of home produced cattle and 0.10761 to the value of imported cattle) it was estimated that the total GNP generated by the production and slaughtering of 673,000 cattle was £38.8 million of which £0.7 million came from the slaughtering of 74,000 imported fat cattle.

Wages and salaries generated directly and indirectly (but excluding by-product industries) by total cattle production and slaughtering were £12.9 million and the number of hired workers supported by these wages was 11,800 or more than double the numbers supported by the live exports. The

latter comparison is however not entirely valid as the numbers of cattle exported live and dead are not the same.

A more valid comparison is to consider the effect on the economy of exporting all of the dead meat in live form. The effect of this is given in the last column of Table 5.8 which shows that GNP generated by these exports would be £30.6 million, and wages and pensions about £6.1 million. The approximate number of workers supported by these wages would be 5,800. Thus the replacement of slaughtering by live exports in 1971 would have resulted in a loss of GNP of about £8.2 million and a reduction in workers employed of about 6,000.

The above figures are based on the value of all beef and by-products up to the time they leave the slaughtering plant, plus the trade and transport margins on some by-products, such as edible offals exported or consumed as such within the state. They do not include, however, the income or employment generated by the by-products used in the country for further processing e.g. the tanning of hides or the processing of fats in soaps, paints etc.

Opinions differ as to whether this income and employment should be included as part of the economic contribution of cattle slaughtering. Those in favour say that, since the cattle slaughtering provides raw materials for these subsidiary industries, a share of the employment and GNP arising in these industries should be attributed to cattle slaughtering. Those against argue that these subsidiary industries could import their raw materials and that such industries would survive in the absence of a cattle slaughtering industry.

The latter statement may be true for some subsidiary industries but not for all. For example, the amount of Irish cattle fat used in the oil, paint and soap industries is very small and these industries would easily survive in the absence of the cattle slaughtering industry since it relies mainly on imported raw materials. There are many other industries in a similar position and, therefore, we can attribute no more than a small share of the first round effects of these industries to cattle slaughtering. The fellmongery and tanning industry on the other hand is a special case.

Although about one third of its hide and skin inputs were sheep and lamb skins, and about half of the cattle hides used in 1969 were imported, the industry is nevertheless very dependent on the level of availability of Irish cattle hides. Imports are largely made to ensure an even flow of raw material throughout the year in the face of the marked seasonality of Irish supplies, and there can be little doubt that the capacity of the industry is fundamentally related to the volume of Irish supplies.[3] On the other hand,

[3]Committee on Industrial Progress' Report on Fellmongery and Tanning Industry, 1971.

TABLE 5.9: *Summarised details of fellmongery, tanning and dressing of leather industry, 1960 and 1969*

	1960	1969
	£'000	
Gross Output (A)	5,611	9,127
Cost of Materials used		
Sheep and lamb skins	1,646	1,536
Other hides and skins	1,287	2,923
Semi-finished and other leathers	53	35
Tanning and other materials and chemicals	517	1,030
Work in process at beginning of year	577	714
Cost of fuel packing materials, etc.	150	229
Total cost of materials (B)	4,230	6,467
Net Output (A)–(B)	1,381	2,660
Salaries, wages and earnings	756	1,406
Remainder of net output	625	1,254
Total numbers engaged Sept.–October	1,525	1,530
Volume of Production index	100	140·0
Imports: Cattle hides undressed	241	1,310
Other hides and skins and waste leather	60	88
Exports: Cattle hides undressed	696	1,834
Other hides, skins and waste leather	246	1,661

Source: Irish Statistical Bulletin, June 1963, Dec. 1971 and Monthly Trade Statistics of Ireland 1960 and 1969.

the growth of the industry has not kept pace with the growth of cattle slaughtering, partly because of the problem of seasonality, so that in 1969 more home produced cattle hides were exported than were used in the Irish tanning factories.

All in all, we are convinced that the fellmongery and tanning industry would not have developed in the absence of a home supply of hides and skins, and that it would be unlikely to continue in the absence of home slaughtering. For that reason we feel that a fairly high proportion of the multiplied GNP and employment generated in this industry should be credited to cattle slaughtering. It is felt however, that we should not extend these effects very much beyond the fellmongery and tanning stage, and certainly not into the boot and shoe industry, the existence of which relies little on the availability of home produced material.

Details of the fellmongery and tanning industry together with hide imports and exports are summarised in Table 5.9. Applying the reasoning of the

previous paragraph to these figures, and making a small allowance for the contribution of domestic supplies to other by-product processing industries, it seems reasonable to estimate that total GNP generated by the by-products of cattle slaughtering in 1971 was about £4 million. The employment generated, directly and indirectly is estimated at about 2,000.

If these figures are added back to the calculated totals for cattle slaughtering itself, the total GNP generated would be about £42.8 million and employment, direct and indirect, about 13,800. Had all the dead meat produced in 1971 been exported as live cattle, we estimate that the reduction in GNP would have been about £12.2 million, and the fall in employment about 8,000.

