VISION FOR FUTURE OF AGRI-FOOD INDUSTRY:

AN ECONOMIC NOTE ON THE NORTHERN IRELAND AGRI-FOOD INDUSTRY

1. CONTRIBUTION TO THE NORTHERN IRELAND ECONOMY

?? Farming and food processing still make important contributions to the Northern Ireland economy, accounting respectively for 2.6% and 2.4% of Gross Value Added. Together, they account for just under 8% of the region's employment.

Table 1: Key Facts, 2000

Agriculture's share of NI Gross Value Added	2.6%
Food processing sector's share of Gross Value Added, 1998	2.4%
Total agricultural labour force *(persons)*	57,800
Agricultural labour force, *measured on a basis consistent with other sectors (persons)*	35,400[1]
Agriculture's share of total employment, *measured on a basis consistent with other sectors (persons)*	4.9%[1]
Employment in food processing sector *(full-time equivalents*), 1998	19,900[2]
Food processing sector's share of total employment	2.9%

[1] This figure excludes forestry and fishing, normally included along with agriculture to give the more commonly quoted figure of 5.3%.

[2] Includes an estimate of 500 for employment in firms with a turnover of less than £250,000.

?? The inputs purchased and outputs produced by the farm sector have a multiplier effect on other industries and, therefore, on the economy as a whole. In 1995, an output multiplier of 1.3 was estimated[1] for the agricultural sector, indicating that the on-farm contribution could be increased by 30% to give an estimate of the overall contribution to the Northern Ireland economy. Individual sector multipliers ranged from 1.2 for horticulture to 2.0 for poultry.

?? In common with other developed countries, agriculture's share of Northern Ireland output and employment has declined over time as other sectors - previously manufacturing and, latterly, services - have expanded.

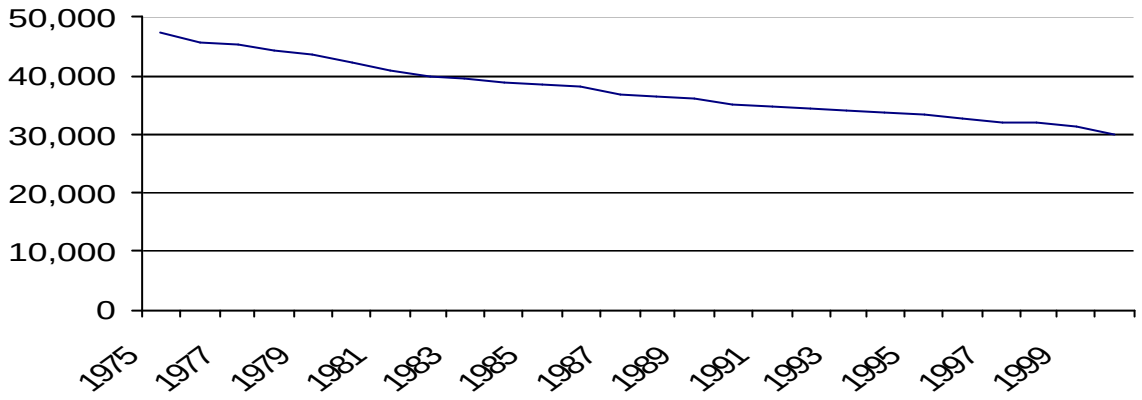
?? Agriculture also provides a range of environmental outputs – for example, the appearance of the countryside – not captured by conventional measures of output such as Gross Value Added. However, it also gives rise to costs in terms of negative environmental impacts and these also are not captured in the conventional agricultural accounts.

[1] Caskie P, An input-output analysis of agriculture in Northern Ireland, PhD Thesis, QUB, 1995.

2. NUMBER OF FARMS

?? The number of farms in Northern Ireland has fallen by over a third during the past 25 years, from 47,000 in 1975 to just under 30,000 in 2000. This reflects re-structuring of the industry in response to rising labour productivity and the decline in the relative price of agricultural products.

Figure 1: Number of Farms, 1979-2000



?? There is some evidence of an acceleration in the rate of structural change in the period 1998 to 2000, a period which coincides with the "pig crisis" and low farm incomes generally.

?? Agriculture in Northern Ireland remains predominantly grass-based. Twenty-five years ago, cattle were found on 85% of farms and the figure for 2000 is similar, although sheep flocks are now more common. There has been a marked decline in the incidence of farms with pigs, from 23% in 1975 to 3% in 2000, and cereal crops are now grown on only 13% of farms.

