Situation and Outlook in Agriculture 2007/08

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CONTENTS

FARM INCOMES 2006

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Overview of 2006

Farm incomes returned to their traditional levels in 2006 following a once off boost in 2005 due to increased direct payments arising from the changeover to the Single Farm Payment (SFP) system. The Teagasc National Farm Survey (NFS) results showed that Family Farm Income (FFI) decreased from €22,459 per farm in 2005 to €16,680 in 2006 – a decrease of 25.7%. Gross output per farm declined by 11% with direct and overhead costs each declining by 2% and 0.3% respectively in 2006, resulting in a decline of 1.2% in total costs. When the decline of 25.7% in 2006 is combined with the increase of 44.4% in 2005, the net effect is that farm incomes have increased by 7.2% from 2004 to 2006.

The decline in farm income ranged from 5% on the Mainly Tillage System to 38% on the Cattle/Other System with a decline of 31% and 35% respectively on the Dairying/Other and Cattle Rearing Systems. Income on Specialist Dairy farms fell by 9% in 2006. The main reason for the large decline was the reduction in direct payments in 2006, as 2005 was an unusual year, when farmers nationally received a once-off increase in direct payments due to change over to the Single Farm Payment system. Nationally average direct payments declined from €21,101 in 2005 to €16,346 per farm in 2006, a decline of €4,755 per farm or 22.5% in direct payments. The largest decline in direct payments occurred on the Cattle Other System, a decline of €7,650 or 33%, followed by a decline of €6,557 and €4,418 on Dairying and Other and Cattle Rearing systems respectively. In 2006 direct payments contributed 98% of FFI - the highest recorded since the National Farm Survey commenced i.e. only 2% of FFI from the marketplace.

Net new investment accounted for €5,989 per farm – an increase of 1% on 2005 and accounted for 36% of FFI. The incidence of off-farm employment of holder and/or spouse increased from 55% in 2005 to 58% in 2006, with the holder having an off-farm job on 42% of all farm nationally.

Trends in Farm Income

In the Teagasc National Farm Survey, the principal measure of the income which arises from the year's farming activities is Family Farm Income per Farm. Table 1 shows average Family Farm Income per farm from 2000 to 2006

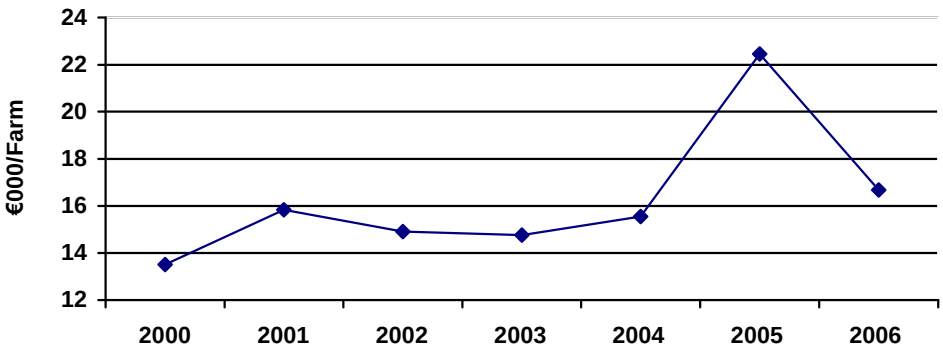
Table 1: Family Farm Income (FFI) per farm 2000-2006

Year	FFI (€/Farm)
2000	13,500
2001	15,840
2002	14.917
2003	14,765
2004	15,557
2005	22,459
2006	16,680

Source: Teagasc National Farm Survey

The data shows farm income in 2006 was 24% above that for 2000 in current terms and the trend in FFI is shown in Fig 1. The main reason for the increase shown from 2004 to 2005 years was the arrears of direct payments from 2004 due to overlapping direct payment support systems. However this increase was reversed in 2006 as shown in Fig. 1.

Figure 1: Family Farm Income per Farm (€) 2000- 2006



Average Family Farm Income

Income discussed so far relates to average farm income but it is important to point out that the average national FFI figure conceals the wide range of variation that exists across the different farm systems and sizes. The data in Table 2 summarises the average levels of Family Farm Income per farm which were achieved in 2006 across the range of farming systems and size groups. When evaluated in conjunction with other NFS data the following conclusions can be drawn.

- As expected, there is a positive relationship between farm size and FFI. In many instances, particularly in the intermediate size groups, income per hectare also increases with farm size. In these circumstances, smaller farms cannot compensate for their lack of scale and hence, with the exception of the Specialist Dairy system, extremely low incomes result in the less than 20 hectare group.

- Similar to previous years results, the average FFI on the Dairy and Tillage systems are far higher than those on the drystock based systems. Average farm income on the larger Cattle Rearing and Cattle Other Systems was €49,699 and €44,592 respectively per farm, compared to €81,573 on the largest Specialist Dairying System.

- The average FFI for many sub-groups, especially in the Cattle and Sheep systems is below the average agricultural wage rate of €16,177 for 2006, so that those farm families do not receive a full return for their labour and no return on management or investment.

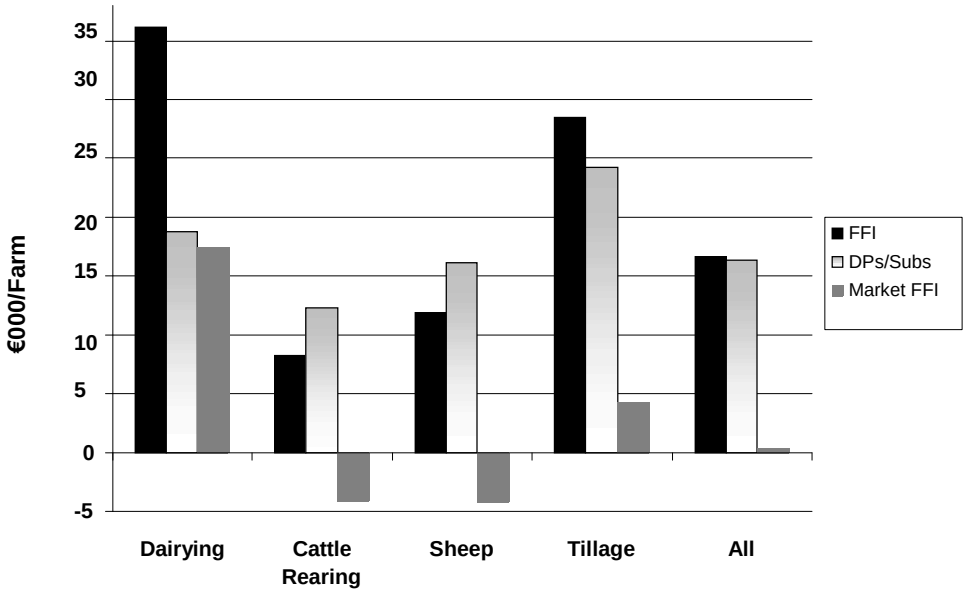
Table 2: Family Farm Income by System and Farm Size (UAA) – 2006

Size (ha)	<10	10-20	20-30	30-50	50-100	>100	All
				€/Farm			
Dairying	-	11112	18294	39141	55089	81573	36221
Dairying/Other	-	-	-	17066	42026	65598	24774
Cattle rearing	-	4915	4809	13791	20436	49699	8291
Cattle other	3600	4639	7823	15815	28944	44592	11292
Mainly sheep	-	6210	11024	15307	22900	41483	11902
Mainly tillage	-	-	-	21061	40550	81322	28536
All	3392	5441	8837	21442	38241	63381	16680

Source: Teagasc National Farm Survey 2006

The dependency of each system on direct payments is shown by excluding direct payments from FFI, resulting in a market based FFI (Fig. 2) by farm system. It is clearly evident that market output for the drystock systems is not sufficient to cover production costs and that a major contribution of direct payments is needed to make up the shortfall. In the current decoupled situation farmers will now need to seriously examine their production systems in an effort to cut costs and at a minimum retain their Single Farm Payment.

Figure 2: FFI, Direct Payments and Market FFI by Farm System – 2006



Source: Teagasc National Farm Survey

Analysis by Farming System

Average FFI per farm on the Specialist Dairy farms declined by almost 9% in 2006 to €36,221. Output increased by only 1% with output from milk sales increasing by 1.1%. Direct payments for this system declined by just under 1%. Direct and overhead costs both increased by 8% and 6%, respectively.

- In the Dairy/Other System, FFI per farm declined by 31% to €24,774. This resulted from a combination of lower direct payments (23%) combined with increase in overhead costs. Market based output declined by 7%

- Income on Cattle Rearing System was €8,291 per farm in 2006, a decline of 35% on 2005 figure of €12,729. Market based gross output increased by over 4% to €12,828, whilst there was an increase of 4% and 6% respectively in direct costs and overhead costs. The decline of 25% in direct payments of €4,148 per farm in 2006 was the main reason for the reduced FFI.

- Income on the Cattle Other System declined by 38%, mainly as a result of direct payments declining by €7,650 per farm or 33%. Direct and overhead costs increased by 3% and under 1% respectively. For the

2006 year gross output declined by 17% to contribute to an overall FFI per farm of €11,292. FFI on both the Cattle Rearing System and the Cattle Other System was still only 26% and 35% respectively of the Average Industrial Wage in the 2006 year (€32,432)

- Income on the Mainly Sheep System declined from €15,935 in 2005 to €11,902 in 2006, a decline of 25%. Gross output for this system declined by 15% while market based gross output declined by 10%. There was a 19% decline in direct payments for the Sheep System, with direct costs declining by 11% and overhead costs also declining by 2%.

- Average FFI for the Mainly Tillage System declined by 5% in 2006 to €28,536 in comparison to €29,914 in 2005. The Mainly Tillage System includes farms which can have a high proportion of output from livestock, as well as from crops, as described in Appendices B and C. Direct payments declined by 18%. Both direct and overhead costs on Tillage farms declined by 6% and 2% respectively in 2006. This is the third consecutive year that both direct and overhead costs declined on Tillage farms.

The above summary in relation to farming systems refer to changes in per farm output, costs and incomes and does not allow for year to year changes in farm size. However the effect of changes in farm size is shown in Table 3, which shows average return per hectare of land farmed across the different farming systems. Average FFI/Ha for all systems in 2006 at €470 showed a decrease of 22% on 2005 figure of €602. As in previous years dairying yielded the highest FFI/ha, followed by Tillage with Cattle Rearing System yielding the lowest returns.

Table 3: Family Farm Income per Ha 2005/2006

	2005	2006	% Change 2005/06
	€/Ha		
Dairying	902	814	- 10
Dairying/Other	691	511	- 26
Cattle Rearing	466	300	- 36
Cattle Other	603	379	- 37
Mainly Sheep	405	353	- 13
Mainly Tillage	499	506	+ 1
All Systems	602	470	- 22

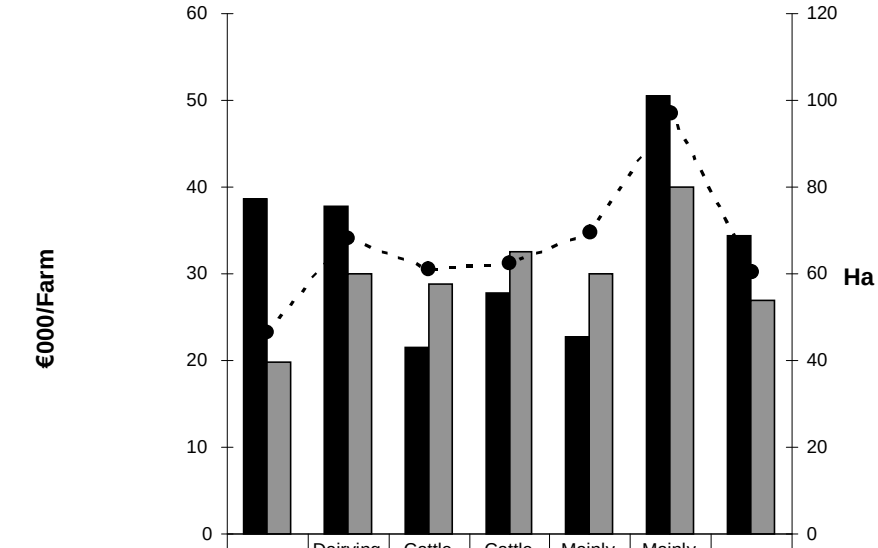
Source: Teagasc National Farm Survey

Full-time and Part-time Farms

In the NFS, Full-time farms are defined as farms which require at least 0.75 standard labour units to operate, as calculated on a Standard Man Day basis (SMD). Farms are therefore divided into Full-time and Part-time on

the basis of the estimated labour required to operate their business as distinct from labour available which is often in excess of that required. The presence or absence of an off-farm job is not taken into consideration in the definition.

Fig. 3: FFI, Direct Payments for Full-Time farms by farm system - 2006



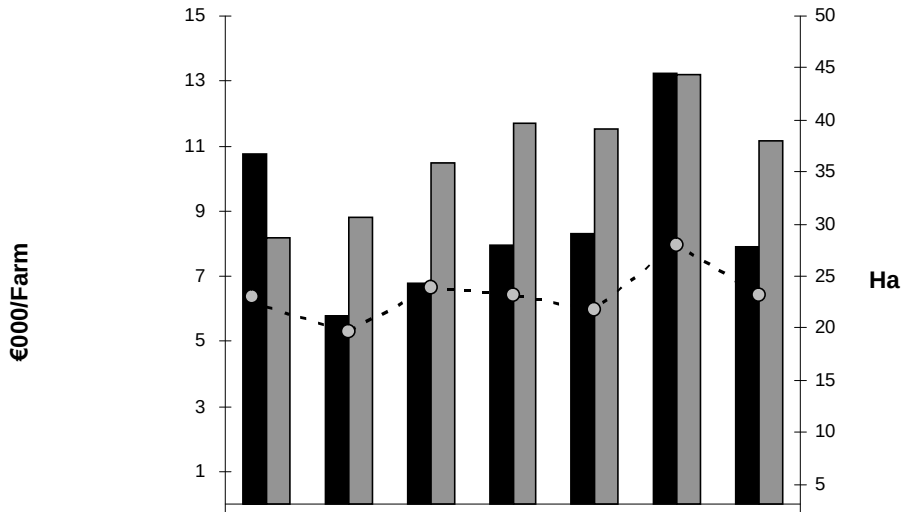
	Dairying	Dairying /Other	Cattle Rearing	Cattle Other	Mainly Sheep	Mainly Tillage	All
FFI	38690	37780	21500	27779	22765	50443	34486
Direct Payments	19818	29998	28756	32522	29932	39958	26873
Farm Size (Ha)	46.6	68.3	61.1	62.3	69.4	96.9	60.5

Full-time farms therefore represent the larger more commercial sector of farming and in 2006 accounted for almost 33% (or 37,200) of all farms represented. Data in Fig. 3 details FFI, direct payments and farm size for the full-time farms by farming system. Fifty six per cent of Full-time farms were in the two dairying systems, with a further 8% in the Mainly Tillage System and the remaining 36% in the drystock systems.

The average FFI on Full-time farms in 2006 was €34,486 compared to €40,485 in 2005 – a decrease of 15%. The Tillage and Dairying systems had the highest FFI per farm at €50,443 and €38,690 respectively, followed by Dairying/Other at €37,780. On 15% of Full-time farms, the farmer had an off-farm job, whilst on 41% of farms the spouse had an off-farm job. Overall on 49% of full-time farms either the spouse or holder had off-farm employment.

Details of FFI, direct payments and farm size for Part-time farms are detailed graphically in Fig. 4.