It is thus clear that the fresh meat industry is of very considerable benefit to the national economy. The disappearance, or even the substantial reduction in this industry would be a serious economic setback. Conversely, the expansion of the industry would be highly beneficial to the national economy and to particular regions within it.

The Case for the Live Trade

In recognition of the value of the fresh meat industry, and in response to the difficulties of the meat factories in recent years, several suggestions have been made that there should be a curtailment, or even an abolition of, live cattle exports. Though such measures would have a considerable superficial attraction, they would hardly be allowed under EEC regulations and, even if they were, there are powerful counter-arguments.

Although total employment would certainly be raised by any diversion of cattle from export to domestic slaughter, the live trade itself is of long standing, and many individuals would lose their own jobs with its abolition or drastic curtailment. Secondly, the number of traders involved and the diversity of their markets means that the live trade is better able than the factories to pay differential prices for cattle of exceptional quality or with unusual features.

This brings us to the main issue: the degree of competition offered by the live trade in the purchase of cattle. As we have already mentioned, the majority of farmers believed that this competition is essential if ex-farm cattle prices are to reflect fairly the true value of the beasts sold, and that competition merely among the factories in the absence of a live trade would not be sufficiently vigorous to protect the farmers' legitimate interests.

It is virtually impossible to adduce firm evidence either to support or to refute the farmers' claims. Allegations concerning what has happened in the past tend to be ambiguous and are perhaps of doubtful relevance to future

conditions. Similarly, theoretical considerations leave open the question as to whether competition among the factories alone could be expected to ensure fair ex-farm prices.

What is incontrovertible is that the farmers' view is strongly held. Given the lack of evidence, it seems improbable that farmers could be convinced that their fears are groundless, and thus any move to introduce measures aimed at abolishing or severely curtailing the live trade would be deeply resented.

Policy Implication

We are thus left with the position that on national grounds it would be beneficial to increase the volume of throughput of the fresh meat industry, and to increase the proportion of cattle slaughtered in Ireland, while on the other hand there are compelling arguments against a severe curtailment of the live cattle trade. Fortunately, this problem has to be solved within the context of steadily increasing cattle output. There is thus the possibility that both the volume of production of, and the proportion of cattle handled, by the factories can be increased without any reduction in the absolute level of the live trade.

Furthermore, although the live trade is greatly valued by farmers, there is nothing particularly sacrosanct about its present level. A gradual run-down of its volume, provided it were not brought about by active restrictions, could be quite compatible with the continuation of its role in offering actual and potential competition to the factories and thus ensuring adequate ex-farm prices.

Whether a solution along these lines of expanding factory throughput to absorb all of, or slightly more than, the entire increase in cattle output, can be brought about is an open question. But the difficulties faced by the fresh meat industry in the past year or so should not be allowed unduly to colour judgement of the possibility. After all, this is approximately what happened throughout the Sixties, when almost all of the increase in cattle supplies did pass through the domestic factories.

Moreover, it appears from our analysis that there are several factors, especially in the fields of transport and marketing, which in the long run should work in favour of the factories and tend to increase their share of cattle supplies. It could be that official actions could be superimposed on economic trends to hasten the process a little, and to overcome temporary difficulties.

The form such assistance might take is circumscribed by EEC regulation, but in this context it should be borne in mind that the Commission is very

sympathetic towards Irish industrialisation and can consequently be expected to prove reasonably flexible in such matters. Possible forms of assistance to firms in the fresh meat industry include removing impediments to the development of an efficient, Irish based, meat transport system, organisational and financial help in improving the marketing of beef and associated product research, and if it proves necessary, some form of temporary financial accommodation to assist individual viable firms over periods of short-term liquidity difficulties, such as some firms faced in the first half of 1972.

Such limited measures of positive assistance to the fresh meat industry, to ensure that it survives temporary problems and to accelerate slightly the increase in the volume of its throughput, appear to be much more promising than negative measures which would seek to benefit the factories by attacking the live trade.

Marketing Structures

Throughout this study we have stressed that a high level and quality of marketing effort for Irish beef will be necessary if maximum value is to be obtained from national cattle production. The examination of the economics of alternative marketing structures was not within the terms of reference of this paper,* and for that reason we have not investigated the matter in any great depth. However, the contribution which successful marketing can make to the development of the fresh meat industry (and to the national economy as a whole) is such that we cannot ignore the subject completely.

The marketing function for a product like beef is complex. In addition to straightforward product promotion, it must also include market research to identify specific markets and their requirements, market development to turn potential into actual markets, classification and grading of the product, product development to meet the needs of particular markets, and quality control to ensure that goodwill built up by the other marketing activities is not dissipated by the delivery of sub-standard produce.