Table 2: Percentage of Farms With Enterprises, 1975, 1990 and 2000

% farms with:	1975	1990	2000
Dairy cows	27	23	18
Beef cows	59	55	56
Cattle	85	87	84
Sheep	20	38	36
Pigs	23	9	3
Cereals	30	19	13

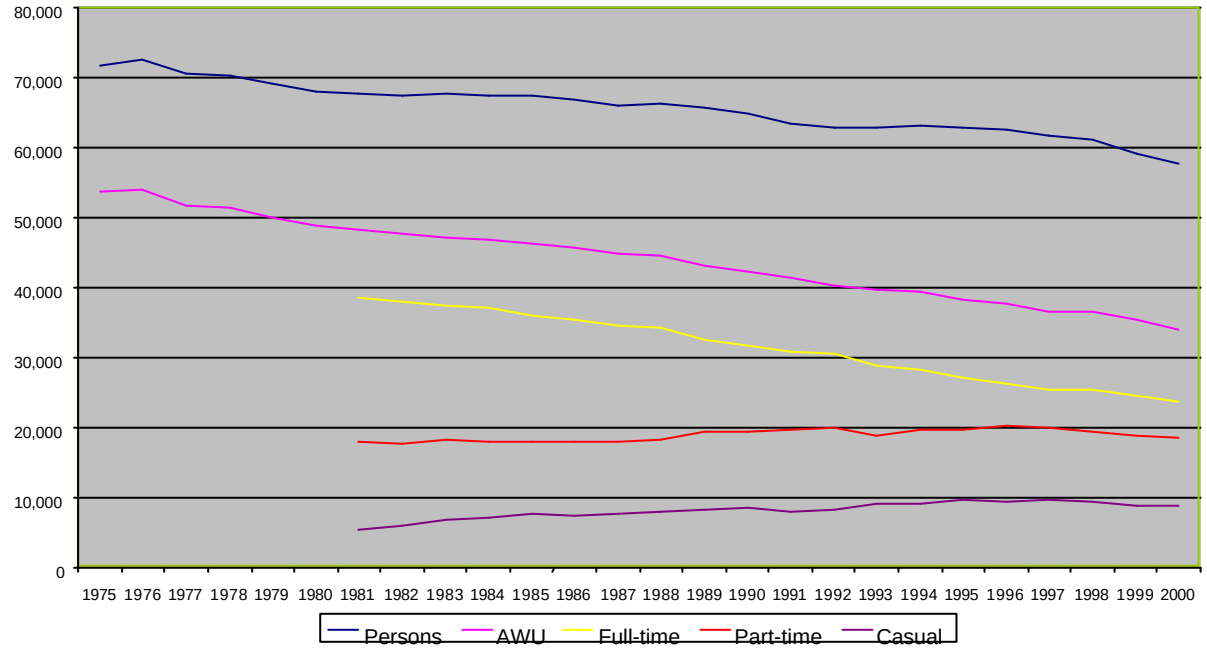
?? The average size of farm in Northern Ireland is 35.5 hectares, somewhat over half the average for the UK as a whole but about double that (18.4 hectares) for the EU15.

3. EMPLOYMENT IN AGRICULTURE

?? Over the past 25 years, the total number of persons recorded in the Agricultural Census as working on Northern Ireland farms has fallen by 20%, from 72,000 in 1975 to 58,000 in 2000 (see Figure 2). These totals disguise a shift away from full-time towards part-time and casual working patterns. The total labour input, measured in Annual Work Units (AWU), has fallen by 36% over the period.

?? Although the total number of persons working on farms in 2000 was 58,000, many of these have part-time or casual involvement and do not record themselves in the Labour Force Survey and the Population Census as having their principal occupation in agriculture. When measured on a basis consistent with that for the rest of the economy, the agricultural workforce is estimated at 35,400.