Fig. 4: FFI, Direct Payments for Part-Time farms by farm system - 2006



	Dairying	Dairying/ Other	Cattle Rearing	Cattle Other	Mainly Sheep	Mainly Tillage	All
FFI	10751	5790	6784	7928	8296	13235	7899
Direct Payments	8190	8817	10475	11710	11533	13200	11154
Farm Size (Ha)	22.1	19.6	23.8	23.2	21.8	28	23.2

Approximately 67% (or 75,300) of farms were part-time in 2006, with 87% in the drystock systems. The average FFI for all part-time farms was €7,899 (€11,372 in 2005) and this ranged from €13,235 on the Tillage System to €6,784 on the Cattle Rearing system. The average cash income on part-time farms was €11,214 in 2006 compared to €13,583 in 2005. Average direct payments and subsidies were €11,154 in 2006, or 141% of FFI. This compares to 128% of FFI in 2005, reflecting the general situation on drystock farms where output from the market place is insufficient to cover total production costs.

On 63% of these Part-time farms, either the farmer or spouse had off farm employment (58% in 2005). On 94% of farms there was another source of income – either from off farm job, pension or social assistance. The farmers on part-time farms were older (56 years) than those on full-time farms (52 years) and 63% were married compared to 77% on full-time farms.

Analysis of REPS Farms

An estimated 48% of farms received REPS payments in 2006. The average FFI on those farms receiving REPS at € 17,713 was 13% higher than FFI of €15,744 on non-REPS farms. Over 76% of farms which participate in REPS are in the three drystock systems, namely Cattle Rearing, Cattle Other and Mainly Sheep. Unlike previous years FFI was actually higher on REPS Specialist Dairy farms than their non-REPS counterparts, €38,546 as opposed to €35,145. Income on Dairy and Other farms and Tillage farms was higher on the non-REPS farms. On REPS cattle farms (Cattle Rearing and Cattle Other) income was higher than on non-REPS farms with the REPS payment contributing up to 74% of the difference between FFI on REPS and Non-REPS farms in these systems. In 2006 income per farm for the Mainly Sheep system was higher on REPS farms than non-REPS farms, €15,066 as opposed to €6,647 on non-REPS, a difference of €8,419. A more detailed analysis of REPS farms will be compiled and published later in 2007.

The following tables present the key information in relation to farms participating in REPS (Table 4(a)) and those not participating in REPS (Table 4(b)).

Table 4(a): FFI, Direct Payments on REPS farms by farm system - 2006

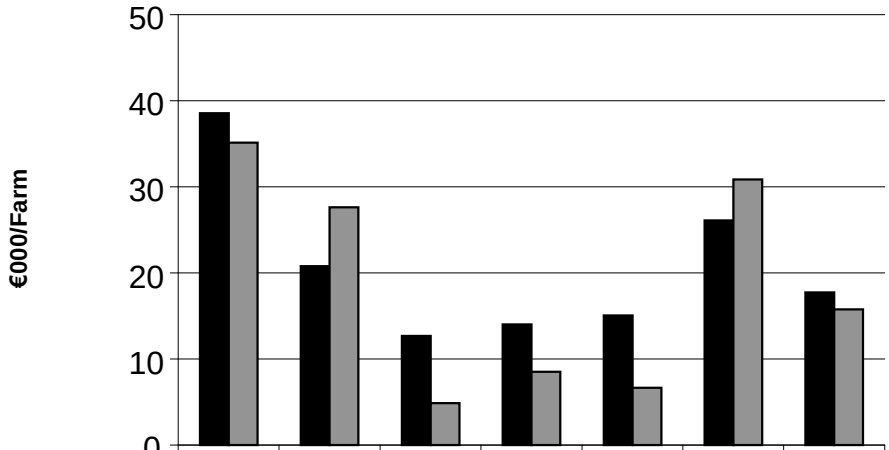
	Dairying	Dairying/ Other	Cattle Rearing	Cattle Other	Sheep	Tillage	All
	€/Farm						
FFI	38546	20792	12655	13986	15066	26093	17713
Dir. Payments	23561	22001	17943	19722	20516	25015	20429
REPS Contrib.	6952	6162	5594	5384	6481	6866	6007
Farm Size (Ha)	44.9	41.1	32.5	32.7	37.7	46.7	36.6

Table 4(b): FFI, Direct Payments on Non-REPS farms by farming system - 2006

	Dairying	Dairying/ Other	Cattle Rearing	Cattle Other	Sheep	Tillage	All
	€/Farm						
FFI	35145	27608	4867	8500	6647	30852	15744
Dir. Payments	16584	20949	7957	10589	8816	23434	12642
Farm Size (Ha)	44.3	53.8	23.7	26.8	7.1	65.5	34.5

Source: Teagasc National Farm Survey

Fig. 5: FFI for REPS and Non-REPS farms by farm system - 2006



	Dairying	Dairying/ Other	Cattle Rearing	Cattle Other	Mainly Sheep	Tillage Systems	All
FFI - REPS	38546	20792	12655	13986	15066	26093	17713
FFI - Non-REPS	35145	27608	4867	8500	6647	30852	15744

The difference in Family Farm Income between the REPS and Non-REPS farms is shown graphically in Fig. 5.

Gross Output and Costs

The efficiency and competitiveness of Irish agriculture can be examined by calculating the costs of production for the main products. On a national basis 66% of gross output was absorbed by total costs in 2006. If direct payments are excluded from gross output, then costs as a percentage of the market based value of gross output in 2006 was 99%. This has increased from 96% and 94% in 2005 and 2004 respectively; highlighting the fact that costs are now absorbing almost all of the market based gross output.

In 2006 only 22% of farms were capable of keeping total costs below 50% of output, compared to 34% in 2005, whereas 41% of farms had costs which were above 70% of output. Costs as a percentage of output have been increasing since 2000. This is a worrying trend as it reflects what occurs with rising costs and static output, resulting in deteriorating incomes for the agricultural sector.

INVESTMENT IN AGRICULTURE 2007/08

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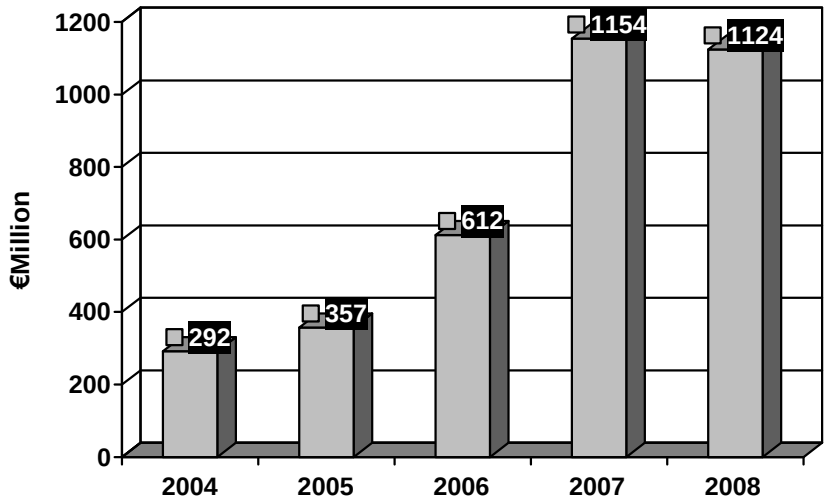
Farmers invest a high proportion of their net income in farm buildings, machinery, quotas, land and other miscellaneous capital items. The National Farm Survey data show that in 2006 they invested 36 percent of their net income in their farm businesses. Every autumn Teagasc carry out a survey to (i) determine farmer's actual investment expenditure in the current year (2007) and (ii) to ascertain farmers' investment intentions or plans for the coming year (2008). The survey is conducted on farmers participating in the National Farm Survey (NFS) and at the end of 2007 the survey was carried out on a random sample of almost 1000 farms, representing 111,360 farms nationally. Results are compared to investment plans at the same time last year i.e. planned investment for 2007 versus planned investment for 2008. In late 2007 over 32,540 farmers stated that they planned on investing an average of €34,500 per farm in 2008, giving a total investment of €1,124 m. This is in comparison to last years survey results showing 32,300 farmers planning an average investment of €35,650 per farm in 2007 giving a total investment of €1,154 m (Fig. 1).

Figure 1: Planned Farm Investment 2004 – 2008



Source: Teagasc National Farm Survey

Fig. 1 shows the planned investment of €1,124 m on farms for 2008 remains high relative to the 2004 to 2006 period and is only three percent below that planned for 2007 of €1,154 m.

Type of Farm Investment

The breakdown of planned investment by category of investment is shown in Table 1 for 2008 and 2007.

Table 1: Farm investment planned for 2008 versus planned 2007 investment by investment type

	2008		2007		Change	
	€m	%	€m	%	€m	%
	144	13	113	10	31	+27
Machinery						
Buildings	912	81	948	82	-36	-4
Land	34	3	62	5	-28	-45
Milk quota	17	2	14	1	3	+21
Other	17	2	16	1	1	+6
Total	**1,124**	**100**	**1,154**	**100**	**-30**	**-3**

Source: Teagasc National Farm Survey

Farm buildings accounted for the bulk of planned farm investment in both years, but there was a decline of €30 million or 3 percent in total planned investment in 2008 over 2007. Planned investment in farm buildings in 2008 was €912 m or 81 percent of total investment, showing a decline of €36 million on that planned for 2007. Planned investment in farm machinery accounted for a further 13 percent. Possible reasons for the increase in planned investment in farm buildings in 2007 and 2008 are the introduction of the Nitrates Directive, cross compliance, increased participation in REPS and the closure of the Farm Waste Management Scheme at the end of December 2006 whilst 12,700 farmers have applied for the Farm Improvement Scheme (FIS) which closed on 31 October 2007. All the above have contributed to the increase in overall planned farm investment in 2007 and 2008.

Farm Investment by Farm System

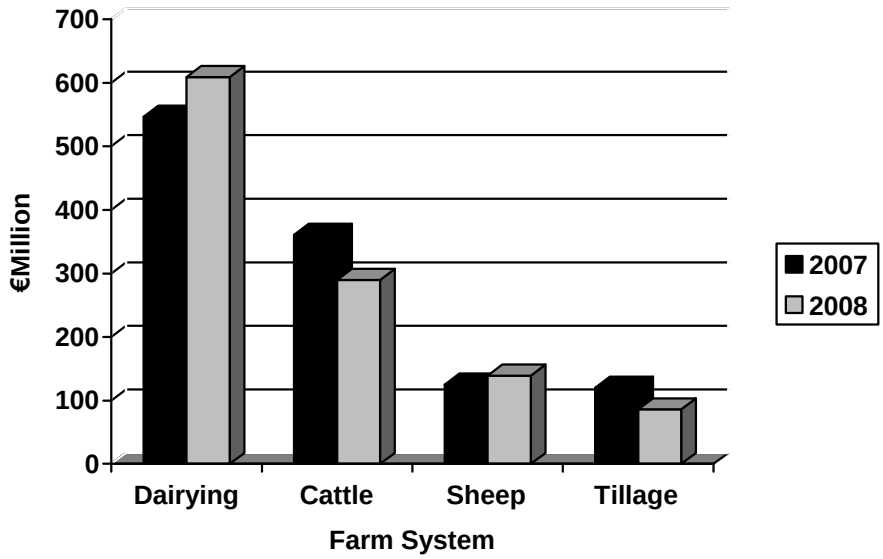
Dairy farmers accounted for the bulk of planned investment, 54 percent in 2008 and 48 percent in 2007, with the cattle systems accounting for 26 and 31 percent in 2008 and 2007 respectively (Table 2). Planned investment by system of farming is also illustrated in Figure 2.

Table 2: Planned farm investment by system of farming 2007 and 2008

	2008		2007	
	€m	%	€m	%
Dairying	609	54	547	48
Cattle	290	26	361	31
Sheep	139	12	125	11
Tillage	86	8	120	10
Total	**1,124**	**100**	**1,154**	**100**

Source: Teagasc National Farm Survey

Figure 2: Planned Farm Investment by Farm System 2007 and 2008



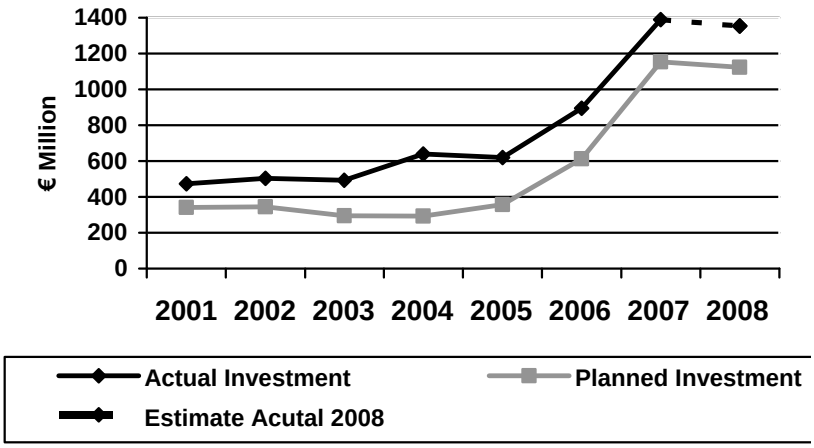
Source: Teagasc National Farm Survey

Actual Investment versus Planned Investment

The actual investment by farmers in 2007 was also obtained in the autumn survey conducted on the NFS sample and was compared to their planned investment of the previous autumn. For many reasons actual farm investment seldom turns out as planned and 2007 was no exception in that the actual investment by farmers in 2007 was higher than that planned viz. 50,030 farmers actually invested a total of €1,390 m or €27,650 per farm, while planned investment for 2007 was €1,154 m. The discrepancy was due to more farmers investing, even though average investment per farm was lower at €27,650 compared to planned investment of €35,650 per farm.

In the past farmers have always understated planned investment in machinery and 2007 was no exception with an actual investment in machinery of €489 m compared to that planned of €113 m. For 2008, farmers plan to invest €144 m but again we anticipate increased machinery investment. The number of new tractors registered at local authority centres reached an all time high in 2007 and could be as high as 5,200 for the full year compared to approximately 2,500 per annum in the early to mid 2000s. Machinery investment on dairy farms include milking machines, water heaters, and milk cooling equipment etc. as well as tractors, jeeps and other non-power machines. The planned investment in farm buildings in 2007 was €948 m, whilst the actual investment was only €774 m i.e. an 18 percent shortfall. This could be due to the difficulty in sourcing suitable builders but could also reflect farmers having second thoughts on investing in their farm businesses. Actual investment in milk quota in 2007 was €26 m compared to that planned of €14 m. Actual farm investment is compared to planned investment from 2001 to 2008 in Figure 3.

Figure 3: Actual v Planned Farm Investment 2001-2008



Source: Teagasc National Farm Survey

Overall the survey results show that farmer's investment plans for 2008 are similar to the high levels planned for 2007 and considerably higher than those for previous years.

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The authors wish to thank the farmers participating in the National Farm Survey who co-operated in this study, Teagasc's farm recording staff who carried out the survey, and Rural Economy colleagues for their advice and contributions.

SITUATION AND OUTLOOK FOR DAIRYING 2007/2008

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1. Introduction

The year 2007 has been an extraordinary one for the dairy sector both in Ireland and internationally. A number of factors, economic, policy and climate related, have converged to produce price increases that have surpassed expectations for the dairy sector. Concerns relating to oil security together with political tensions in the Middle East, have led to oil prices reaching their highest level in real US dollar terms since the early 1980s.

High energy prices coupled with an increasing political focus on the climate change issue, have resulted in an epidemic of 'biofuel friendly' policies across the world, most notably in the US. In key exporting countries this has led to an increase in cereal area, but at the same time a significant shift of cereals out of food and feed use and into fuel production. As a result animal feed prices have risen and in turn this has negatively affected the cost of dairy production.