Clearly, the provision of a complex marketing service of this nature involves the commitment of a fairly large number of personnel and other resources, and is a field in which economies of scale can be expected to operate strongly. On the other hand, the function will fail unless there is very close co-operation between the marketing organisation and the production units, with an unimpeded flow of information in each direction and a high level of mutual trust.

As to the structure through which the marketing function could be fulfilled, it appears that possible forms of organisation can be divided into three

*The economics of establishing a centralised marketing board was the subject of a separate study carried out for CBF by the School of Business Administration in UCD.

main categories. In the first place, the entire operation could be left to the individual factories, or to such voluntary combinations as they care to set up. It seems most unlikely that such an arrangement could achieve sufficient co-ordination, or that any individual factory could afford to operate on a sufficient scale, to provide a full effective marketing function.

At the other extreme, all marketing and selling could be centralised in a strong co-operative organisation, analogous to the present Pigs and Bacon Commission or Bord Bainne. A body of this nature has been advocated on numerous occasions in the past.* While we did not assess the economics of such a centralised organisation, we did discuss the proposal with a number of people in the fresh meat industry. Although views differed to some extent, there appeared to be very considerable opposition to the idea of a central body responsible for all export marketing and selling, especially if it was not under the exclusive control of the industry. Whatever its economic merits may be, we therefore feel that a single export organisation is unlikely to gain the degree of co-operation from the factories essential to the successful marketing of a heterogenous product like beef.

The third possible structure is a form of compromise, where the individual firms would remain responsible for the actual selling of their product, but where the ancilliary marketing functions (market research, quality control etc.) would be provided by a central agency. The current situation of course falls within this type of structure, with the individual firms responsible for selling and CBF providing various marketing and information services to both the meat industry and the live trade. This arrangement has worked very satisfactorily to date and has enabled substantial improvements to be made in the marketing of Irish beef.

However, if the full potential of the Irish fresh meat industry is to be realised, a further strengthening of the role of the central agency would appear to be desirable. In particular, a considerable degree of control by the agency over the factories in such matters as grading, and as guarantors of the quality of meat exported to particular markets, could increase the effectiveness of the total marketing function.

Such an extension of its powers could prove a problem to CBF as at present constituted. Its links with the live trade, and the lack of effective representation of the factories in its management, have not proved serious drawbacks to CBF's efficient discharge of its present functions. They would, prove a serious drawback to the extension of the functions envisaged. If the factories are to surrender a significant degree of autonomy to a central

*e.g. "The Irish Beef Industry and Its Future", Paper delivered by Mr P. Needham, General Manager, CBF, to the International Beef Symposium, Dublin, April, 1972.

agency, they would need to feel that the agency fully represented their interests, and that they had adequate representation in its management.

It is not our aim in this paper to make specific recommendations on marketing structure. The above discussion is designed more to clarify the issues than to pre-empt a particular answer. To some extent the choice of a marketing structure will be influenced by decisions taken in other fields. Nevertheless, the marketing structure for beef and its efficient operation is of considerable importance for the Irish economy, and it is hard to avoid the conclusion that whatever structure is adopted it should be flexible and capable of organic change in response to developments in the international market conditions which cannot fully be foreseen.

Chapter 6

Conclusions and Recommendations

Conclusions

1. The international context is likely to be favourable for the development of the Irish cattle and beef industries for the foreseeable future. The world beef shortage, which has forced prices so strongly upwards in Ireland, Europe and the United States, seems likely to persist, or even to intensify, for the remainder of the decade. Compared with other meats, beef and veal are income elastic, tending to take larger shares of an expanding market as income levels rise. Supplies of beef seem unlikely to expand sufficiently to meet demand even at the high price levels obtaining in early 1973. This is particularly true of beef production in the enlarged EEC, where the size of the cattle herd is very dependent on milk prices, which are likely to be held down by recurring gluts of milk products.

2. In this context European beef, and therefore cattle, prices are likely to follow an upward trend both absolutely and in relation to other agricultural prices and to the general price level. There will be temporary fluctuations around this upward trend, with periods of standstill or even slight decline, alternating with periods of rapid price increase, but there seems little likelihood of any severe break in prices such as there has often been in the past. A limit to the rise in beef prices may be set by competition from other meats, supplies of which can be increased rather more rapidly. This should not, however, prevent beef and cattle prices rising above even the very high levels of early 1973 within the course of the next few years. Because of their lower starting point, the rise in Irish cattle and beef prices between 1971 and the end of the decade will be even greater than the European average.

3. Because of the projected world shortage, and more directly the projected EEC deficit in supplies, outlets should be readily available at good prices for any conceivable volume of Irish cattle and beef in the remainder of the decade, so long as Irish cattle remain acceptable internationally from a veterinary point of view.