Figure 2: Persons Working on Northern Ireland Farms, 1975-2000



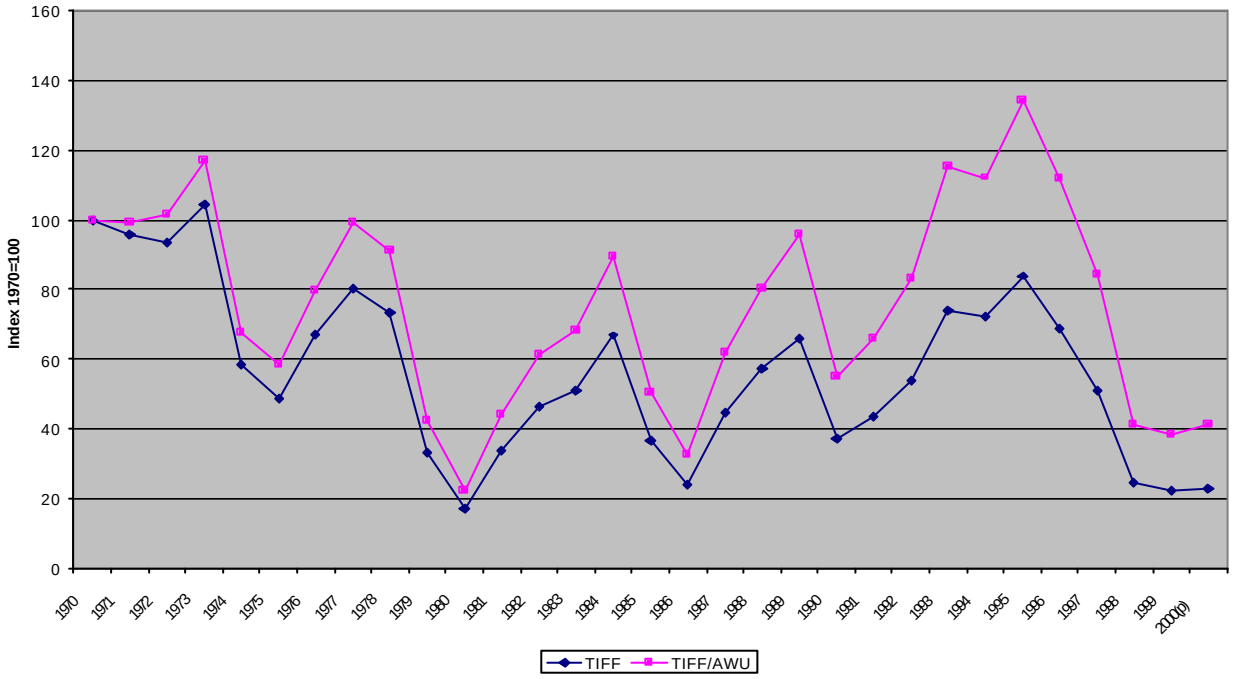
?? There is evidence of some acceleration in the rate of decline in the number of self-employed farmers in the industry in the period 1998 to 2000. However, preliminary results from the June 2001 census do not confirm this acceleration.

?? In 1975, agriculture, forestry and fishing contributed 9.0% of Northern Ireland civil employment compared with 5.3% in 2000. The contribution of agriculture alone in 2000 was 4.9%.

4. TRENDS IN AGGREGATE INCOME

?? Movements in Northern Ireland aggregate agricultural income tend to be cyclical, but it is, nevertheless, possible to discern an overall downward trend in Total Income from Farming (TIFF) in real terms over the past 30 years (see figure below). However, this effectively divides into three periods: one of income decline in the period immediately following entry to the EU; a slight upward trend during the 1980s and in the first half of the 1990s; and the period of steep decline in the second half of the 1990s. There was a small increase in 2000.

Figure 3: Total Income from Farming and Total Income From Farming per Annual Work Unit, Northern Ireland, 1970-2000 (real terms)



?? Pressure on agricultural incomes is a feature of developed economies. As their average income rises, people devote a decreasing proportion of their income to necessities, notably food. Over time, the productivity of the agricultural sector has improved and, together, these trends result in declining relative prices for farmers. Any underlying improvement in the industry's capacity to generate income must rely on efficiency gains. There are, however, considerable year-to-year fluctuations in income and short-term upward or downward trends, mainly reflecting exchange rate movements and short-term supply changes.

?? If account is taken of the decrease in the number of persons deriving a return from Total Income from Farming, the long-term decline in income per Annual Work Unit is less marked (see figure above) and, indeed, the trend was very noticeably upwards between the early 1980s and the mid-1990s.

?? Many farm households will, in addition to farm incomes, derive income from off-farm employment or from non-agricultural activities on the farm.

?? The level of aggregate agricultural income is tied very closely to the sterling:euro exchange rate. An analysis conducted by DARD in 1998 indicated that almost three-quarters of the variation in TIFF from 1981 to 1997 could be explained by fluctuations in the exchange rate used to convert support prices and subsidies from ECUs (the precursor of the euro) into sterling. Recent, more rigorous, analyses have been conducted as part of the Northern Ireland FAPRI Project[2]. This work indicates an almost exact inverse relationship between the combined net receipts of the beef, dairy and sheep enterprises and the value of sterling against the euro. That is, for each 1% appreciation of the pound against the euro, the net receipts of these three sectors fall by 1%.

?? This analysis helps explain both the atypically high peak in aggregate income over the period 1993 to 1996, when sterling was particularly weak against the ECU following the pound's departure from the EU Exchange Rate Mechanism (ERM) in September 1992, and the subsequent fall in income from 1995 to 1999 as sterling strengthened again. Other factors contributing to this income decline were the BSE crisis, falling demand in key export markets and declining world prices for many agricultural commodities. The downward trend in prices for all commodities in recent years is evident from Figures 4 to 10.

?? The sharp decline in income since 1995 occurred despite an increase in direct support payments to farmers. These have risen both in absolute terms and as a proportion of Gross Output (see Table 3). This is mainly as a consequence of the MacSharry reforms of the Common Agricultural Policy, agreed in 1992, and, more recently, the Agenda 2000 reforms of 1999, with new or increased subsidies being used to compensate farmers for a reduction in market support (import levies, export subsidies and intervention buying).