Adverse weather conditions, in conjunction with increasing input prices, have led to a fall off in supply of dairy products, milk powders especially, on the world market. The ongoing drought in the Southern hemisphere is having serious detrimental effects on the supply of dairy products from Australia in particular. Furthermore, world stocks generally have been depleted and countries which traditionally held significant stocks no longer have the capacity to release large volumes of product onto world markets to stabilise prices. Simultaneously, demand for dairy products continues to increase. Strong macroeconomic growth, in Southeast Asia in particular, is contributing to increased consumption of dairy products. All of these factors combined have led to sharp increases in prices for dairy products in 2007.

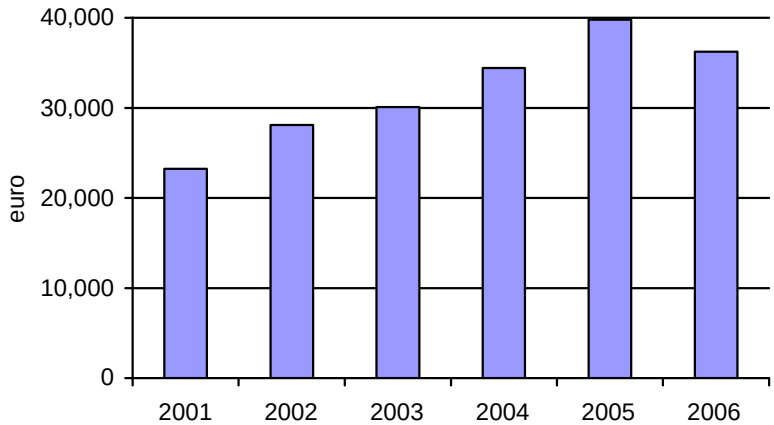
This paper will consider whether the price increases of 2007 represent a one year spike or whether the high prices experienced this year will continue into 2008. The costs of production on dairy farms in Ireland will also be considered to arrive at an estimate of dairy enterprise profit for 2007 and a forecast for 2008. This paper uses Irish National Farm Survey (NFS) data (Connolly et al 2007) to conduct a review of the financial performance of dairy farms. The paper begins with a review of the dairy farm sector in 2006. Following this, the milk price and key input costs will be

estimated for 2007 to produce an estimate of profit for the current year. In the concluding sections of the paper, the outlook for 2008 will be presented. Unless otherwise stated all figures referred to are in nominal terms and all income and profit estimates do not include decoupled compensation.

2. Review of the Economic Performance of Dairy Farms in 2006

Income on specialist dairy farms has increased year on year from 2001 to 2005 but fell back slightly in 2006. Figure 1 shows the average farm income on specialist dairy farms as recorded by the NFS. The average family farm income in 2006 was €38,000 compared to €23,000 in 2001. Incomes in 2005 reached unprecedented levels because of the timing of subsidy payments, some 2004 payments were paid in arrears in 2005 along with the 2005 entitlement to the Single Farm Payment.

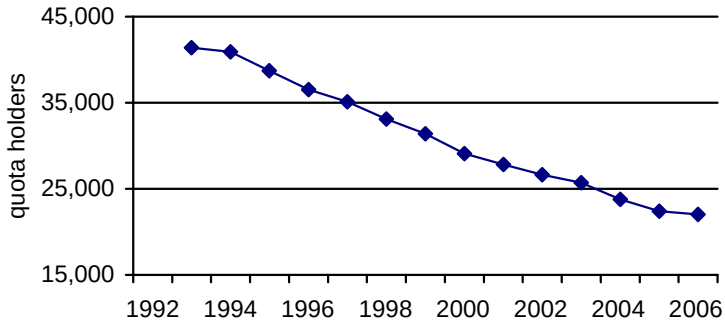
Figure 1: Income on Specialist Dairy Farms in Ireland: 2001 to 2006



Source: National Farm Survey (various years)

The increase in average dairy farm incomes in recent years, is mostly attributable to an increase in milk deliveries, as profit per litre of milk produced has remained relatively static or decreased slightly. Despite the constraints of the milk quota system, declining dairy farm numbers have facilitated an increase in milk production per farm. According to Department of Agriculture Food and Fisheries (DAFF) figures (2007) there were approximately 22,000 active dairy producers in Ireland in 2006 compared to 28,000 in 2001 and a significantly larger 42,000 active suppliers ten years earlier in 1993. Figure 2 presents DAFF data on dairy farm numbers.

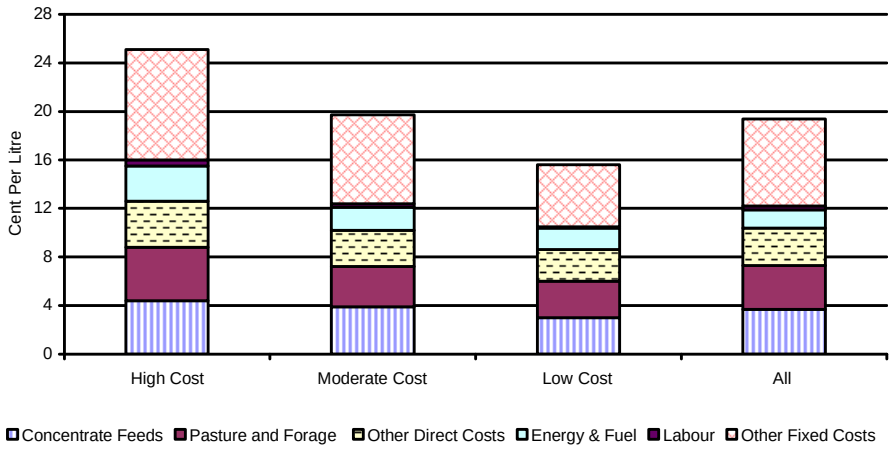
Figure 2: Number of Active Milk Quota Holders in Ireland 1992 to 2006



Source: Department of Agriculture (2007)

To place the economic performance of dairy farms in 2007 in context, we first review the financial performance of farms in 2006 using NFS data. Figure 3 disaggregates the total costs of production in 2006 for all creamery milk suppliers. To examine the variation in cost efficiency that exists in dairy farming, the weighted sample of 20,500 creamery milk suppliers are classified into three groups. In 2006 the national average cost of production was approximately 20 cent per litre (CPL), which was about 5 percent higher than the 2005 level. Farms are classified on the basis of production costs; the best performing one third of farms are labelled low cost, the middle one third are moderate cost and the poorest performing one third of dairy farms are classified as high cost. The variation in costs across farms is apparent from Figure 3. The total cost of production on high cost farms in 2006 was 25 CPL, compared to 20 CPL on moderate cost farms and just 16 CPL on low cost farms. Across the range of creamery milk producers the difference in costs, between the best performing and poorest performing farm groupings, was 9 CPL in 2006.

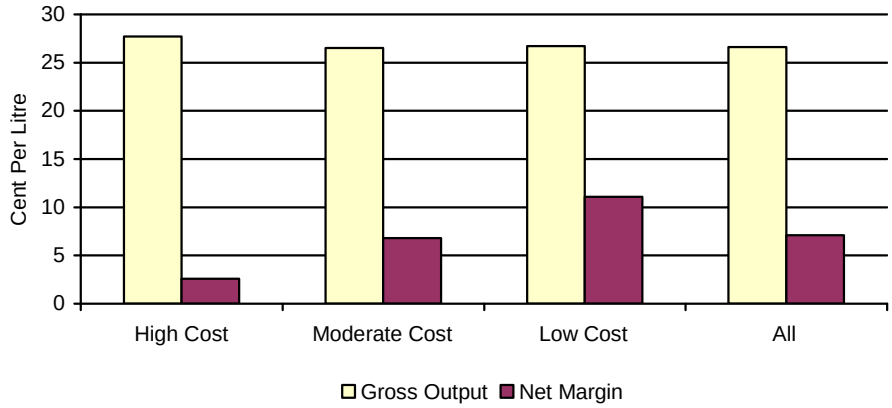
Figure 3: Variation in Total Costs of Milk Production across all Creamery Milk Producers in Ireland in 2006



Source: National Farm Survey Data (2006)

Purchased *concentrate feeds* and *pasture and forage costs* represent between 33 and 39 percent of total costs of production on dairy farms, comprising a higher proportion on low cost farms. Purchased concentrate feed costs varied from 3 CPL on low cost farms in 2006 to 4.3 CPL on high cost farms. The other direct costs category includes *veterinary, AI* and *hire of machinery*. These costs ranged from 2.6 CPL to 3.8 CPL from low to high cost farms. Fixed costs are broken into three categories; *energy and fuel* (including car, electricity, phone and all fuel used on the farm), *labour* (including casual and permanent hired labour) and *all other fixed costs* (including depreciation and maintenance of machinery, buildings and land). Energy and fuel costs varied from 1.8 CPL to 2.8 CPL on low to high cost farms. Labour comprises a very small proportion of fixed costs, less than 2 percent of total costs on all farms. However, labour is the cost item that exhibits most variability between farms. The labour costs on high cost farms are over 3 times higher than on low cost farms. Finally, all other fixed costs is the largest cost category, ranging from 9 cent per litre on high cost farms to 5 cent per litre on low cost farms. Figure 4 presents gross output and net margin for these farm cost groupings.

Figure 4: Variation in Net Margin across all Creamery Milk Producers in Ireland in 2006



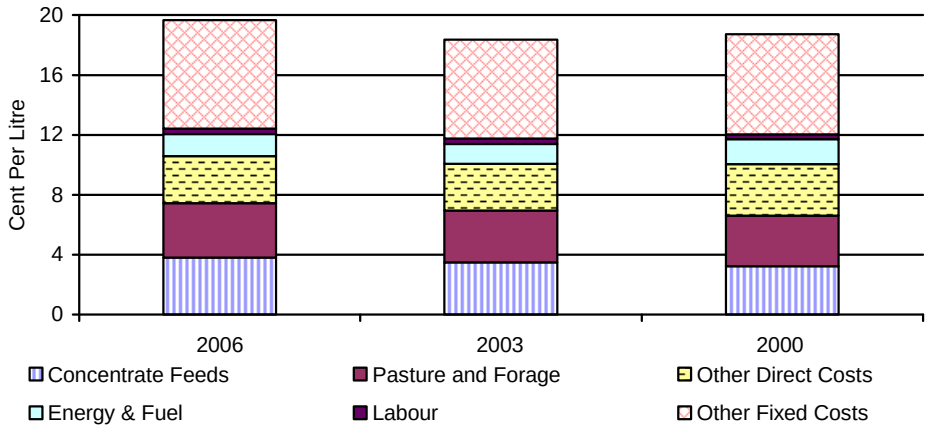
Source: National Farm Survey Data (2006)

Gross output includes the value of milk and calf sales less replacement costs. Calf sales are worth on average 3 cent per litre with only small variation across farms. Replacement costs have typically been in the order to 2.5 to 2.7 CPL so the profit from calf sales is almost completely eroded by replacement costs. The value of milk sales typically accounts for 95 percent of gross output on the farm. As is evident from Figure 4 the variation in gross output across farms is only marginal, only 3 percent difference between groups.

The variation in production costs has obvious implications for profit levels. The net margin on low cost farms in 2006 was 11 CPL compared to the middle group of farmers at 6.8 CPL and the poorest performing farms at just 2.6 CPL. This means that the difference in profit between low and high cost farms for a typical 250,000 litre farm was €21,250 in 2006.

In terms of costs, it is interesting to establish whether 2006 was a typical year or a “high cost” year for dairy farmers. Figure 5 presents a review of costs of production in 2000, 2003 and 2006 for all creamery milk suppliers.

Figure 5: Variation in Total Costs of Milk Production across all Creamery Milk Producers in Ireland in 2000, 2003 and 2006



Source: National Farm Survey Data Various Years

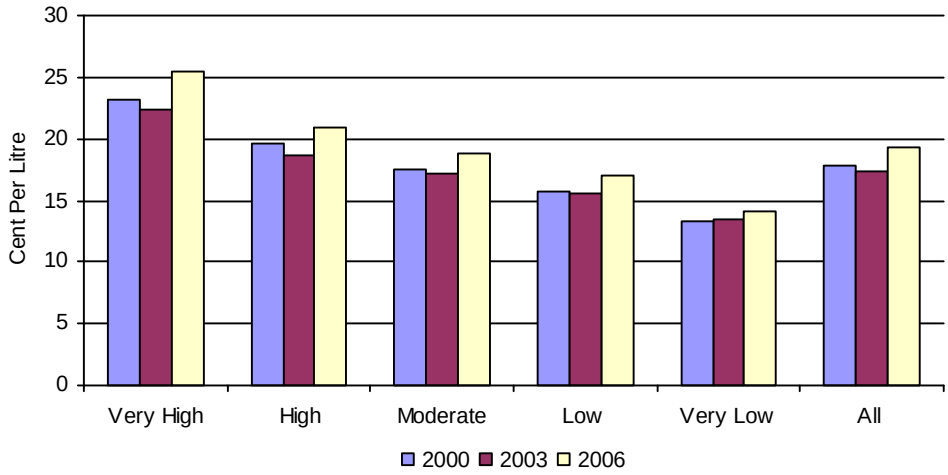
As can be seen, there has not been substantial variation in production costs across these years, but costs in 2006 are slightly higher than in the preceding years. Costs in 2006 were 7 percent higher than 2003 levels and 5 percent higher than 2000 levels. Higher costs in 2006 can be mostly attributed to increased expenditure on concentrate feeds, energy and fuel and labour respectively. Considering all costs are recorded in nominal terms, it can be concluded that farmers have been, for the most part, either able to negate the effect of cost inflation through better cost management, or that typically high cost farmers are exiting the sector thus reducing the average cost of remaining farms. The observed outcome can be said to be a mixture of both factors.

The cost of production data presented in Figure 3, Figure 4 and Figure 5 above, refer to costs of production on all creamery milk producing farms in Ireland. Previous analysis conducted by Fingleton (2004) focussed on the costs of production on specialist dairy farms only. This sample of farms only included farms that were specialised in milk production, i.e. a minimum of 66 percent of the farm gross output was derived from the dairy enterprise, and farms with a dairy herd of ten cows or more. For comparative purposes the same sample of farms is selected from the 2006 NFS and costs of production are analysed. The sample of farms is ranked on the basis of production costs and is then divided into quintiles (20 percent groupings). Figure 6 presents the quintiles for 2000, 2003 and 2006.

In general costs of production on specialist dairy farms are lower than in the full sample of creamery milk suppliers. The difference in costs amounts to between 2 and 5 percent depending on the year examined. However, the

trend in costs year on year is the same for both groups of farms, with costs increasing in 2006 relative to 2003. As is evident from Figure 6 there is also considerable variation in costs of production on specialist dairy farms and that variation is persistent over time. What is interesting is the ability of "Very Low" cost farms to adapt and remain insulated from the effect of cost inflation. As displayed in Figure 6, costs of production on "Very Low" cost farms increased by 5 percent between 2003 and 2006 while costs on "Very High" cost farms increased by 14 percent over the same period.