4. Irish output of cattle can be expected to continue its rapid growth. High cattle prices imply high calf prices, thus encouraging further expansion of the breeding herd. Although the EEC milk price can be expected to be held in check as far as political factors permit, the existing milk price is sufficiently high by Irish standards to stimulate a continued rapid increase in the dairy herd, which is the principal source of calves for the beef cattle industry.

5. Because of the impact of high prices, Irish consumption of beef seems likely to increase only slightly above the 1971 level. Thus the increased supply of cattle will be exported in one form or another. Although some trade with the USA may continue, this will be of less importance than in the past. Most of the exports will go to the enlarged EEC, and the interesting question is the balance between the UK and the continental members.

6. British consumption of beef is expected to decline, at least initially, in reaction to higher prices. At the same time a substantial increase in British beef production is likely. Consequently the UK beef deficit is expected to fall sharply in the next few years, and it is quite possible that UK net import requirements of beef and cattle will fall below the level of the Irish exportable surplus. However, the possibility must not be overlooked that the UK may itself develop a significant export trade to the continent. If this happens, then despite the fall in net import requirements the level of actual imports to the UK could remain at a high level, sufficient to absorb all available Irish supplies.

7. It thus remains an open question whether Irish exporters will actually be forced to divert trade to the continent by the contraction of the British market. However, it seems probable that in any case it will be profitable to develop continental markets for a considerable proportion of Irish output. In particular the French and Italian markets for lean beef or cattle of the continental beef breeds and perhaps also for Friesians, and the German market for the more traditional type of Irish cattle seem likely to offer higher returns as well as offering a useful insurance against the possible reduction of the UK market.

8. Just how far this switch of supplies to the continent will go will largely be determined by the relative prices offered in the different markets (when these diverge from the common support price), by the transport costs to different markets, and by the quantity of cattle available in Ireland suitable for the continental trades. The working of the price mechanism in this regard can be influenced by positive action in the fields of marketing, transport and breeding policy, but it should be borne in mind that such actions will merely supplement the working of market price mechanisms, which will be the primary arbiters of change.

9. The form in which cattle will be exported is also difficult to forecast with any precision, and is also likely to be determined principally by the operation of the price system.

10. The traditional live store trade to the UK seems likely to decline substantially. In the past the pattern of this trade has been conditioned to a large extent by the operation of the British subsidy system. In the absence of the subsidies there appears no good reason why the export of finished or semi-finished cattle as stores should continue. These beasts, if they are exported live at all, are likely to go as fat cattle. A reasonable number of genuine store cattle, especially younger animals of lighter weight, will probably still be exported to the UK. The size of this trade is difficult to predict, since the decline to be expected as UK cattle production rises, could be largely offset if Britain itself develops a substantial export trade in cattle or beef. In contrast to the probable fall in traditional shipments to the UK an increasing export trade may develop with the UK and the continent in well fed 4-5 cwt. calves and young bulls of lean breeds. Again the prices paid by British and continental feeders will be the main determinant of this trade, but the ability of the calves to survive the sea journeys involved will be an important deciding factor also.

11. With regard to the balance between domestic slaughtering and the export of live fat cattle, the trend will depend either on restrictions placed on live exports (which seem both undesirable and unlikely) or on the relative prices offered to farmers by the meat factories and the live traders. These relative prices will be conditioned by many factors, of which the most important are the production costs of the factories; the comparative costs of transporting live cattle and dead meat; the success or otherwise of marketing in establishing the image of Irish beef and reducing the price differential between locally killed meat and beef imported from Ireland; and, for the next few years, the size and nature of tariff and other impediments to free trade in both cattle and beef.

12. Under *laissez-faire* conditions a gradual shift in favour of domestic slaughter could be expected, which would slowly absorb the present overcapacity in the industry. Due to technological and economic factors the transport cost differential in favour of dead meat seems likely to widen. The present tariff structure in the "Six" countries of the original EEC discriminates strongly against beef compared with live cattle, and, with the disappearance of this tariff in the course of transition to full membership, the relative position of beef as against cattle will improve somewhat. The problem of acute cattle supply seasonality may ease somewhat under the new cattle/feed price ratio expected under EEC conditions, although considerable

instability of supply is likely to persist, due to unpredictable movements in the seasonal price patterns for both store and fat cattle. Some improvement in both marketing and productive efficiency is also probable, although the latter might be achieved at the expense of a few of the less viable factories closing in the near future.

13. A steady and substantial increase in the number of cattle slaughtered within Ireland appears to be very much in the national interest. The "value added" to the value of cattle by producing the meat and by-products within the country is considerable. On the basis of the 1964 input-output table, adjusted for changed structures and updated to 1971 prices and quantities, it would appear that the cattle slaughtering industry directly and indirectly generated GNP of about £12 million over and above what would have been obtained if the same number of cattle had been exported live. This represents about 8,000 jobs. Each additional beast slaughtered at home rather than exported live would generate income of about £18, or one job per 85 beasts. Moreover, the geographical dispersal of the factories implies that the fresh meat industry is of significance to regional development as well as to national economic welfare.