Table 3: Direct Payments as a Proportion of Gross Output

Year	Direct Payments	Gross Output	Direct Payments as % of Gross Output
	Total (£ million)	(£ million)	Per cent
1981	27.4	627.9	4.4
1984	56.6	812.6	7.0
1987	51.2	816.7	6.3
1990	63.3	947.4	6.7
1993	125.0	1,199.6	10.4
1996	261.1	1,379.1	18.9
1997	227.8	1,285.3	17.7
1998	205.1	1,128.1	18.2
1999	199.5	1,102.3	18.1
2000	198.4	1,092.8	18.2

[2] "The Impact of Different Exchange Rate Projections on the Northern Ireland Agricultural Sectors," QUB-FAPRI Outlook Conference, 21 March 2000. (FAPRI is the Food and Agricultural Policy Research Institute at the University of Missouri.)

Figure 4: Finished Steer Producer Prices 1995-2000

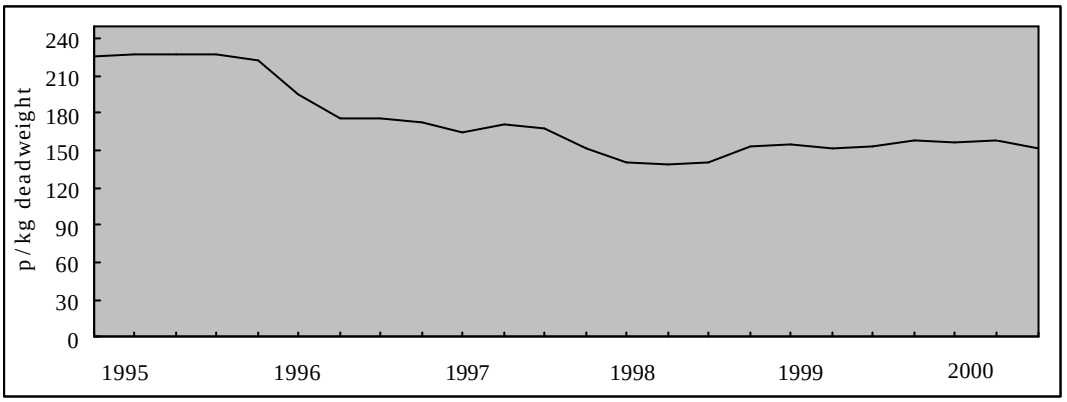


Figure 5: Milk Producer Prices 1995-2000