Figure 6: Variation in Total Cost of Milk Production by Quintile for Specialist Dairy Farm Quintiles in Ireland for 2000, 2003 and 2006



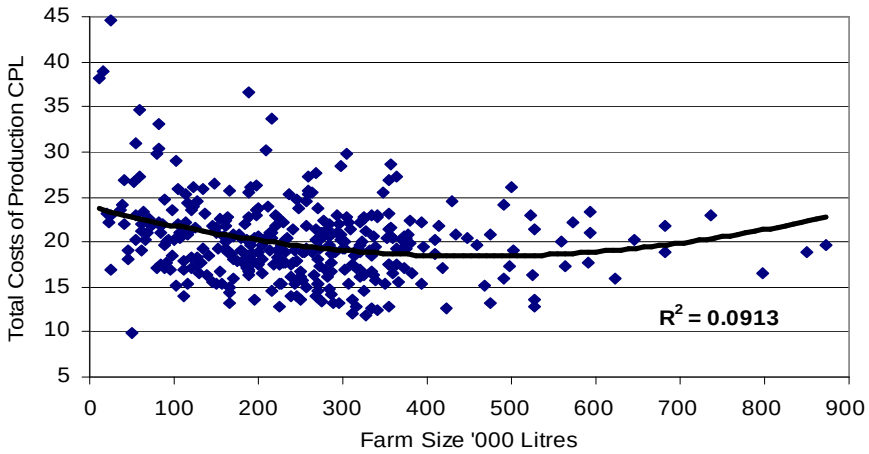
Source: National Farm Survey Data Various Years

2.1 What are the Factors Affecting Farm Profitability?

It is evident from the data presented thus far that there continues to be very large differences in production costs on Irish dairy farms and consequently large differences in profit levels. In this section of the paper we examine some of the factors affecting dairy farm profitability. First we consider whether larger farmers are more cost efficient and assess whether per unit costs of production decrease with scale. A statistical analysis focussing on the relationship between per unit costs of production and farm size shows that there is a statistically significant negative relationship between production costs and farm size but that this relationship is non-linear. This means that as farm size increases production costs decline but at a declining rate. However, only 9 percent of the variation in production costs

is accounted for by farm size, so it can be concluded that it is not the most important driver of cost efficiency.

Figure 7: The Relationship between Production Costs and Quantity of Milk Produced for All Creamery Milk Suppliers in Ireland in 2006



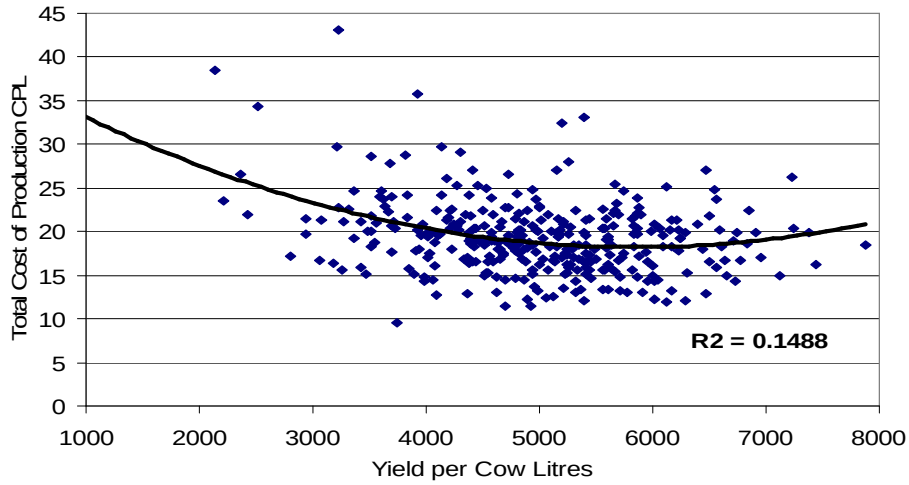
Source: National Farm Survey Data 2006

Figure 7 plots the relationship between the quantity of milk produced and per unit of production costs. The curve illustrates that production costs initially decrease with scale, (reflecting economies of scale), but then flatten out and eventually costs begin to increase with scale once again. The coefficients of the regression analysis suggest that, other things being equal, economies of scale exist up to about 450,000 litres of production. Typically production over this point will have an increased cost and a lower profit per unit of production.

If larger farms are not always more efficient, then the other characteristics that are likely to account for the variation in production costs should be considered. High yielding cows may contribute to lower per unit production costs. Figure 8 plots the relationship between yield per cow and production costs. As with farm size, there in a nonlinear, statistically significant, negative relationship between production costs and yield per cow. This means that as yield per cow increases, production costs per litre decline up to a critical point, after which production costs begin to increase again. The critical point is 6,000 litres per cow, with costs per litre of milk declining as far as this point and increasing thereafter.

The relationship between yield per cow and costs is statistically more significant than the relationship between size and costs, i.e. the t-statistics are larger as is the R squared. Yield per cow explains 15 percent of the variation in production costs, compared to just 9 percent for quantity of milk produced.

Figure 8: The Relationship between Production Costs and Yield per Cow for All Creamery Milk Suppliers in Ireland in 2006



Source: National Farm Survey Data 2006

Another factor that is likely to influence both cost and technical efficiency is soil type. The NFS collect data on soil type which can be classified into three groups. Soil group 1, or very good soils, has the widest use range while soil group 3, poor soils, has the most limited range. Table 1 shows a number of summary statistics for the three soil groups compared to the national average. The majority of creamery milk suppliers have very good soils. Approximately 52 percent of farmers are in the very good soils categories; these farmers are larger than average, accounting for 61 percent of total milk production.

Table 1: Summary Statistics by Soil Groups for All Creamery Milk Suppliers in Ireland in 2006

N=344	Very Good Soils	Good Soil	Poor Soil	All Soils
Percentage of Farms	52	40	8	100
Percentage of Production	61	33	6	100
Production Costs (CPL)	19.1	19.1	21.3	19.6
Concentrates per Cow (kg)	914	927	913	919
Milk per kg of concentrates (Litres)	5.5	5.2	4.9	5.6
Stocking Rate (Lu/Ha)	2	1.8	1.6	1.9
Production (Litres/Ha)	10,000	9,000	6,800	9,400
Net Margin (€/ha)	731	610	314	650

Source: National Farm Survey Data 2006

The per unit costs of production are, on average, higher for poor soils. The total cost of production, on a per litre basis, was 21.3 cent on poor soils in 2006 compared to the national average of just less than 20 CPL. There is almost no difference in per unit production costs between good soils and very good soils. The most notable difference across the three soil groups is the carrying capacity of the land, reflecting land quality and grass yield. The average milk produced per hectare on very good soils was 10,000 in 2006 compared to just 6,800 on poor soils. High stocking densities has consequent effects for profit, with profit per hectare being €731 on very good soils in 2006, more than twice the profit recorded on poor soils.

Cost differences persist over time and determine profitability. The variability in costs is strongly related to land quality. On farms with poorer land, lower stocking rates are not offset by lower concentrate usage. In fact there is only a marginal difference in the volume of milk produced per kg of purchased feed across the various soil classes. Farmers may be limited in their capacity over the short term to change farm scale or improve yields, hence greater consideration may need to be given, from both a research and technical perspective, as to whether land quality can justify such differences in farm performance. There may be other factors on farms with poor land which may also contribute to poorer farm performance. For example, cow fertility tends to be lower in the western and northern counties and soil quality in these counties tends on average to be lower. Unfortunately the NFS does not allow us to determine the extent to which factors such as fertility have consequences for profitability.

A statistical analysis of the characteristics of low cost farms relative to high cost farms shows that low cost farmers are more likely to be specialist milk producers, more likely to farm on good soils, have a higher stocking density, higher yielding cows and a lower level of concentrate feed usage for a given level of milk production.

3. Estimated Review of 2007 Performance

This section of the paper presents a review of the dairy farm sector in 2007. To provide an estimate of farm profitability for the current year, it is necessary to estimate the volume and price of inputs that are likely to have been used as well the volume and value of outputs. The ensuing sections of the paper discuss first, the movements in input prices and usage in the current year and following that the development on dairy product markets.

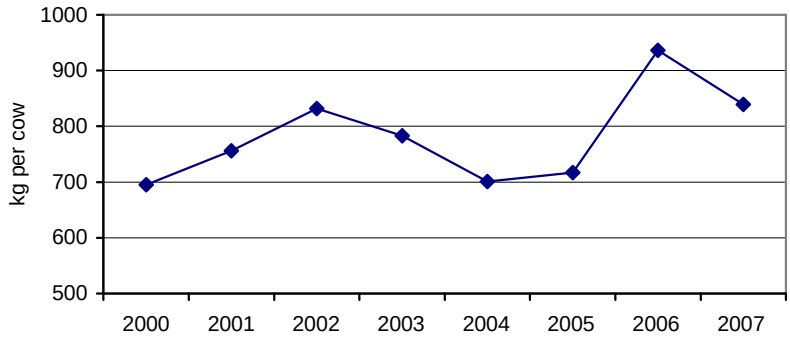
3.1 Estimated Input Usage and Price 2007

3.1.1 Feedstuffs

Purchased feed (concentrates) typically accounts for about 20 percent of total input expenditure on dairy farms, although this varies by farm and by year. Figure 9 shows the average volume of concentrate fed per cow. This is derived by the authors from Department of Agriculture (DAFF) figures on feed sales and from Central Statistic Office (CSO) data on animal numbers.

As is evident from the graph, there is appreciable variability in the amount of feed required year on year. The variability in purchased feed illustrated in Figure 9, is largely weather related, and this variability is supported by the farm-level data from the NFS. The amount of concentrates fed per cow nationally increased significantly in 2006, approximately 15 percent higher than the 2005 levels. It is expected that the quantities of purchased feed in 2007 will be lower than 2006 levels but still above the average of recent years. Data for the first 9 months of 2007 provided by the DAFF indicates that aggregate feed purchases declined relative to 2006. Feed purchases in 2007 were down particularly in the second quarter (a 19 percent reduction relative to 2006) and the third quarter (an 11 percent reduction relative to 2006) as feed price increases materialised. More favourable weather conditions than in 2006 may have also contributed to this decline in purchased feed usage in 2007. It is estimated that concentrate feed per head will decline by about 11 percent or 100 kg per cow in 2007 relative to the 2006 level.

Figure 9: Concentrate Feed Purchases per dairy cow in Ireland: National Average for 2000 to 2007*

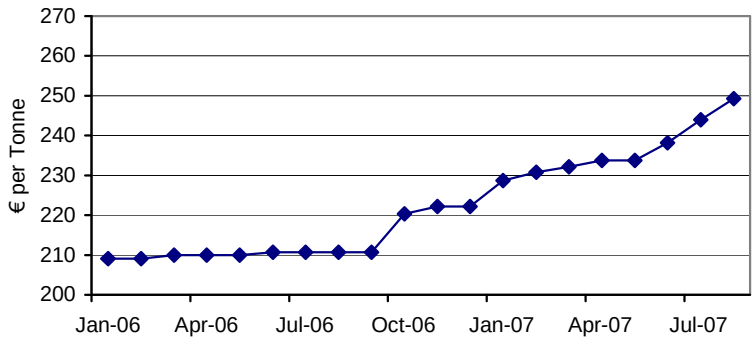


Source: Authors' estimates derived from DAFF and CSO data

** 2007 figure estimated by authors*

Relative to recent years, concentrate feed prices increased considerably in 2007. Figure 10 presents monthly prices for dairy meal from January 2006 to August 2007 (the most recent data available) compiled by the CSO. As can be seen for the period illustrated, prices for dairy meal were relatively static up to October 2006 but began to rise towards the end of 2006 and continued to increase through 2007.

Figure 10: Monthly Price Index of Dairy Meal (16-18% Protein) in Ireland for 2006 and 2007



Source: Central Statistics Office Data for 2000 to 2006.

This increase in feed prices reflects the general increase in cereals and oilseed prices which relate to poor harvests internationally, a depletion of cereal stocks and the emergence of biofuel crops as a competitor for land, particularly in the US and South America and to a lesser extent in the EU. The CSO estimates that cereal prices will be 67 percent higher in 2007 relative to 2006. This has had a consequent upward effect on the price of feed stuffs. As can be seen from Figure 10, feed prices increased steadily from €210 per tonne in September of 2006 to €250 per tonne in August of 2007. This represents a 19 percent increase in meal prices over that period. Consultations with industry representatives, farm advisors and farmers suggest that the annual average increase in feed prices in 2007 relative to 2006 will be approximately 20 percent.

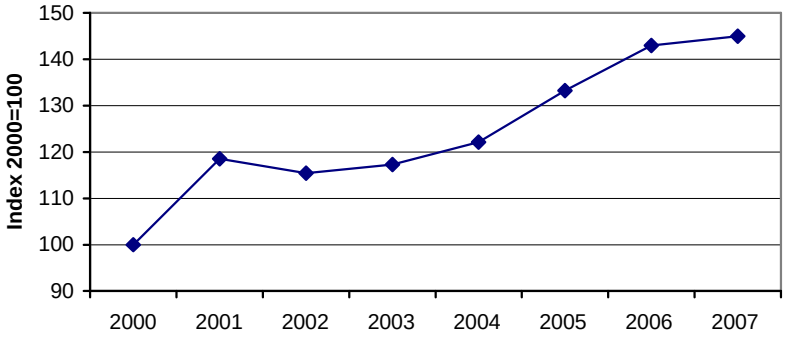
Despite the 20 percent increase in feed prices in 2007, the estimated reduction in feed usage in 2007 offsets some of the price increase. By assuming a decline in feeding volumes in 2007 it is probable that, despite the feed price increases, total expenditure on animal feeds in 2007 will be up just 6.5 percent.

3.1.2 Fertiliser – usage and price 2007

Pasture and forage costs typically comprise about 18 percent of total production costs on dairy farms. Fertiliser comprises about half of the pasture and forage input costs. As illustrated in Figure 11, fertiliser prices have increased substantially since 2000. The CSO recorded price in 2006 was 42 percent higher than the 2000 price. Increased energy prices, in particular the price of natural gas which is a key determinant of fertiliser price, have been the major driving force behind the upward trend for fertiliser prices throughout the early 2000s. Given that, on average, natural gas prices have been stable in 2007, relative to the previous year, the CSO estimate that fertiliser prices are likely to have increased by just 2 percent by the end of 2007 compared to 2006 levels.

On the usage side, DAFF figures indicate that fertiliser purchases in the 2007 fertiliser year (October 2006/September 2007) have declined in aggregate by about 8 percent relative to the corresponding 2006 level and reports from farm advisors suggest that the reductions on dairy farms were of broadly a similar percentage. The reduction in fertiliser purchases reflects more favourable weather conditions in 2007 relative to 2006. An additional minor contributing factor was the increase in fertiliser prices which are up 2 about percent in 2007 relative to 2006. The reduction in fertiliser usage will outweigh the increase in fertiliser prices leaving overall expenditure on fertiliser down by about 6 percent on the 2006 level.

Figure 11: Price Index of Straight Fertilisers 2000 to 2007*



Source: Central Statistics Office Data for 2000 to 2006. Authors' estimates for 2007.

3.1.3 Energy and Fuel – usage and price 2007

Energy and fuel are less important inputs in dairy production, comprising just 8 percent of total costs on dairy farms. While petroleum prices have risen from $US 55 in January 2007 to a level over $US 95 per barrel by November 2007, countries in the euro zone have been partially insulated from this rise in prices by the 15 percent increase in the value of the euro relative to the US dollar over the same period. Nevertheless, energy costs have risen significantly in 2007. Fuel prices began the year at a level below the average for 2006, but have increased significantly over the course of 2007. The average Brent crude oil price for 2007 will be about US $70, only about 5 percent up on the average 2006 level of US $64.

CSO estimates indicate that electricity costs, which change less frequently in Ireland due to price regulation, have risen by about 13% in 2007 relative to 2006. Demand for these input items tends to be relatively inelastic with respect to price and does not vary due to weather variability and therefore it is assumed that usage in 2007 will be on a par with the 2006 level. Overall expenditure on energy (electricity) in 2007 is anticipated to be up about 13% on the 2006 level, while expenditure on fuel in 2007 is likely to have increased by 7% on the 2006 level.