14. In view of the national value of home slaughtering, the rather slow expansion of the fresh meat industry which is foreseen under *laissez-faire* conditions appears inadequate. Moreover, left entirely to market forces progress is likely to be erratic, with periods of expansion alternating with periods of intense difficulty during which there is a considerable risk of several factories being forced out of existence.

15. There thus appears to be a strong case for encouraging the fresh meat industry to expand. On the other hand there is also a case for maintaining the live trade at a sufficient level to provide vigorous competition to the factories for supplies, thus ensuring that farmers continue to receive a fair price for their cattle.

16. It therefore seems that policy should aim to encourage the fresh meat industry through various forms of assistance rather than to restrict the live trade through controls or prohibitions, thus forcing a diversion of supplies to the factories. Such a policy could well result in a very substantial rise in factory throughput, while leaving the live trade sufficiently vigorous to provide adequate competition.

17. Obviously, the factories themselves have a major role to play in improving their competitive position vis-a-vis the live trade by ensuring that equipment and techniques are up-to-date, and that management in general is efficient.

18. Official support could take various forms, but the areas in which it could make the most valid contributions include those of tiding individual factories over periods of temporary financial difficulty, ensuring that adequate and suitable finance is available for re-equipment and for keeping abreast of technical developments, encouraging the provision of reliable and low cost transport for fresh meat, and assisting in the evolution of an effective and acceptable marketing structure.

19. The detailed form that assistance in the above fields should take is beyond the terms of reference of this study. It is our opinion however that whatever forms they take the measures should seek to maintain the maximum degree of flexibility, as many aspects of the development of the Irish cattle and beef trade remain shrouded in considerable uncertainty. Secondly, the measures should command the widest possible acceptance among farmers, factories and live traders, and any attempt to impose policies against strong opposition seems unlikely to result in the optimum development of Ireland's major national resource.

Recommendations

1. Any coherent national policy for cattle and beef should recognise that market factors, operating mainly through the price mechanism, will play the predominant role in the development of the industries.

2. Positive policy actions are desirable in several areas to supplement the market mechanism, and to ensure that the industries have sufficient flexibility to respond quickly and effectively to any change in market conditions.

3. Adequate capital to facilitate the expansion of the cattle herd should continue to be made available, even during any future periods of financial stringency. FEOGA or other grants would appear to be appropriate for much of the long-term investment needed. With regard to loans, there does not appear to be a particularly strong case for charging less than commercial rates of interest, but policy can ensure that loans are of the right nature for their purpose—medium term for financing purchase of stock, long term for such building and other ancilliary investment as is not met from grants—and that they are available when needed and without undue restrictions.

4. Breeding policy should be aimed at allowing a high degree of flexibility in the potential disposal of cattle output. Thus advice, and the availability and price of semen for AI, should be such as to encourage the production of a reasonable proportion of cattle suitable for continental markets (i.e. Charolais, Simmental etc.), while ensuring also the large-scale retention of breeds of proven acceptability on the established UK markets.

5. Vigorous steps should be taken to ensure that the Irish cattle stock meet required veterinary standards with regard to the UK, continental Europe and the USA.

6. Measures compatible with EEC rules should be devised which could be used if necessary to prevent the export of any significant numbers of calves or heifers suitable for breeding purposes.

7. The live export trade of adult cattle should not be subject to discriminatory controls or restrictions. Neither should it be actively encouraged, unless this proves necessary on a temporary basis to prevent too rapid and severe a run-down.

8. The fresh meat industry should be encouraged by various direct actions, designed to re-inforce market trends and to alleviate short-term fluctuations.

9. The factories themselves should play their part in this process by ensuring that management is competent and that equipment and technology are up-to-date, by attempting to overcome problems of seasonality, and by submitting reasoned proposals as to the most effective forms of official assistance.

10. Official assistance at factory levels could take various forms, and discussions with the industry should enable the most effective combination to be determined. The following are among the most obvious measures that could be included: —

(a) provision of temporary loan assistance over any short periods of exceptional liquidity difficulties (in ways acceptable under EEC regulations) to support factories which appear viable in the long run: —

(b) provision of adequate capital, through existing state agencies (IDA, ICC, ACC etc.) for new equipment etc.;—

(c) financial and technical support for the adoption of modern methods (e.g. vacuum packing etc.).

(d) financial and technical support for research into new product forms and new production processes.

(e) support for factory efforts to overcome supply seasonality. The latter could take the form of making sure that adequate long-term and working capital is available for the development of substantial winter feeding capacity and that present beef grain price ratios are maintained.

11. The possibility of official action to improve the effectiveness and reduce the cost of meat transporting should be investigated and, if necessary, action should be taken in this field in consultation with Irish transport companies and with the factories and their customers.