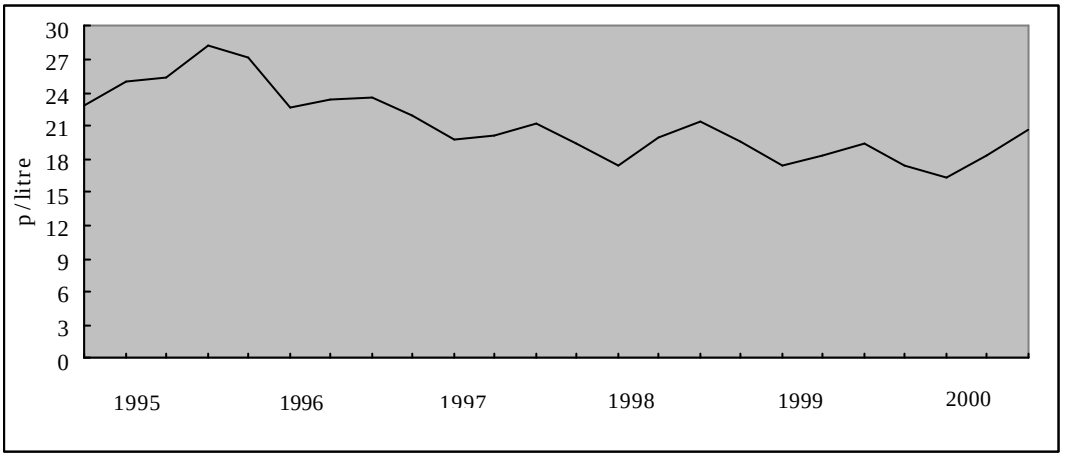


Figure 6: Finished Clean Sheep and Lamb Producer Prices 1995-2000

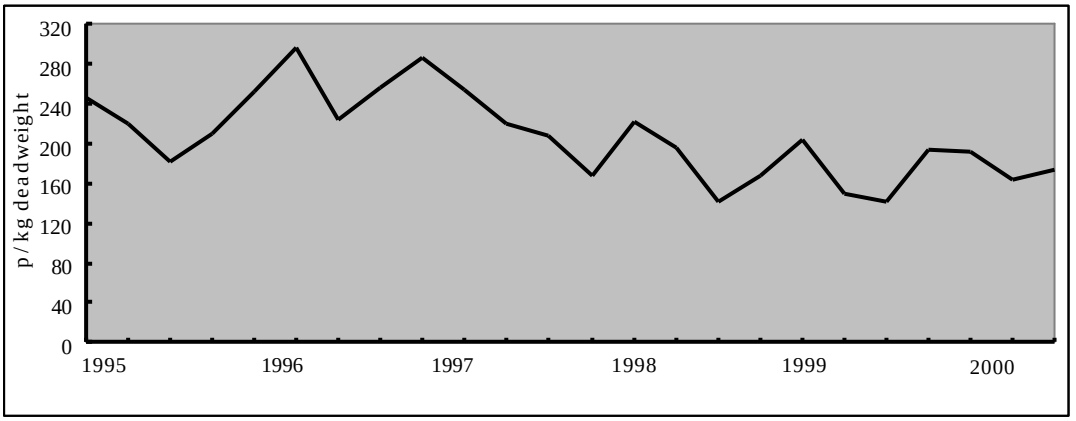


Figure 7: Finished Clean Pig Producer Prices 1995-2000

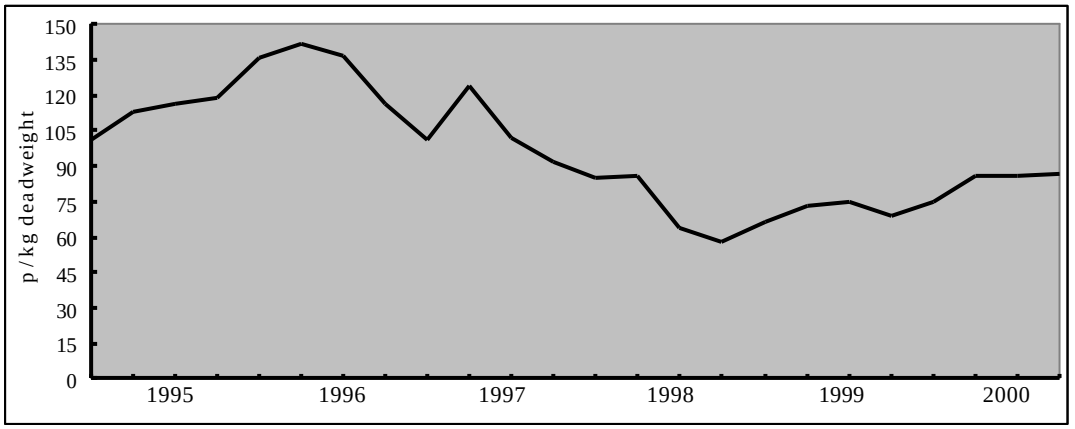


Figure 8: Broiler Chicken Producer Prices 1995-2000

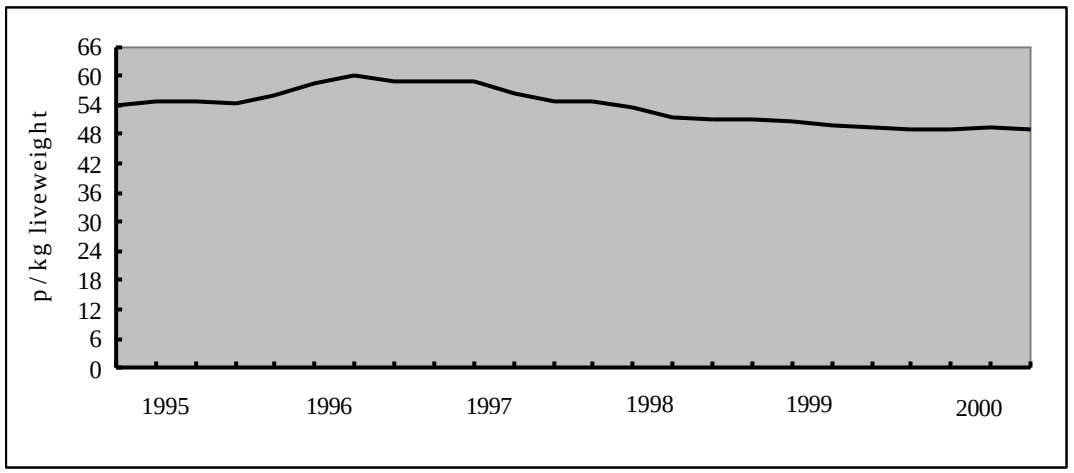


Figure 9: Egg Producer Prices 1995-2000

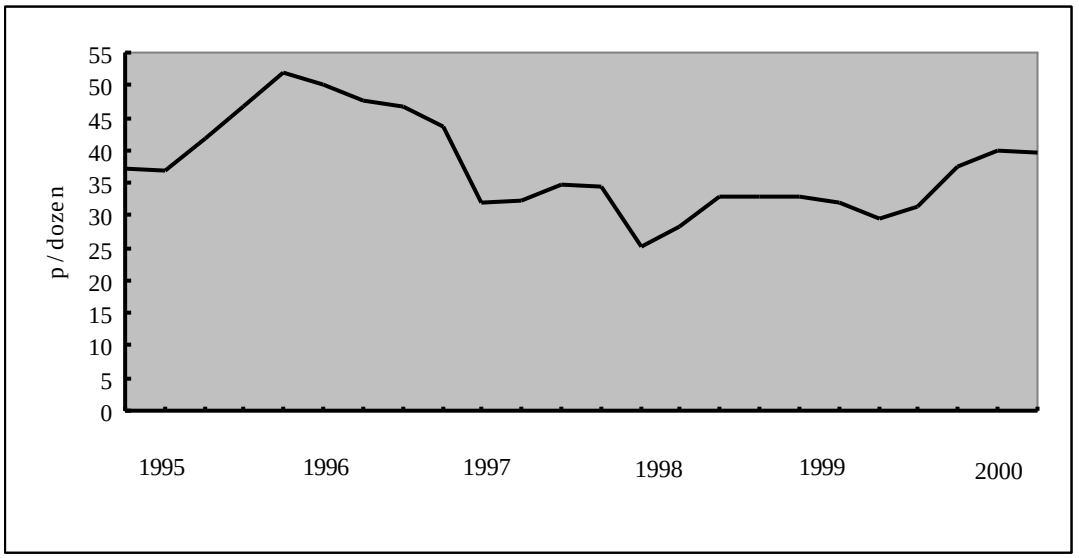
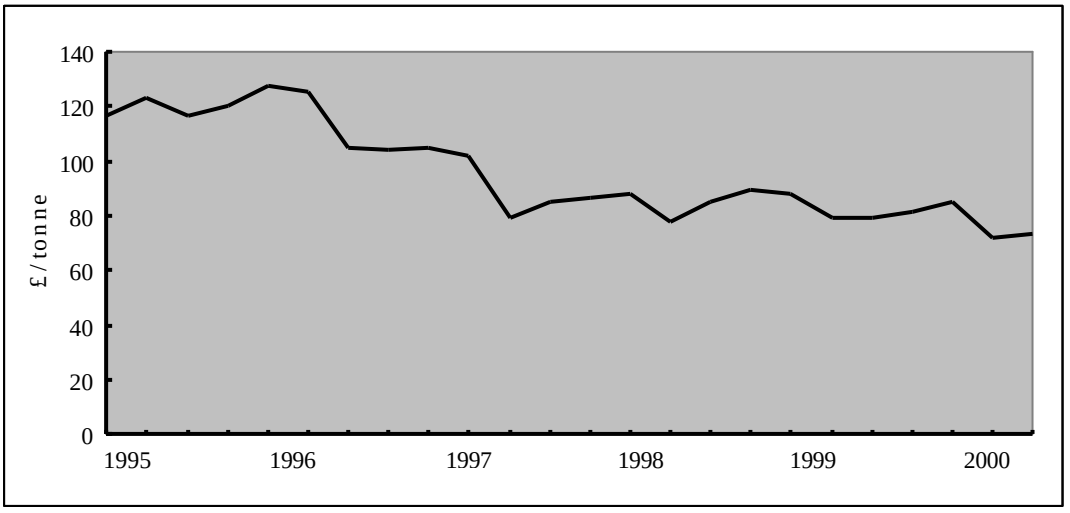


Figure 10: Barley Producer Prices 1995-2000



5. INCOMES AT FARM LEVEL[3]

?? A combination of adverse factors, including the appreciation of sterling and falling world commodity prices, resulted in farmers' incomes declining in each year between 1996/97 and 1999/00, albeit from historically high levels (see Figure 11 below).

?? Net farm incomes in 2000/01 are expected to have improved on all farm types other than Cereals. In absolute terms, average net income is expected to have increased by about £3000 per farm. However, for Lowland Cattle and Sheep farms, average net income, despite some improvement, is expected to have remained negative.

?? The improvements in incomes in 2000/01 have been due mainly to increased producer prices for milk (+5%), lambs (+10%), pigs (+25%) and potatoes (+50%). Rates of payment for Suckler Cow Premium, Beef Special Premium and Sheep Annual Premium all declined because of the appreciation of sterling against the euro, but cattle producers benefited from the introduction of the Bovine Slaughter Premium and Beef Heifer Slaughter Premium as a result of the Agenda 2000 reforms.