3.1.4 All Other Direct and Fixed Costs– usage and price 2007

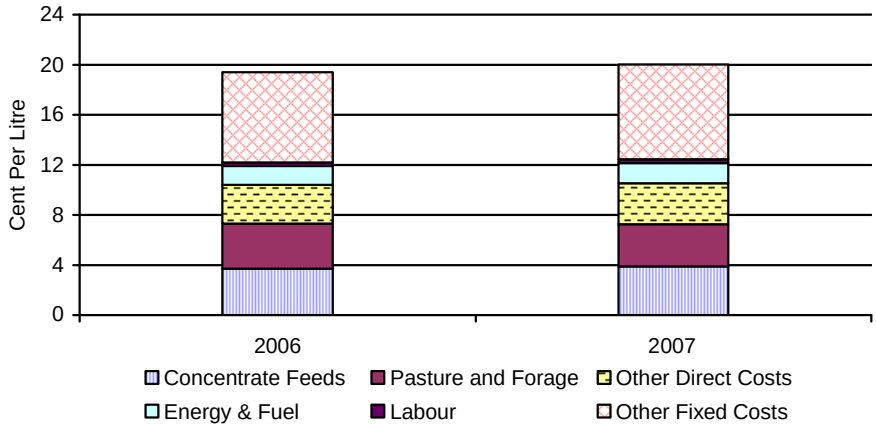
CSO estimates indicate that labour costs have risen in 2007 by about 5 percent relative to 2006. Again, it is assumed that the quantity of labour used on farms is price relatively inelastic and is likely to change little year on year. Veterinary costs are estimated to have increased by about 3

percent in 2007 relative to 2006. The cost of other input items is up about 5 percent in 2007 on the preceding year. It is assumed that usage of these input items will be in line with 2006 levels and as a result the increase in prices in 2007 is reflected in a corresponding increase in expenditure on these items.

3.1.5 Estimate of Total Input expenditure for 2007

With the exception of fertiliser, total expenditure on all other input items is estimated to have increased in 2007 relative to 2006, which itself was a "high cost" year. Expenditure on concentrate feeds is estimated to increase by about 5 percent in 2007, pushing the average spend from 3.7 CPL in 2006 to 3.9 CPL. Fertiliser expenditure is projected to decline by about 6 percent from 2006 to 2007.

Figure 12: Total Costs of Milk Production across all Creamery Milk Producers in Ireland 2006 and Estimated for 2007



Source: National Farm Survey Data (2006) and Authors' Estimates (2007)

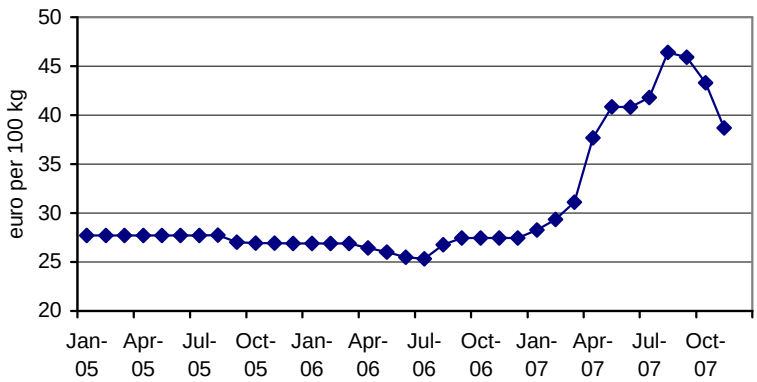
Figure 12 presents average total costs of production for all creamery milk suppliers in 2006 and estimated for 2007. It is estimated that total costs of production on the average creamery milk supplier in Ireland will be 4 percent higher in 2007 than 2006.

3.2 Estimated Output Values 2007

A slowdown in the rate of milk production growth relative to consumption growth has led to increases in dairy product prices over the course of 2007. EU butter intervention stocks are down to zero for the first time in four decades. Worldwide dairy product stocks are also depleted, which has curtailed the capacity to increase supply onto the world market and dampen the current high price level. Market prices for butter and SMP were well above intervention levels and as a result the last of the MTR's intervention price cuts that was implemented in 2007 had no effect on farm milk prices.

Over 60 percent of milk produced in Ireland is used for the manufacture of butter, skimmed milk powder, casein, and whole milk powder. A further 25 percent is used for cheese production with only 10 percent of milk production being used as drinking milk. It follows then that the milk price paid to farmers is very dependent on the butter and powder commodity markets. Figure 13 shows the butter and skimmed milk powder equivalent milk price as estimated by the Irish Dairy Board from January 2005 to October 2007.

Figure 13: Irish Dairy Board Butter/SMP Equivalent Price from 2005 to 2007

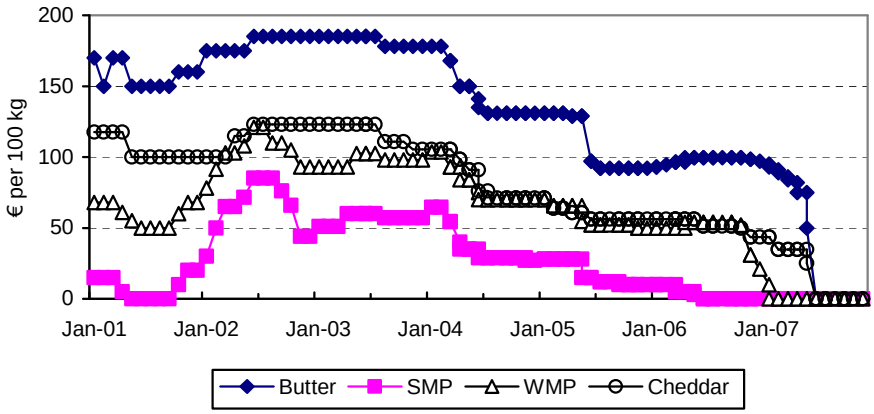


Source: Irish Dairy Board

Historically our dependence on commodity products like butter and SMP has been to our disadvantage, as these low value added products competed on price alone. Typically our farm milk price was several cents below that achieved in continental EU Member States (MS). Circumstances were turned on their head in 2007, due to a surge in bulk commodity prices, which led to the suspension by the EU Commission of all dairy export subsidies, as world dairy commodity price rose to the level of

commodity prices on the EU internal market. Export subsidies for SMP were reduced to zero in June 2006. This was followed with a zero rate for WMP export refund in January 2007. As can be seen from Figure 14, exports refunds were set to zero on butter and cheese in June 2007. In addition internal consumption subsidies have also been reduced to zero over the course of 2006 and 2007 in the case of butter for manufacturing use and skim milk for animal feed and casein production.

Figure 14: EU export refund rates for Dairy Products 2001 to 2007



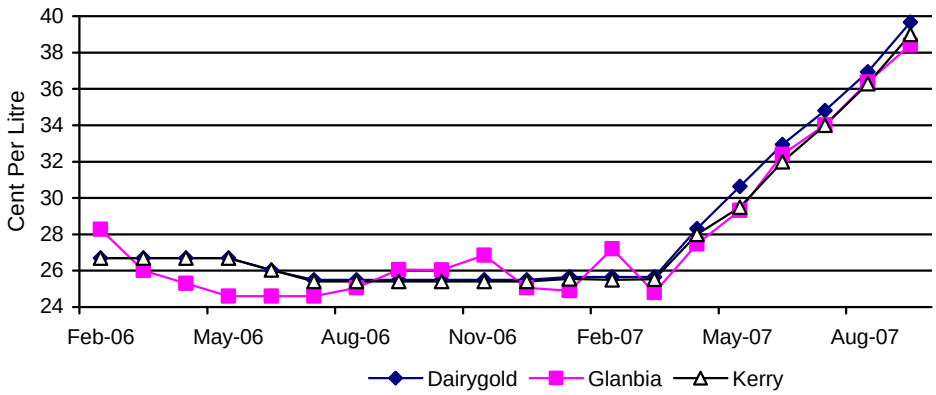
Source: European Commission

Ireland's greater exposure to the world market was then turned to our advantage and the Irish milk price increased by over 14 cents between March and October 2007, a considerably greater increase than was achieved in most other EU MS. It is now likely that milk prices in Ireland in 2007 will be on a par with milk prices generally in the EU. The rise in price was initiated by increases in skim milk powder prices and traditionally minor products such as whey powder due to an unexpected shortfall in global production. In the second quarter of 2007 this was followed by a sudden and steep rise in butter prices on EU markets due to a shortage of butter caused by blue tongue, reduced levels of feed usage and unfavourable weather conditions in southern Europe. More recently still there has been an increase in cheese prices in the EU. This was the last of the main commodity prices to experience an increase and is indicative of the strength of retailer power in key EU markets. Retailers were unwilling to agree to price increases to suppliers as they feared that consumers would not accept price increases at retail level and that this would damage sales.

Only over the last few months of 2007, in line with increased supply from New Zealand, has the commodity market begun to dampen. In the fourth quarter of 2007 there has been a weakening in butter and SMP prices and

this is reflected in the downturn in the IDB price in recent months (Figure 13). Cheese prices remain strong at present.

Figure 15: Farm Gate Milk Prices* in 2006 and 2007

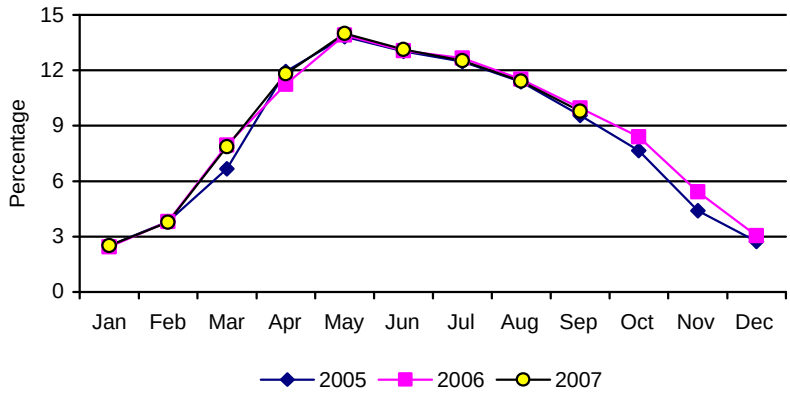


Source: Irish Farmers' Journal Milk League
Price includes VAT and is for milk collected from farm 3.6% butterfat and 3.3% protein – excluding collection charges and bonuses

The positive developments on the commodity markets in 2007 were also reflected in the farm level milk price in Ireland. Figure 15 presents prices paid by the three largest dairy co-operatives in 2006 and 2007, Glanbia, Kerry and Dairygold. These three co-operatives account for approximately two-thirds of the national milk pool and therefore provide a representative view of the milk price paid to the majority of farmers. At the time of writing the data for 2007 was only available up until September. The prices portrayed are VAT inclusive and are for standard 3.6 percent butterfat and 3.3 percent protein levels.

The price increases in the latter half of 2007 are evident from the graph. Prices increased from approximately 25 cent per litre in March 2007 to between 38 and 39 cent per litre in September 2007. To arrive at an estimate of the average annual milk price, it is necessary to consider both the monthly milk price and the quantity of milk delivered in each month. Figure 16 presents the supply profile for the sector for the years 2005 and 2006 including the supply profile for 2007 up to September. As is evident, the supply profile does not change considerably from year to year, nor does the total quantity delivered due to the milk quota constraint. Typically two-thirds of the national milk supply is delivered during the period between April and August meaning that the prices that are paid in these months are the most important for determining the annual average milk price.

Figure 16: Monthly Milk Deliveries in Ireland for 2005 to 2007



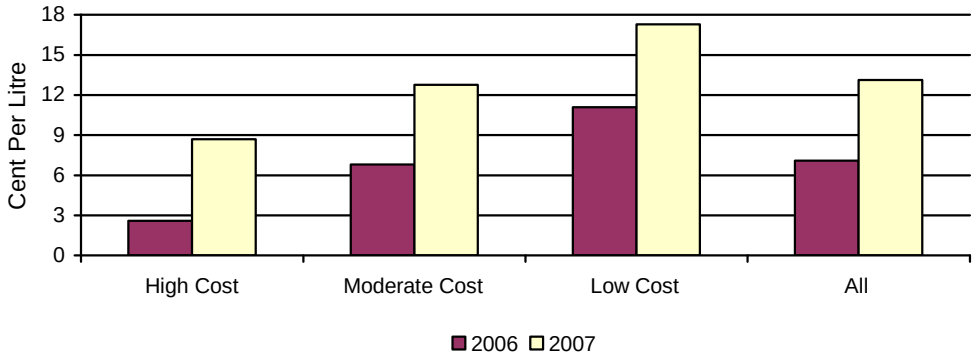
Source: CSO Data Various Years

By applying the monthly prices to the quantity of milk delivered in each month it is possible to arrive at an annual milk price for 2006 and 2007. Official estimates for the October, November and December 2007 price data was unavailable at the time of writing, so it was necessary to estimate the price that might prevail in these months. It is assumed that the average July, August and September price continues for the rest of the year. However, it should be noted that only about 15 percent of the annual milk supply is delivered in the October to December period and so the annual price estimate is not very sensitive to the price assumption for this period. Based on a weighted average of the three Co-operative milk prices and the annual supply profile, it is estimated that the average annual price for 2006 was 25.6 cent per litre. The estimated price for 2007 is 32.6 cent per litre, that is over 25 percent higher than 2006.

3.3 Review of Dairy Enterprise Net Margins in 2007

The review of milk prices showed that the average milk price for 2007 was approximately 25 percent higher than the average 2006 price, while the review of input costs concluded that total production costs would be 4 percent higher in 2007 than 2006. Figure 17 presents the effect of dairy enterprise net margin. The Figure shows the average net margin for all creamery milk suppliers as well the sample disaggregated into one-third groupings based on cost efficiency.

Figure 17: Net Margin for Creamery Milk Producers in Ireland in 2006 and Estimated for 2007



Source: National Farm Survey Data (2006) and Authors' Estimates (2007)

It is assumed that income from calf sales continued to be absorbed by replacement costs in 2007. Overall, gross output values on dairy farms increased by about 25 percent. Input costs are estimated to have increased only marginally. Consequently, all farm groups are expected to experience substantial increases in net margin in 2007. For the average farmer, net margin per litre is estimated to increase from 7 CPL in 2006 to 13 CPL in 2007, an 85 percent increase. The high cost farmer experienced the largest increase in net margin, moving from the modest margin of approximately 2.5 CPL in 2006 to 8.5 CPL in 2007. For an average 250,000 litre dairy farm this would represent an increase in enterprise profit from €17,500 to €32,500. This enterprise net margin estimate excludes decoupled compensation which in 2007 is worth approximately 3.5 cent per litre or an additional €8,750.

Table 2 disaggregates profitability on a per hectare basis for 2006 and estimated for 2007. The average net margin per hectare across all creamery milk suppliers in 2006 was €650 this is estimated to increase to €1,192 in 2007. Table 2 disaggregates the groups into one-thirds based the net margin per hectare.

Table 2: Profitability per Hectare on Creamery Milk Suppliers 2006 and Estimated for 2007

N=344	Least Profitable	Average Profitability	Most Profitable	All
Herd Size	33	38	52	42
Stocking Rate €/Ha	1.6	1.9	2.1	1.9
Gross Output €/Ha	1838	2560	3200	2537
Concentrate Feed Costs	317	380	380	360
Other Direct Costs	560	645	670	628
Gross Margin	950	1535	2174	1548
Overhead Costs	822	919	950	897
Net Margin per Hectare 2006	137	615	1200	650
Net Margin per Hectare 2007	513	1158	1900	1192

Source: National Farm Survey Data 2006

4. Outlook for 2008

In this section we estimate the expenditure for various input items in 2008, the milk price that will prevail and the likely income of dairy farmers in 2008.