12. Consultation with the factories should be undertaken regarding the most suitable organisation of the marketing function. In addition to actual

selling, an effective marketing operation should include such diverse functions as product promotion, market research, market development, product development, effective grading systems and some form of quality control or guarantee. We feel that it is unlikely that individual factories can discharge all these functions adequately, and that some form of central agency or board will be necessary to perform at least some of them. The particular structure adopted must meet the approval of the industry if it is to function effectively, and no structure should be imposed on the industry against its wishes. While it is possible that in the long run the industry will desire a strong central marketing board responsible for all export marketing and selling of beef, in the immediate future it would appear more acceptable to provide a structure in which the factories remain responsible for selling, but in which most of the ancilliary marketing functions are provided by a central agency such as CBF. In the changing market conditions foreseen, the central agency should have broader functions than those at present exercised by CBF. In order to achieve the degree of rapport with the factories necessary for the effective discharge of these extended functions, the agency would need to have strong factory representation in its management, and to have its role defined in such a way as to convince the factories that their interests would receive due priority.

APPENDICES

APPENDIX A*

Transport Costs

CONSIDERATION of their respective transport costs is essential when comparing the live and dead meat export trades. In many cases beef is equally acceptable to UK and continental traders in the live or dead form, so that relative transport costs could be quite important in determining the pattern of trade.

The cost of transporting beef in the carcase form is generally considered to be less than that of transporting the live animal. The following analysis† aims at quantifying this difference, if any.

The cost of transferring an 11 cwt. bullock to a number of important market centres in the United Kingdom and on the Continent was computed for two cases, namely: —

(a) where the animal is slaughtered in Ireland and carcase and offal exported, and

(b) where the animal is exported live.

Destinations were chosen on the basis of their importance as market centres for both carcase beef and live cattle. On this basis the following centres were chosen: —Smithfield; Glasgow; Manchester; Newcastle; Rugby; Banbury; Le Havre; Milan; Rotterdam; Antwerp and Hamburg.

Case (a) Animal Slaughtered in Ireland

To arrive at the approximate cost of transporting a complete animal in this case, account must be taken of transporting both the carcase and the hide and offal. First the cost of transporting carcase beef is considered. The forms of transport costed are those most commonly used by Irish exporters, namely, lift on/lift off insulated containers in the case of UK trade and roll on/roll off refrigerated trucks for continental trade. Costs used here are based on prices quoted by transport companies to two large diversified

*This Appendix was prepared by Mr. Sean Mannion of CBF.
†This analysis was carried out in October 1972 and the rates quoted are those prevailing at that time.

meat export firms for October 1972. To these basic costs of transport to the various destinations must be added an estimate of ancillary charges involved in each case. The cost of transporting 1 lb. of carcase beef is then obtained by dividing total costs per container by the average load. The following average container weights were adopted after discussions with the trade:—

United Kingdom	15,680 lb.
Italy	36,000 lb.
Other Continental countries	38,000 lb.

In the case of the UK the estimated ancillary costs per container are as follows:—

Ice	£6.00
Stockinette	£6.00
Ropes	£1.25
Insurance	£6.10
Customs Clearance	£1.00
Total	£20.35

The estimated ancillary costs per container for continental trade are:—

Stockinette	£12.00
Ropes	£2.50
Insurance	£68.00 (Italy £121.00)
Total	£82.50 (Italy £135.50)

Table A.1 shows average container rates charged by firms to the chosen destinations. There was a substantial variation in charges between firms. This variation in charges was due to a shortage of capacity and therefore poor competition amongst hauliers. The number of quotations for each destination is greater in the case of the continental trade, since there are more hauliers involved than in the UK trade.

Table A.2 shows the average total cost (including ancillary costs) of transporting carcase beef to the chosen destinations on a container basis; per lb. of carcase beef, and on a per carcase basis, using the information already given and on the assumption that an 11 cwt. bullock yields a carcase of 678 lb. (i.e. a killing-out percentage of 55 which is a representative figure for the whole year round).

TABLE A.1: *Rates per container charged by different hauliers to the selected destinations*

Destination	*No. of quotations*	*Average rate* (£)
United Kingdom		
Smithfield	3	114·3
Glasgow	2	118·5
Manchester	2	90·5
Newcastle	1	116·0
Rugby	1	119·0
Banbury	1	115·0
Continent		
Le Havre	5	484·0
Rotterdam	7	506·0
Antwerp	4	477·0
Hamburg	5	613·4
Milan	7	753·0

TABLE A.2: *Average total transport cost to different destinations for carcase beef*

Destination	*Per container* (£)	*Per lb.* (*P*)	*Per carcase* (£)
United Kingdom			
Smithfield	135	0·86	5·8
Glasgow	139	0·88	6·0
Manchester	111	0·71	4·8
Newcastle	136	0·87	5·9
Rugby	139	0·89	6·0
Banbury	135	0·86	5·8
Continent			
Le Havre	566	1·49	10·1
Rotterdam	589	1·55	10·5
Antwerp	560	1·47	10·0
Hamburg	696	1·83	12·5
Milan	888	2·47	16·8

Hide and Offal

The cost of transporting the hide and offal from an animal is not easily estimated, since some of it is sold on the home market for immediate consumption or further processing. The maximum weight of hide and offal from an 11 cwt. bullock which would enter the export trade is estimated at 160 lbs.