Table 4: Farm Incomes in Northern Ireland

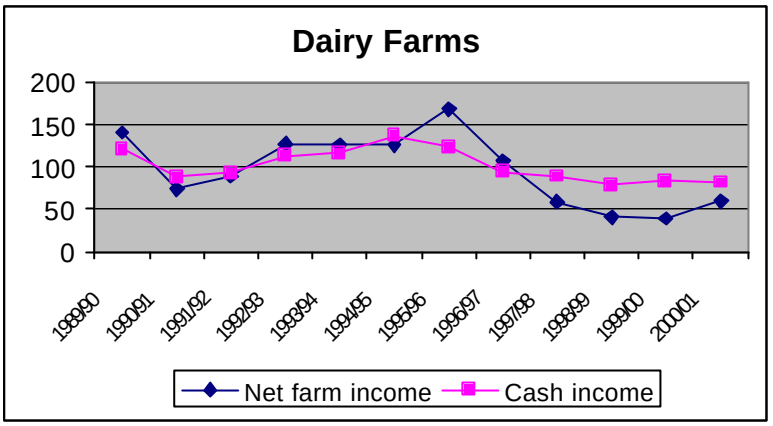
Farm type[1]	1998/99	1999/00	2000/01 (Est.)	1999/00 1998/99	2000/01 1999/00
	Net Farm Income, £ per farm			**Annual % change**	
Dairy	8,031	6,972	11,000	-13	+58
LFA Cattle & Sheep	304	-1,617	600		
All types	2,154	1,141	4,500	-22	+394
	Cash Income, £ per farm				
Dairy	29,327	25,476	27,900	-13	+10
LFA Cattle & Sheep	13,262	9,428	9,900	-29	+5
All types	18,952	15,248	17,200	-19	+13

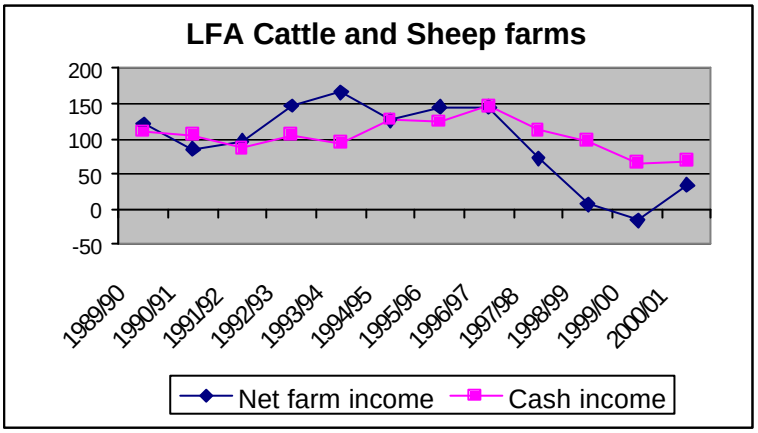
Source: Farm Business Survey

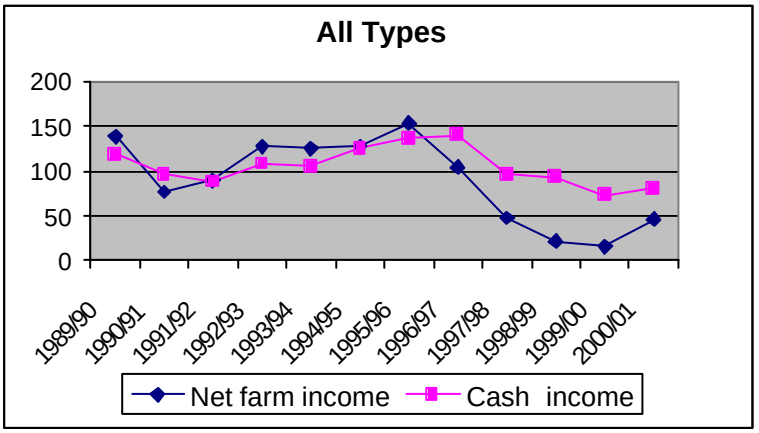
[1] Dairy and LFA Cattle and Sheep farms account for 76% of all farms in Northern Ireland.

[3] Incomes at farm level – based on the Farm Business Survey – are estimated according to different accounting conventions to those employed in the aggregate accounts referred to earlier in this note.

Figure 11: Trends in Farm Incomes in Northern Ireland
(Indices in real terms 1989/90 – 1991/92=100)







?? Three measures of income – net farm income, occupier's income and cash income – are used in official publications to indicate income trends. Net farm income represents the return to the farmer and spouse for their labour input and on the "tenant type" assets of the farm.

?? As a notional charge for rent on owner-occupied land and the imputed value of family labour are deducted in estimating net farm income, the concept "cash income" is used in making comparisons with other sectors of the economy. This is defined as the difference between cash receipts and outgoings. It provides a measure of the return to all of those with an entrepreneurial interest in the farm business and is probably closer than net farm income to how farmers themselves perceive their incomes. It is the closest of the agricultural income measures to earnings from employment in other sectors. Cash income figures tend to be higher than net farm income, e.g., in 2000/01 the average "All Types" net farm income is forecast to have been £4,500, whereas the average cash income for all farms is expected to have been £17,200.