4.1. The Outlook for Input Expenditure

4.1.1 Feedstuffs

Assuming normal weather conditions prevail, it is likely that the volume of feed usage in 2008 will decline relative to 2007. It is assumed that feed usage will revert to the average of the 2000 to 2007 level, which is approximately 780kg per cow. This is a 7 percent reduction on the 2007 level. While still below par, cereal production in key export countries such as Australia should be up on the preceding year. There are also indications that the growth in biofuel production in the US is slowing and this should ease price pressure in cereal markets. In the EU, a derogation is now in place for set-side next year, and accordingly there should be greater EU feed availability in 2008. Taken together these factors should lead to a gradual reduction in cereal prices over the course of 2008. However, the 2007 harvest has been purchased at historically high prices so this may mean that feed prices in 2008 increase relative to 2007. Anecdotal evidence suggests that some producers are forward purchasing their feed for 2008 which may insulate them to some degree against possible price increases. The overall assessment in this paper is that annual average feed prices in 2008 will be unchanged on the 2007 level and given the decline in

usage, expenditure on feed will be down 7 percent. Given the low level of global cereal stocks at present, any further unforeseen production shocks could impact on this aspect of the outlook.

4.1.2 Fertiliser

Natural gas prices are a key determinant of fertiliser prices. Despite the recent increase in petroleum prices, natural gas prices have remained relatively stable due to plentiful availability of secure supplies at present. In the absence of any supply shock in 2008 there is unlikely to be any significant change in natural gas prices. However, there are already indications that Russia will seek to increase its gas prices by as much as 25% in 2008, which will have consequences for the European natural gas market. Higher natural gas prices, increasing demand and fertiliser production capacity constraints, all suggest that fertiliser prices should rise significantly in 2008. In anticipation of a price increase, merchants are already advising farmers to purchase ahead where possible.

Additionally fertiliser usage in 2008 will depend on weather conditions but, aside from that, there is likely to be little volume change on the 2007 level, as fertiliser usage is not expected to be particularly responsive to price changes, given the level of the farm milk price. Overall, it can be expected that fertiliser expenditure will increase in 2008, perhaps by as much as 20 percent.

4.1.3 Energy and Fuel

Fuel costs in 2008 will depend on the evolution of crude oil prices. At the time of writing (November 2007) crude oil futures prices suggest that prices will drop back from their current level by about 3 percent by mid 2008. However, a moderate drop in oil prices from the current level (to say US $90) over the course of 2008 would still leave crude oil prices up about 30 percent on the average for 2007. As already mentioned, gas prices in 2008 may rise to restore the price relativity with crude oil. Given that Irish electricity prices are regulated, it is difficult to assess how they will change in 2008. If recent crude oil price increases are sustained into 2008, then it is more likely that Irish electricity prices will increase in 2008.

For the purposes of this analysis it will be assumed that, fuel costs will increase by 30 percent in 2008 and that electricity prices increase by 10 percent in 2008. Assuming that usage is unchanged then, expenditure on fuel and electricity will reflect these price increases. It is estimated that energy and fuel expenditure combined will increase by approximately 20 percent.

4.1.4 Other Direct and Fixed Costs

Labour costs are forecast to increase in line with wage inflation, which is projected to be about 4 percent in 2008. The price of other direct inputs is projected to increase in line with general inflation which is likely to be about 3 percent.

4.2. The Outlook for Dairy Markets

The exceptional price levels achieved for dairy commodities in 2007 should be considered as a short term spike. Nevertheless, the outlook for dairy markets in 2008 remains quite positive from a producer perspective. The current high dairy commodity price levels are likely to be influenced by supply response from major exporting countries (US and New Zealand) unaffected by weather related production problems. Current estimates are that NZ production is set to increase by 1.5 percent and US milk production by 2.25 percent in 2008 relative to 2007. In addition the EU is committed to an increase in quota of 1.2 percent in 11 EU MS in 2008/09 and is likely to increase its milk quota by a further 2 to 3 percent across the EU25 in 2008/09 in reaction to the high level of world prices. Collectively these increases will put modest downward pressure on dairy commodity prices. Already there is some evidence that prices have passed their peak, and there has been a gradual downturn in world butter and SMP prices in recent weeks.

As a result EU dairy commodity prices in 2008 are unlikely to match the 2007 level. Prices for butter and SMP have already begun to decrease and this decrease should continue through 2008. Quite how this will impact on the Irish milk price in 2008 will depend on the price level prevailing in the April to August period, the peak months for milk production. If prices remain strong into the latter half of 2008 then that would limit the decrease in the annual average Irish milk price in 2008. Bearing in mind the record milk price achieved in 2007, current expectations are for a 7 percent decrease in the Irish milk prices in 2008 relative to 2007. Such a reduction would suggest an annual average milk price of approximately 30 CPL in 2008, 7 percent down on the 2007 level but 17 percent up on the 2006 level.

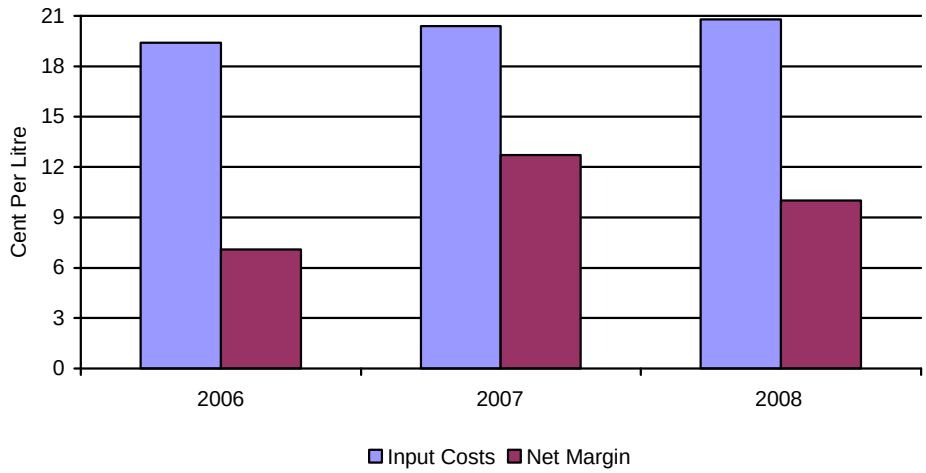
4.2. The Outlook for Dairy Enterprise Net Margin in 2008

Increases in energy and fertiliser prices in particular, and general price inflation, are likely to increase costs of production on dairy farms in 2008 by 4 percent relative to 2007. Milk prices are estimated to decline 7 percent in 2008 from the current high levels in 2007. The net effect of these price

movements is a lower enterprise net margin estimate for 2008 but still considerably higher than the margins achieved in 2006.

Figure 18 presents an estimate of enterprise net margin in 2007 and a forecast for 2008. It is forecast that costs will increase by about 4 percent between 2007 and 2008. With a slight reduction in milk price, net margin for the average creamery milk supplier is forecast to fall from 13 cent per litre in 2007 to just over 10 cent per litre in 2008, an almost 25 percent decline. This is a reduction in total enterprise net margin from approximately €32,500 in 2007 to €25,000 in 2008 on a farm producing 250,000 litres. The 2008 milk price assumes that the EU milk quota will increase by between 2 and 3 percent. If we assume that the farm increases production to 257,000 litres then enterprise net margin increases to €25,800 assuming the additional 7,000 litres are produced at the same cost. This represents a 20 percent decline on the enterprise estimate for 2007 and a 46 percent increase on 2006 levels.

Figure 18: Net Margin for Creamery Milk Producers in Ireland in 2006, Estimated for 2007 and Forecast for 2008



Source: National Farm Survey Data (2006) and Authors' Estimates (2007)

One of the greatest uncertainties in relation to the 2008 outlook is fertiliser price. The data presented in Figure 18 assumes a 20 percent increase in fertiliser expenditure. If such an increase does not emerge then the estimated net margin for 2008 would be higher. If fertiliser expenditure remains unchanged from the 2007 level, then the estimate net margin for 2008 would be 10.2 cent per litre, increasing the average enterprise net

margin to €26,200 compared to €25,800. The 20 percent increase in fertiliser expenditure would cost the average dairy farmer approximately €500 or 0.2 cent per litre.

5 Concluding Comments

As stated at the outset, 2007 has been an extraordinary year for the dairy sector. It is estimated that the annual average milk price will be over 25 percent higher than the price paid in the previous year. Furthermore, given that 2006 was a relatively high cost year, only marginal increases in production costs arose in 2007. Consequently, enterprise net margin is estimated to be almost 85 percent higher in 2007 than the 2006 levels. However, it should be noted that a number of factors could yet impinge on the estimated increase in profit in 2007.

While the outlook for 2008 is not as positive as the outcome for 2007, profits in 2008 are estimated to still be considerably higher than recent trends. The milk price in 2008 is estimated to decline slightly (7 percent) as supply begins to respond to current market shortages. The outlook for input prices is somewhat less certain. Concentrate feed prices did not increase as quickly as cereal prices in 2007. The harvest price for cereals was very high in 2007 and if this is the main determinant of 2008 concentrate feed prices, they could increase substantially. On the other hand however, feed barley and wheat prices are estimated to decline in 2008, whether or not this decline will be transferred to the feed price towards the end of 2008 is difficult to call. Fertiliser prices may provide the greatest area of uncertainty for 2008, since they will be heavily related to developments on energy markets, which in turn will be influenced by political as well as market forces.

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THE SITUATION AND OUTLOOK FOR CATTLE 2007/08

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Summary
Any analysis of trends in the margins in the cattle sector for the last decade was confounded by the complications arising from the animal based Direct Payments (DPs). The cattle based DPs were decoupled in 2005 and in conjunction with other DPs were converted into a Single Farm Payment (SFP). From a farm perspective, decoupling merely changed the method of delivery of the DPs. However, from the enterprise viewpoint, decoupling increased the transparency of the inherent economics of cattle farming and exposed the small and in some instances negative but generally declining market margins pre-decoupling.

The most recent data available on the cattle enterprise for the 1,200 farms in the Teagasc, National Farm Survey (NFS) is 2006. This was also the first year in which the enterprise margins did not contain any animal-based DPs as the SFP accrues to the overall farm rather than the enterprise. A comparison of the margins for individual cattle systems in 2006 with the Market Based Gross Margin (MBGM) - which is gross margin less the value of the DPs - for the earlier years shows that for each of the cattle systems the fully decoupled margins, although modest, compare favourably with the MBGM for the earlier years. Fattening systems in 2005 and to an even greater extent in 2006 benefited from the general increase in cattle prices plus the realignment of cattle cohort prices as the earlier capitalisation value of the animal-based DPs were unwound following decoupling. However, this decapitalisation of DPs had a negative impact on the margins in the cattle rearing system but by co-incidence this price reduction effect was largely offset by the general rise in cattle prices during this period.

Cattle prices declined marginally in 2007 with the main impact arising in the first half of the year. This is the first year post decoupling in which Irish cattle farmers experienced a decline in output prices. Calf prices were also lower reflecting the full impact of decoupling and the weaker export trade. World cereal prices and consequently the price of concentrate feed increased sharply in the second half of 2007 and will likely be maintained in 2008. The full effect of the increased prices of concentrate feed will impact in the spring of 2008 thus affecting the economics of winter fattening and the supply of slaughter cattle early in 2008. Energy and energy related costs also increased in 2007, but like the price of concentrates most of its impact will be in 2008. International dairy product prices increased sharply in 2007 with a consequent increase in the cost of veal production. This, like

that arising from the changes in the cereal market, will impact on the economics of white meat production and intensive cattle farming, especially in 2008. Forecasting cattle and beef supplies and prices in 2008 is particularly difficult due to the continued turbulence in the energy and exchange rate markets and the knock-on impact of sudden changes in the feed, whitemeat and dairy markets.

For 2007, it is estimated that the combined impact of the changes in costs and the value of sales in 2007 will result in a decline in the gross margin for cattle of approximately 10% compared to 2006. The forecast for 2008 is that cattle margins will recover to their 2006 level mainly driven by an anticipated increase in cattle prices resulting from lower competition from the intensive meat producers in Europe and internationally. The forecast margin for 2008 compares favourably with the (comparable though modest) market based gross margin for the pre-decoupling period.

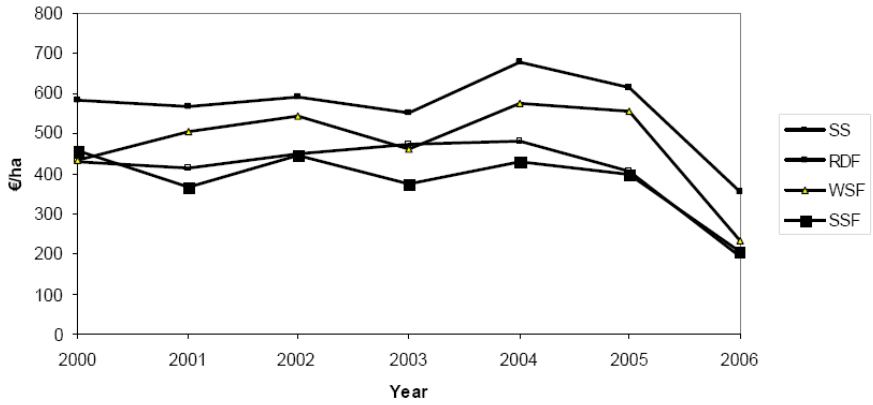
Introduction

The most recent year for which data is available on the cattle enterprise for the 1,200 farms in the Teagasc, National Farm Survey (NFS) is 2006. The analysis of trends for recent years for the cattle enterprise is complicated by the decoupling of the animal-based Direct Payments (DPs) in January 2005. Prior to 2005 the animal based DPs were included in the enterprise margin. The farm results for 2005 are a mix of both the pre and the post decoupled situation. In 2005 the enterprise margins contain the 2nd part of the 2004 animal-based payments plus the extensification premium based on eligible animals and farms in 2004, but simultaneously in 2005 the farm received the full decoupled Single Farm payment (SFP) for that year. The enterprise margins for 2006 do not contain any animal-based DPs as the SFP accrues to the overall farm rather than the enterprise.

Gross margin by cattle system

Trends in the enterprise gross margin *per* hectare under the DP system operable in the appropriate year for four selected cattle systems for the period 2000 to 2006 are shown in Figure 2.1. The four cattle systems presented are two rearing systems, *viz*: Single Suckling (SS), Rearing on Dairy Farms (RDF), and two fattening systems, *viz*: Weanlings to Store/Finish (WSF), and Stores to Store/Finish (SSF). In 2006, the impact of full decoupling is clearly evident resulting in a sharp decline in the gross margin for each of the cattle systems.

Figure 2.1: Gross Margins by cattle system



Market based gross margin by cattle system

A more realistic comparison is to evaluate the margins by system in 2006 relative to the Market Based Gross Margin (MBGM) - which is gross margin less the value of the DPs - for the earlier years. These results, presented in Figure 2.2, show that for each of the cattle systems the fully decoupled margins in 2006, although modest, compare favourably with the MBGM for the earlier years.

From a farm perspective, decoupling merely changed the method of delivery of the DPs. However, from the enterprise viewpoint, decoupling increased the transparency of the inherent economics of cattle farming and exposed the small and in some instances negative but generally declining market margins pre decoupling.