A difficulty is encountered in measuring the costs per lb. of transporting offal to different destinations, since mixed containers of offal and carcase are

sometimes shipped. This usually arises when a particular consignment of carcase beef does not fill the container to the maximum weight allowed by the haulier and so offal can be included on the floor for no extra charge. Furthermore, when containers carry offal exclusively the load weight is usually greater than in the case of carcase beef. Also, hides are not transported in containers, but on flats, and because of greater loadability, the per lb. cost of shipping is usually less than that of carcase beef. Offals going to the continent are transported in lift on/lift off insulated containers which are considerably cheaper than the refrigerated trucks used to carry beef. In order to overcome these problems, it would seem best just to estimate the per lb. cost of transporting offal and hides as a proportion of that for carcase beef. A good estimate would be to assume that the average cost per lb. of transporting hide and offal to the UK and the continent is two thirds and a half respectively of the average cost per lb. of transporting carcase beef as calculated in Table A.2. On this basis the information in Table A.3 is obtained.

TABLE A.3: *Average total transport cost to different destinations for an animal slaughtered in Ireland*

Destination	*Carcase* (678 *lb.*) (1)	*Hide & Offal* (160 *lb.*) (2)	*Total animal* (1)+(2)
United Kingdom	(£)	(£)	(£)
Smithfield	5·8	0·9	6·7
Glasgow	6·0	0·9	6·9
Manchester	4·8	0·8	5·6
Newcastle	5·9	0·9	6·8
Rugby	6·0	1·0	7·0
Banbury	5·8	0·9	6·7
Continent			
Le Havre	10·1	1·2	11·3
Rotterdam	10·5	1·2	11·7
Antwerp	10·0	1·2	11·2
Hamburg	12·4	1·5	13·9
Milan	16·8	2·0	18·8

Case (B) Live Animal Transported

In the case of live cattle, as in the case of beef, there are direct and indirect charges associated with transport. In the case of shipment to the United Kingdom the charges are fairly straightforward and there is little difference in rates between transport companies. Indirect charges are incurred both at the port of shipment in Ireland and at the port of landing. Charges at the port of shipment include agents' fees, feeding, insurance, customs clearance

charge, slaughtered animals compensation levy and national executive levy. At the port of landing in the United Kingdom charges include agents' fees, lairage, feeding, veterinary examination, tags and tolls. An average level for the above charges is assumed in each case. For example, in calculating feeding and lairage charges it is assumed that the animals do not have an overnight stay in lairage at either port.

Both the direct and indirect charges are shown in Table A.4. Where there is more than one shipping company involved, the rates charged by different companies are averaged to arrive at the figures in this table. The relatively low level of indireot charges at the port of landing is due to the fact that in the case of one of the major shipping companies such charges are almost entirely included in the direct shipping charge.

TABLE A.4: *Transport costs per live animal to different destinations in the United Kingdom*

Destination	*Charges at port of shipment*	*Transport cost*	*Charges at port of landing*	*Total cost of shipment*
	(£)	(£)	(£)	(£)
United Kingdom				
Reading (Smithfield)*	1·2	6·4	0·5	8·1
Glasgow	1·2	5·0	0·5	6·7
Manchester	1·2	4·7	0·5	6·4
Hexham (Newcastle)*	1·2	5·9	0·5	7·6
Rugby	1·2	5·6	0·5	7·3
Banbury	1·2	5·7	0·5	7·4

*Reading and Hexham are taken as synonomous with Smithfield and Newcastle respectively.

In the case of cattle exports to continental destinations it is more difficult to determine the transport costs involved since most cattle are carried in chartered vessels. The only scheduled service is to Le Havre and Rotterdam. Furthermore, it is not possible to obtain a rate for inland transport of cattle on the continent, and for this reason the destinations chosen are all ports of landing. However, discussions with shipping companies and exporters indicate that costs are approximately as shown in Table A.5.

Comparisons

Table A.6 shows the total transport cost per animal to the selected destinations in both cases, and merely involves bringing together the data from Tables A.3, A.4 and A.5.

TABLE A.5: *Estimated total transport cost per live animal to continental destinations*

Destination	*Estimated total* transport cost per animal* (£)
Le Havre	14·0
Rotterdam	14·0
Antwerp	14·0
Hamburg	18·0
Leghorn	26·0

*Includes direct and indirect charges.

Qualifications

A few points should be made in connection with these figures.