?? As measures of farm income show considerable volatility, it is best if comparisons are based over a run of years. In the period 1995/96 to 1997/98, average cash income, measured in real terms, was 23% higher than that in the early 1990s, while average net farm income was little different. Recent declines have taken average cash income (in real terms) to a level 18% below that experienced in the early 1990s, while net farm income has fallen more substantially below the level of that period (Table 5).

Table 5: Percentage Changes in Farm Incomes in Northern Ireland

Farm type	Average 1995/96 to 1997/98 compared with average 1989/90 to 1991/92	Average 1998/99 to 2000/01 compared with average 1989/90 to 1991/92
Dairy		
Net farm income	+10	-54
Cash income	+18	-17
LFA Cattle and Sheep		
Net farm income	+20	-92
Cash income	+27	-22
All Types		
Net farm income	No change	-72
Cash income	+23	-18

Source: Farm Business Survey

?? The welfare of farmers will also depend upon their income from non-farming sources. Available information is presented in Table 6. The data exclude income earned by family members other than the farmer and spouse.

Table 6: Farm and Non-Farm Income[1]

All Farm Types	£ per farm, 2000/01
Cash income	17,200
Net farm income	4,500
Non-farm income[1]	4,600
of which:	
Employment & self employment	3,400
Investments, pensions & other	1,200
Non-farm income as % of cash income	27
Non-farm income as % of net farm income	102

Source: Farm Business Survey

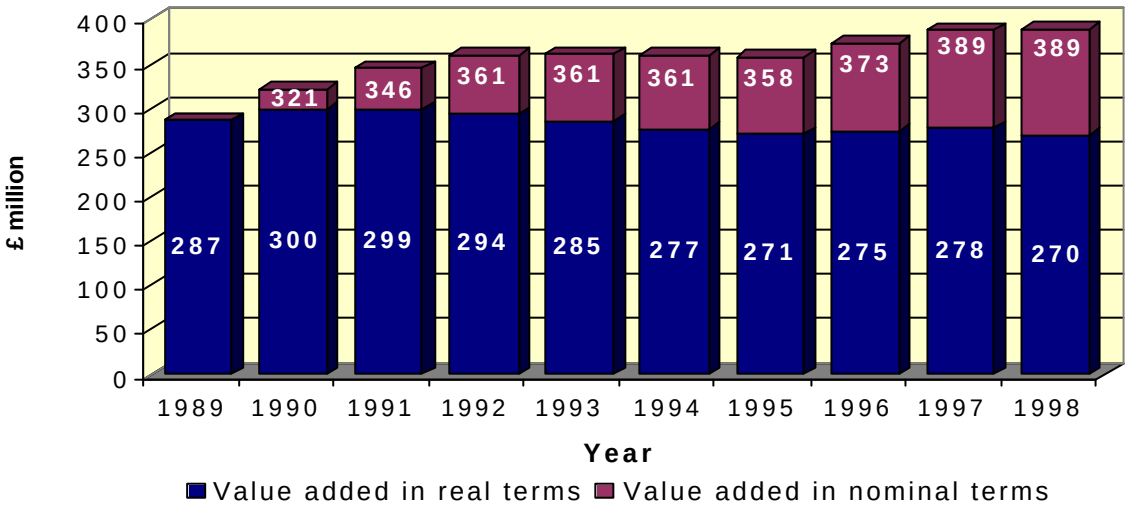
[1] Non-farm income includes income from employment and self-employment in non-farming activities. It includes social payments.

6. FOOD AND DRINKS PROCESSING SECTOR

?? In 1998, the most recent year for which data are available, the value of sales from the food and drinks processing sector was £2,162 million, with a gross value added of £389 million. The total number employed in the sector was 19,900 or 2.9% of total employment in Northern Ireland. The poultrymeat sub-sector is the largest employer of the 10 sub-sectors, with 3,900 employees in 1998.

?? The milk and milk products and beef and sheepmeat sub-sectors have been the two largest in terms of annual sales throughout the 1990s. In 1998 they jointly accounted for 44% of the total sector sales

Figure 12: Value Added in the Food and Drinks Processing Sector, 1989 to 1998.



?? In 1998, food and drink businesses accounted for 23% of Northern Ireland's manufacturing sales, 17% of external sales (including to Great Britain), 9% of the gross exports, almost 3% of total employment and 2.3% of gross value added. The contribution to net exports is likely to be greater than 9% because the output of the food processing sector has a lower import content than many other sectors of the economy.

?? In 1998, just over half (52%) of total sales were to destinations outside Northern Ireland. Of these, Great Britain was the largest and accounted for 35% of total sales. The Republic of Ireland was the second largest external market, with sales worth £157 million, some 7% of the total in 1998.

?? Throughout the 1990s, the sector has experienced declining profit margins. In 1998, profitability averaged 2.0% of sales compared with 4.8% in 1990. Only 5 of the 10 sub-sectors which comprise the processing sector generated a profit in 1998.