For most of the Irish cattle farmers full decoupling was a welcome release from a decade of experience of grappling with the seemingly endless management inputs and the related non monetary costs associated with the need to juggle animal numbers, birth dates, purchases, sales and stocking densities to comply with the eligibility requirements for the animal-based payments. The main benefit of decoupling was in relation to the simplification of the routine management of the cattle enterprise rather than monetary cost savings. The primary exception was the post decoupling unwinding of the capitalisation of DPs into young animal prices which was a loss to rearing systems but a gain to fattening systems.

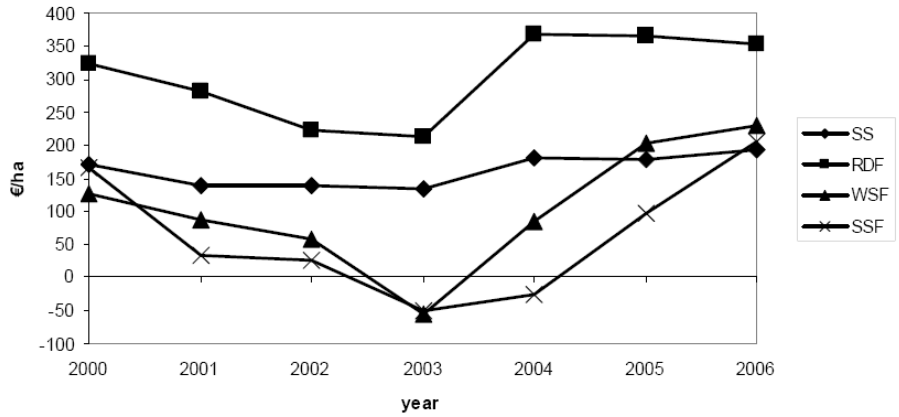
The main factors affecting the MBGM's for the four cattle systems in the period 2004 to 2006 were, changes in cattle prices and the knock-on impact of decoupling in 2005. Cattle prices increased significantly in 2004 and again in the first half of 2005 followed by a sharp decline in the second half

of the year but recovered again in 2006 and this recovery was largely maintained for the full year.

The impact of these developments on the decoupled margins and MBGM's for each of the systems is clearly evident in Figure 2.2. The fattening systems in 2005 and to an even greater extent in 2006 benefited from the general increase in cattle prices plus the realignment of cattle cohort prices as the earlier capitalisation value of the animal-based DPs were unwound following decoupling. In contrast to the benefit for the fattening systems on price of purchased animals, this had a negative impact on the margins in the cattle rearing system but by co-incidence this price reduction effect was largely offset by the general rise in cattle prices during this period.

All systems benefited from the increase in cattle prices in the period 2004 to 2006. The fattening systems were the main beneficiaries followed by the RDF, the latter mainly through the greater impact of the increase in cattle prices due to its high stocking intensity *per* hectare. Changes in cattle prices, upwards and downwards, have a greater impact on the margins in the more intensive systems.

Figure 2.2: Market Based Gross Margin by cattle system

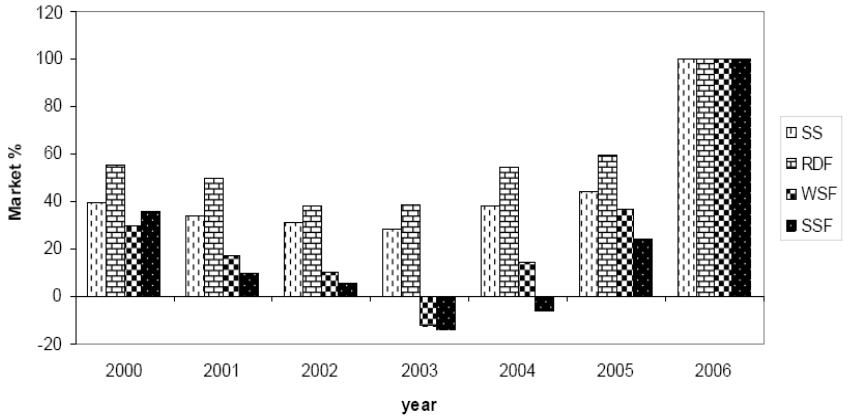


Market orientation by cattle system

By 2006, the gross margin for each of the individual cattle systems was entirely market based once decoupling was fully operable, Figure 2.3. Prior to decoupling, as Figure 2.3 shows, the dependency of all of the individual cattle systems on the market based component was declining but to varying degrees. For many years the market margin was very small for the fattening systems, and had even been negative in 2003 and 2004, but recovered in 2005 as a consequence of decoupling and the general increase in cattle prices. In contrast, both of the breeding systems derived a larger portion of their respective margins from the market with the RDF system being the

most market oriented. Part of this was due to the capitalisation of the animal based DPs into young animal prices.

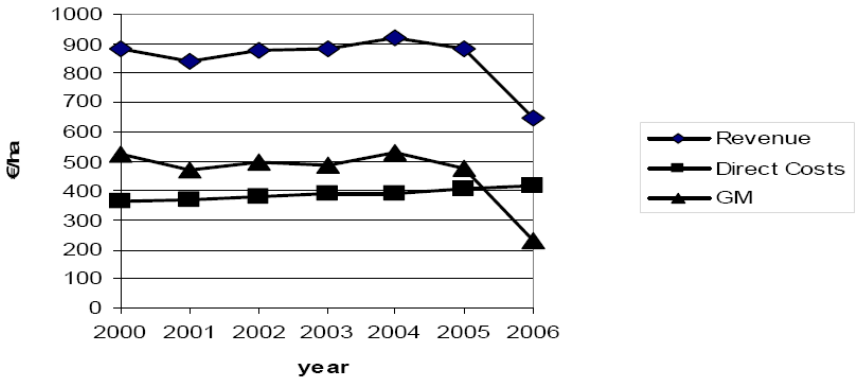
Figure 2.3: Gross Margins by cattle systems - % from the market



Components of gross margins

Trends in the revenue, direct costs and the gross margin for the aggregate cattle sector are presented in Figure 2.4. The revenue data for the various years includes both the market based and the animal-based DPs where applicable. Prior to decoupling in 2005, the DPs were assuming an increasing portion of annual revenue in the cattle sector. In this period the unit values of the animal based DPs were increasing and annual adjustments in the apportionment of the rate of "pay out" to farmers was a regular feature. This largely offset annual variations in the returns from the market resulting in a smoothing of the overall annual revenue accruing to cattle farmers generally.

Figure 2.4: Components of Gross Margin – all cattle systems



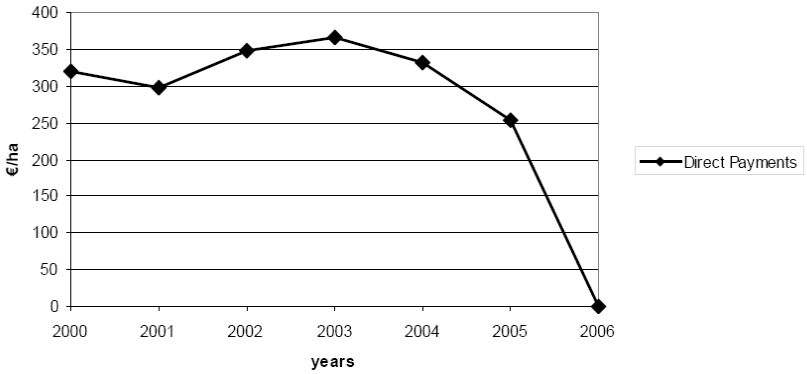
For most of the period, direct costs were largely contained, Figure 2.4. A small upward trend is discernible, mainly arising from increases in the inputs of concentrates aimed primarily at achieving earlier finishing of animals, especially in later years.

When the changes in both revenue and direct costs are combined in the form of a gross margin, the annual changes were relatively small in the pre decoupling period. Following decoupling there was, as expected, a significant decline in the gross margin for 2005 and particularly in 2006 once the animal based DPs were finally eliminated from the gross margin.

Revenue from animal based DPs

Trends in the annual revenue per hectare in the form of animal based DPs are presented in Figure 2.5. While there were year to year variations, this revenue source was generally in the range of €300 to 350 per hectare, but following decoupling it declined to €250 in 2005 which was the final increment on the 2004 animals and zero in 2006 once full decoupling was achieved.

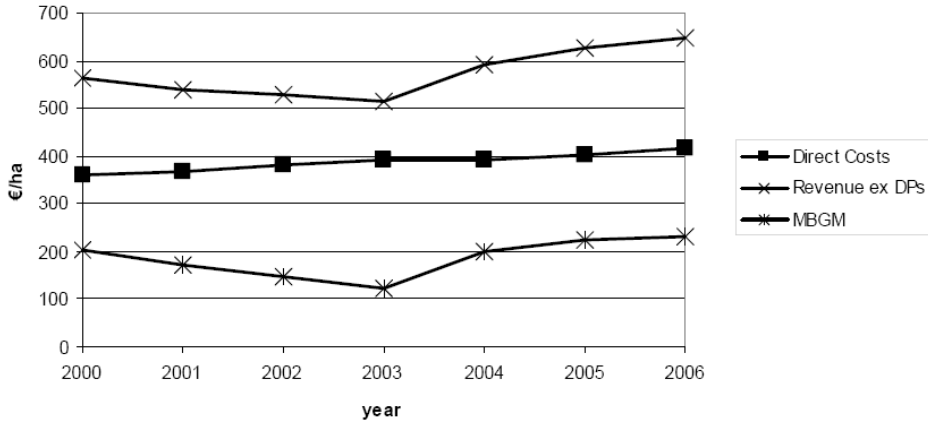
Figure 2.5: Direct payments – all cattle systems



Decoupled margins

To facilitate future comparisons with the pre decoupled position for the aggregate cattle sector, the historical DPs were excluded from the revenue and margins calculations for the earlier years. The aggregate return from the market increased in each of the three years (2004 to 2006 inclusive) mainly reflecting the changes in cattle prices, Figure 2.6.

Figure 2.6: Decoupled (market based) Gross Margins – all cattle systems



As the increases in direct costs were modest, almost all of the added revenue from the increases in cattle prices translated into increases in the market gross margin. The main cost factor of future concern is the increased reliance on added inputs of concentrate feeds in 2005 and 2006.

Shifts in costs and prices

World cereal prices and consequently the price of concentrate feed increased sharply in the second half of 2007 and will likely be maintained in 2008. This will impact on both the cost of concentrates and the volume used in that part of 2007 and probably for the full year in 2008. Fortunately, the grazing season was particularly good in the second half of 2007 thereby reducing the requirement for concentrate inputs. But the full effect of the increased prices of concentrate feed will impact in the spring of 2008 thus affecting the economics of winter fattening and the supply of slaughter cattle early in 2008. Energy and energy related costs also increased in 2007, but like the price of concentrates most of its impact will be in 2008.

Overall it is expected that there will be a small decrease in costs in 2007 compared to 2006 but in 2008 costs are expected to revert to the 2006 level. However, in 2008 there will be a much greater reliance on grazed and conserved forage to the detriment of concentrate use.

The number of cattle slaughtered in 2007 is likely to be comparable to that in 2006. Prices declined marginally in 2007 with the main impact in the first half of the year. This is the first year post decoupling in which Irish farmers experienced a decline in cattle prices. Calf prices were also lower reflecting the full impact of decoupling and the weaker export trade.

Similar to cereals, the international dairy product prices increased sharply in 2007 with a consequent increase in the cost of veal production. This, like that arising from the changes in the cereal market, will impact on the economics of white meat production and intensive cattle farming, especially in 2008.

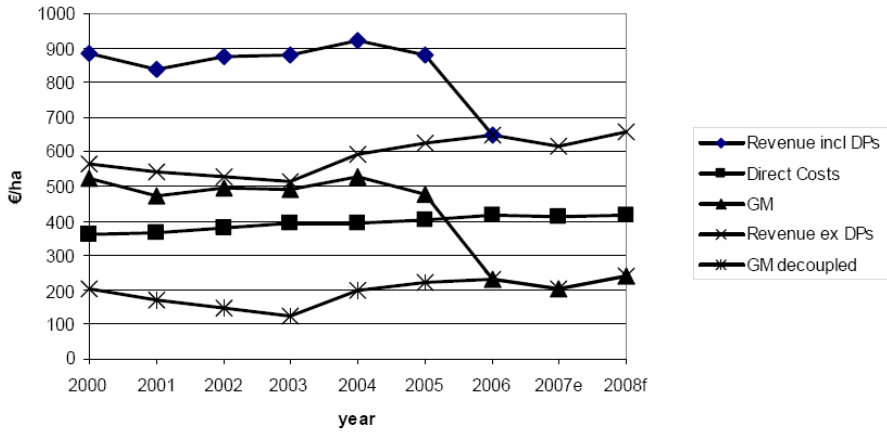
Forecasting cattle and beef supplies and prices in 2008 is particularly difficult due to the continued turbulence in the energy and exchange rate markets and the knock-on impact of sudden changes in the feed, whitemeat and dairy markets. Much depends of how these markets evolve in 2008 and the extent of de-stocking in the intensive livestock systems and the production system adjustments made by extensive grassland cattle farmers. All factors considered it is forecast that in Ireland cattle supplies will decline and prices will increase in 2008. It is also expected that the price of calves will again decline, thereby reducing their cost to the beef farmers.

Estimates and Forecasts

For 2007, it is estimated that the combined impact of the changes in costs and the value of sales in 2007 will result in a decline in the gross margin for cattle of approximately 10% compared to 2006. The forecast for 2008 is that cattle margins will recover to their 2006 level mainly driven by an anticipated increase in cattle prices resulting from lower competition from the intensive meat producers in Europe and internationally.

The details of the estimates and forecasts combined with the historical data available from the NFS are presented in Figure 2.7. Also included in Figure 2.7 are the appropriate data on the trends in revenue and gross margins pre (including DPs) and post decoupling (excluding DPs). While the estimate for 2007 shows a decline in revenue and margin the forecast indicates that the margin for 2008 compares favourably with the (comparable though modest) market based gross margin for the pre-decoupling period.

Figure 2.7: Trends in costs and margins – all cattle systems



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THE SITUATION AND OUTLOOK FOR SHEEP 2007/08

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Introduction

The introduction of the single farm payment (SFP) has afforded farmers an opportunity to focus on market requirements without considerations for the restrictions that the premium system imposed. As supports are no longer determined by production volume or type, sheep production may become a more attractive enterprise option viz a viz cattle production. Whilst it is desirable that ewe numbers are maintained in order to maintain production levels, it is also important that quality as distinct from quantity be enhanced. The de-stocking that occurred owing to SFP introduction could also prove beneficial in removing poorer quality stock, as farmers focus more on breeding potential.

One of the main recommendations of the Malone report is that "*efficiency and productivity at farm level as the means to better profitability are critical for the future of the sector*"[1]. In order to achieve this end the delivery of a better specification of product over a wider period is cited as being the key. To be competitive sheep farmers need to improve technical performance and produce quality lamb while adopting new technology.

Sheep farming is compatible with the Rural Environment Protection Scheme (REPS) and the mixed grazing supplementary measure makes it an even more attractive scheme for sheep farmers. REPS was also cited in the Malone report as being an extremely important measure for sheep farmers. This is supported by National Farm Survey (NFS) figures with an income of almost €15,100 on the REPS farms in the mainly sheep system in comparison to an income of just under €6,650 on the Non-REPS sheep farms. The REPS payment contributed to 43% of this income, with the average REPS payment being €6,480.

Data from farms with a sheep enterprise recorded in the NFS were used as the basis for analysis of financial and technical performance of the sector in this paper. Estimates for 2007 and forecasts for 2008 are calculated based on previous years sheep enterprise NFS data, applying change co-efficients and price indices combined with advice from Teagasc sheep specialists.