(1) The transport cost of beef is obtained by averaging the rates per container charged by the different firms. As can be seen from Table A.1, these rates display considerable variation particularly in the case of transport to the continent. It is logical to expect that, other things being equal, meat exporters will make maximum use of the cheaper hauliers. However, because of the scarcity of containers at present, they are forced to pay the higher rates. To account for the likely greater usage of cheaper hauliers, a weighted average (weighted by usage) of the rates by different hauliers would be more

TABLE A.6: *Total Transport Cost per animal to different destinations*

Destination	*Case (a) Transport in Carcase form* (£)	*Case (b) Transport in Live form* (£)	*Difference case (b) —case (a)* (£)	*Ratio case (b) ÷case (a)*
United Kingdom				
Smithfield (Reading)	6·7	8·1	1·4	1·2
Glasgow	6·9	6·7	—0·2	1·0
Manchester	5·6	6·4	0·8	1·1
Newcastle (Hexham)	6·8	7·6	0·8	1·1
Rugby	7·0	7·3	0·3	1·0
Banbury	6·7	7·4	0·7	1·1
*Continent**				
Le Lavre	11·3	14·0*	2·7	1·2
Rotterdam	11·7	14·0*	2·3	1·2
Antwerp	11·2	14·0†	2·8	1·3
Hamburg	13·9	18·0†	4·1	1·3
Milan (Leghorn)	18·8	26·0†	7·2	1·4

*Actual rates for scheduled services.
†Estimates of costs for chartered services.

appropriate. Unfortunately, weights by usage were not available and we had to have recourse to a simple arithmetic average.

(2) The costings for live cattle transport are from the lairage at the port of Dublin, while the costings for beef transport are adjusted to those which would be charged to a factory located in Dublin. The figures therefore do not include transport from marts or factories to Dublin.

(3) As is well known, live cattle lose weight in transport and this weight loss has to be paid for by somebody, most likely in the ultimate analysis by the producer. Account has not been taken of such loss in calculating the figures for transport costs of live cattle. It is also contended that beef suffers a loss of bloom in transit, but as this was probably more true in the past than at present due to improved transport facilities, it has not been taken into account.

Appendix B*

Breakdown of Offals and By-Products by Item

Hides: Cattle hides are either salted and exported to Britain and the continent or are sold fresh to Irish leather manufacturers.

Red Offal: This consists of the heart, liver and tongue together with kidneys† from manufacturing carcases and carcases going to the continent. The red offal is packed in polythene lined cardboard boxes and frozen at the factory premises. Most of it is then shipped to Britain in insulated containers, but some is also sent to the continent in the holds of ships.

Head and Cheek Meat and Skirts: Head and cheek meat and skirts (diaphragms) are mostly frozen and boxed for export to Britain or France.

Other Edible Offal: This consists mainly of lungs, spleens and rejected livers. The bulk of this material is frozen and exported unprocessed to Britain either direct by the factory or through licenced offal exporters to be manufactured into pet foods. Some stomachs are used to make tripe for export to France.

Intestines: Cattle intestines are cleaned, graded and salted down in plastic barrels for export to Germany as casings for salami-type sausages.

Fat: Edible fats are produced by rendering down trimmed fat from manufacturing carcases and gut and caul fat from prime beef. These fats are used on the home market or are exported, and are used mainly for cooking, high quality soap making, and as fat fillers for calf foods. Waste fat and fat from condemned animals is recovered during the production of meat and bone meal and is sold as inedible tallow. This is mostly exported for industrial processing in Britain, but a small number of firms in Ireland require a steady supply.

*This Appendix was prepared by Mr J. R. Copeland of ESRI.

†Kidneys are not removed from carcases exported to Britain.

TABLE B.1: *Exports of offals and by-products for selected years*

	1963	1966	1967	1970	1971
			(£'000)		
Edible offals	1,177	1,593	2,165	2,475	2,656
Meat and bone meal	—	—	—	610	648
Cattle hides undressed	448	1,002	1,542	1,879	1,946
Natural sausage casings and gut	—	201	173	453	339
Other guts, bladders, stomachs	320	433	554	—	3
Edible animal fats	231	207	230	219	236
Tallow	294	342	395	1,429	1,692
Other animal fats and oils	116	221	177	137	89
	2,586	3,999	5,241	7,202	7,609

N.B. The above items do not refer just to products of the cattle slaughtering industry, but include some production from pigs and sheep.

Inedible Offal: This material all goes for the production of meat and bone meal. Included under this heading are bones, cattle skulls, hooves, blood, small cattle intestines and some stomachs, together with all condemned meat. Some larger factories have their own digester plants for inedible offal. The remaining factories sell their inedible offals fresh to processing firms. It would probably be more economical to dry blood at the moment, than to include it with waste material, but no factory or processor is at the moment engaged in the drying of blood. Also cattle shins can be used to manufacture "Neats foot" oil but this product is no longer produced in this country.

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