[1]Sheep Industry Development Strategy Report – The Malone Report

Sheepmeat Market

Based on data from the EU Commission, following on from the accession of Bulgaria and Romania to the EU, sheep and goat meat production is projected to reach 1.1 million tonnes in 2007 and to decline gradually up to 2014. This results from the impact of decoupling of ewe premium in the major producing regions. Consumption is expected to decline due to the relatively high price of sheep meat. The EU Commission expects that imports to the EU will remain stable throughout the medium term at 275,000 tonnes, as the difference between production and consumption remains relatively constant. Towards the end of the projection period, year 2014, they expect that there will be a slight increase in imports in order to meet domestic demand.

UK sheepmeat production is forecast by the MLC[1] to decline by 6% in 2008. For 2007 lamb supplies were down 4% while for 2008 an additional 4% fall in lamb supplies is expected with lamb numbers back to 13 million head. Ewe and ram disposals are also expected to be lower by 6% in 2007. Exports from the UK are estimated to be 30% lower in 2007 resulting from the ban on exports as result of foot and mouth disease, the unfavourable exchange rates and the increased availability of New Zealand lamb on EU markets. For the first half of 2007 imports, from the rest of the EU to the UK, fell by 3% to over 7,000 tonnes, with Ireland supplying 4,000 tonnes of this, a 9% increase on 2006 figures. However New Zealand still remains the principal source of imports in the UK, with a 9% increase for the first half of 2007, at 64,000 tonnes. Results from the UK June survey show that the national UK sheep flock fell 3% to 33.6 million head while the breeding flock was down 5% year on year, at 15.8 million head[2]. It has been suggested that a high number of unproductive ewes have been disposed of in 2007, thus limiting mutton supply in 2008 and this will in turn affect the breeding flock which MLC forecast to be down 4% in December 2007.

In France the demand for lamb is currently low and increased competition from British lamb in this market has led to reduced demand for Irish lamb. The UK remained the largest exporter to France but imports from New Zealand continue to increase and at end June 2007 were 11% higher than during same period in 2006, at 18,100 tonnes[3].

Owing to drought in many parts of Australia over the past five years Australian sheep numbers are at their lowest level in 80 years. Sheep

[1] Meat and Livestock Commission, Sheep Economics Market Outlook, various issues 2007
[2] UK Agriculture Departments
[3] UBIFRANCE

numbers have fallen by approximately 23 million head since June 2001, to an estimated 88 million in June 2007, a drop of 20%[4]. For the first seven months of 2007, Australian lamb exports were up 3%, with export levels helped by increased availability and strong demand from both US and Middle East markets. The US accounts for 28% of the Australian export market, an increase of 6% over the period. However, over recent months Australian exports have become under pressure from their New Zealand neighbours, especially for frozen cuts.

According to the New Zealand Agricultural Production survey, total sheep numbers declined by 2.4% to 39.1 million head in June 2007. The total number of ewes in lamb were estimated at 26.5 million in June 2007, representing a fall of almost 2% on the 2006 figure. This continues the trend of decreasing ewe numbers in New Zealand since the 1980s. The east coast region of the North Island experienced the largest decline in numbers owing to drought. The continued expansion of the dairy herd coupled with the low profitability of the sheep industry led to most areas experiencing a drop in sheep numbers. While the number of breeding ewes declined by almost 2%, the number of hoggets was over 5% lower in 2007 at 11.4 million head. It is expected that the 2007 – 2008 total lamb crop will decline by 5% owing to decline in ewes joined and a decline of 3% in the lambing percentage[5].

In Ireland lamb slaughterings have been lower in 2007 viz 2.211 million head up to beginning of November 2007, compared to 2.355 million for the same date in 2006, a decline of 6 per cent. Cull ewe slaughterings declined by 5% during the same period, so that by mid November total sheep slaughtering was 2.59 million head, a decline of 6% over the same period in 2006. The re-occurrence of foot and mouth disease (FMD) in the UK resulted in an increase in prices paid to Irish producers with prices rising to between 390–400 c/kg for grade 1 lambs during the period mid to late September. However a freeing up of the export rules towards end of November led to more British players once again entering the French export market. With demand in France still quite weak this surge in British lamb will put Irish prices under further pressure, with grade 1 British lamb reported to be making just 340-350c/kg on the Rungis market.

The strong home market is continuing to support the lamb trade and lamb prices to early November 2007 were 2.4% up on the same period in 2006. On a seasonal basis prices were up 6% in the first quarter of 2007. In late November good lambs were fetching up to 370c/kg. The main reason for

[4] Meat and Livestock Australia
[5] Meat & Wool New Zealand Economic Service

this price hike is that numbers on offer continue to decline. Especially in the south of the country, where good quality lambs are in extremely tight supply, meant that some lots hit €100 per head in late November. There were 41,000 lambs killed in first week of November, the lowest level since last March 2007. Indications are that supplies will fall even further to under 40,000 lambs. The home market is absorbing three quarters of these, leaving remaining lambs for export to France.

The processing sector has developed a strong presence in a lucrative French market, accounting for 60% of Irish lamb exports. The French are the single largest importer in the EU. With the level of self sufficiency in EU declining this means Irish sheep meat as an established supplier should be in an ideal position to increase its market penetration in Europe, having already entered new markets in the UK and Northern Europe. According to the Malone Report, EU Sheepmeat self sufficiency had declined from 82% in 2000 to 80% in 2005.

Lamb numbers will continue to be tight in Ireland up to the end of 2007. However given the poor markets and low demand in France which were down by almost 2% at end of June 2007, this is probably just as well. This trend in lamb numbers is likely to continue for the remainder of the year and also for first few months of 2008. The situation is being watched carefully for early next year by New Zealand, who have not much quota left to fill for the current year.

Sheep and Flock Numbers

Sheep flock numbers are shown in Table 1. The trend in the number of sheep flocks which has been in decline since 1993 continued in 2006, declining to 35,277 flocks, a 33% decline on 1993 flock numbers.

Table 1: Sheep flock numbers 1993 – 2006

Year	1993	1998	2000	2003	2004	2005	2006
Flock numbers	52,955	44,583	41,177	34,910	34,821	37,209	35,277

Source: Department of Agriculture, Fisheries and Food

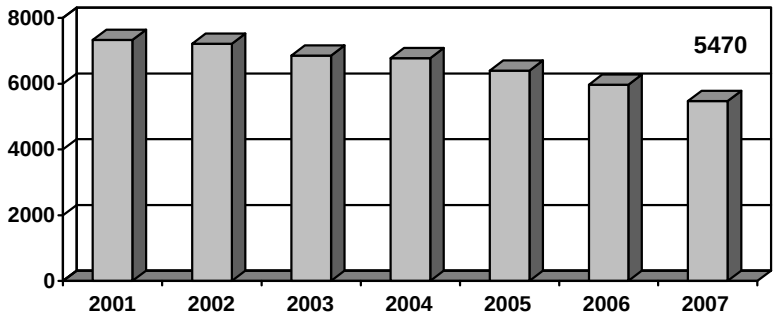
Average flock size continues to change slightly with 102 ewes in December 2006 compared to 100 in 1993. The national flock size actually decreased from 108 sheep per flock in December 2005 to 102 in 2006 (68% of flocks had below this average). Of the 35,277 sheep flocks in the country, approximately 44% have less than 50 ewes while the number of large flocks fell slightly. Although numbers have been failing they do not indicate any consolidation in the sheep sector or any shift to larger more commercial flocks. Many of the smaller flocks are managed by elderly or part-time

farmers and the likelihood is that more of these will exit from sheep production especially following on from the decoupling.

The decline in the national sheep flock is not only continuing but is accelerating with Irish sheep numbers in June 2007, 8% head lower than 2006[6] and 14% below that of 2005, as shown in Figure 1. This decrease in sheep numbers has been seen across the board with the number of breeding sheep falling by almost 9% to 2.93 million head (Bord Bia). Since 2000, the size of the Irish breeding flock has fallen by 1.27 million head. Ewe and ram disposals in 2007 at export meat plants are 6% lower than 2006 while the number of other sheep disposals fell by 8%. This decline is reflective of the reduced lamb crop in 2007.

For 2007 total sheep numbers are 5.47 million head compared to 7.33 million head in 2001. According to CSO figures, breeding ewe numbers are down by 0.25 million since 2006, to their lowest level since 1986 and total sheep numbers have declined by 2 million in this decade alone.

Figure 1: Sheep Numbers '000 Head 2001-2007 (June)



Source: CSO

Table 2 shows the trend in Irish lamb prices since year 2000. Lamb prices declined in 2005 but have increased again in the last two years. It is expected that the strong home market will continue to support 2007 lamb prices and that this price trend will continue into the New Year.

[6] CSO Survey

Table 2: Irish Lamb Prices, 2000 – 2007

Year	2000	2001	2002	2003	2004	2005	2006	2007
Lamb price c/kg d.wt	314	445	380	365	365	338	345	357 *

**Average Price to early November 2007*
Source: Department of Agriculture, Fisheries & Food

Sheep Margins

The trend in output, costs and margins per ewe are detailed in Table 3 for Mid-season lamb. Gross output declined by 8% between 2005 and 2006 and there was also an increase of 8% in direct costs. Although average lamb prices were higher in 2006, a decline in gross output in 2006 resulted from a combination of a decline in weaning rate and a fall in direct payments per ewe. The mortality rate of lambs and ewes also increased slightly in 2006 so that technical factors were also a cause for this reduction in margins. One of the main elements contributing to the change in direct costs was winter forage, increasing by 11% between 2005 and 2006. Pasture costs and concentrates costs increased by 10% and 3% respectively. Another contributing factor was 'other' direct costs, which includes veterinary and medical expenses, casual labour, transport and hire of machinery. These contributed 8% to the overall change in direct costs.

Table 3: Trend in output, costs and margins, Mid-Season Lamb, 2005- 2006

	2005	2006
	€/ewe	
Gross output	88	81
Direct Costs		
Concentrates	15.7	16.2
Winter forage	3.7	4.1
Pasture costs	6.9	7.6
Other direct costs	10.0	10.8
Total Direct Costs	36	39
Gross Margin	**52**	**42**

Source: Teagasc National Farm Survey

Overhead costs increased by 11% between 2005 and 2006 to €39.80 per ewe. Further emphasis will need to be placed on managing the overall production cost elements, especially in light of the large concentrate price increases. Will continue to be eroded by rising cost of feed bills.

Gross margin data for the main sheep systems are shown in Table 4. All per ewe data are based on per ewe joined.

Table 4: Gross margin (€/ewe), 2004 – 2008

	2004*	2005*	2006	2007[1]	2008[2]
Early Lamb	83	49	46	50	50
Mid-Season Lamb	71	52	42	45	46
Hill-Blackface	33	4	4	4	4

Source: Teagasc National Farm Survey
** Pre-decoupling – includes direct payments*[7]
[1]Estimate, [2]Forecast

Actual margins are presented for 2004 - 2006 with estimates for 2007 and forecasts for 2008. The lowland systems are based on National Farm Survey data from flocks on all soil groups while the hill system is based on soils with a limited use range.

Gross margin per ewe for the Early lamb system declined slightly in 2006 mainly due to an increase of over 30% in pasture costs, while other direct costs increased by approximately 6%. The cost of concentrates per ewe actually declined by 2 % for this system, breaking the trend for previous years but this resulted from less concentrates fed per ewe. Margins for the Early lamb system declined in 2006 but are estimated to have increased in 2007. This is due to higher lamb prices in the April to May period compared to 2006. However some of this price gain will be eroded by increased direct costs, especially concentrate feed costs. Owing to the reduced supply of lambs coming on the market the outlook for prices in 2008 is also positive.

Mid-season is the predominant lowland system and margins for this system were relatively static up to 2004, declining since to €42/ewe in 2006. This decline in 2006 resulted mainly from a decline in gross output as a result of adverse changes in technical factors and also an 8% increase in direct costs, as mentioned previously. Margins for the Mid-season system are estimated to have increased in 2007 as a result of stronger prices. It is forecast that prices will remain strong for 2008 as result of the tighter supplies but the increased output gains will be somewhat eroded by increased concentrate and other direct costs.

The actual gross margin for Hill-Blackface system was €4 per ewe for both 2005 and 2006 and is expected to remain relatively static in 2007 and 2008. Overhead costs for this system were estimated at €13.90 per ewe in 2006 resulting in a negative net margin of €9.90, with output not being sufficient

[7] The decoupling of the ewe premia in 2005 has had a dramatic impact on the gross margin per ewe resulting in a reduction of approximately €25 per ewe on both lowland system and €29 for blackface system.

to cover production costs. However it is the general consensus that this sheep system provides a positive externality, a public good and form part of the physical landscape, adding a value that may not be quantifiable in money terms but provide a benefit nonetheless. From an environmental perspective it is important that this sheep system is retained and also for cross compliance purposes.

The trend for output, cost and gross margins per ha for the main lowland system is shown in Table 5 for farms on all soils to enable comparison with other enterprises.

Table 5: Trend in output, costs and margins (€/ha), Mid-Season Lamb, 2006 –2008

	2006	2007[1]	2008[2]
Gross output	725	771	811
Direct costs	347	364	395
Gross margin	378	407	416

Source: Teagasc National Farm Survey
[1] Estimate, [2] Forecast

Gross margins are hectare are estimated to increase to €407 in 2007 with a slight increase for 2008. Higher meal prices which will operate throughout next year will tighten margins even further. An expected lift in the lambing rate will somewhat offset the higher meal bills but in long run the lamb trade must reach or go beyond the €100/head threshold if business is to be viable at farm level

For Mid-season lamb the average lambs weaned per ewe joined, according to NFS data, is 1.25. However if we examine the bottom, middle and top one third of Mid-season lamb producers, in Table 6, there is quite a lot of variation between the three groups. “An output of at least 1.5 lambs sold/ewe let to ram” is given as a reasonable objective in the Malone report and the top group of Mid-season lamb producers in the NFS are not far off this mark having a weaning rate of 1.36. A combination of high weaning rates and good stocking rates is essential to achieving acceptable returns and from the data in Table 6, the top group in also shown in a very favourable light for these variables.

Table 6: Mid-Season Lamb 2006 - Trend in output, costs and margins and technical performance

	Bottom ⅓	Middle ⅓	Top ⅓
		€/Ha	
Output	529	701	1165
Direct Costs	390	285	378
Gross Margins	139	416	786
Ewe / Ha	7.8	8.8	11.6
Lambing rate	1.29	1.33	1.46
Weaning Rate /ewe	1.18	1.23	1.36
Lamb Carcass kg/ha	170	200	293
Dir. Costs €/kg carcass	2.29	1.43	1.29

Source: Teagasc National Farm Survey

As livestock production is seen to be a low margin business, a lack of scale and efficiency hinders long term viability. The top third are performing well and this is supported out by the NFS results for 2006. However even this group still have considerable scope to improve their weaning and stocking rates and so increase profitability. With reference to the margins for the top ⅓ Mid-season group, the gross margin per hectare is over five and a half times that of the bottom group. The Family Farm income for the top group is almost €30,000 compared to €13,300 and €18,100 for the other two groups, respectively. To be competitive and provide viable returns to labour and assets, sheep farmers need to improve technical performance, contain or reduce their costs and produce quality lamb.

Summary

Whilst it is important that ewe numbers are maintained so as to maintain production levels, it is also important that quality as distinct from quantity be enhanced. The resultant de-stocking owing to the SFP introduction may lead to less efficient farmers leaving the system and so prove beneficial in removing poorer quality stock, as farmers focus more on breeding potential.

The decrease in sheep numbers has been seen across the board and since 2000, the size of the Irish breeding flock has fallen by 1.27 million head. The decline in the national sheep flock is not only continuing but is accelerating. Average flock size continues to change slightly with 102 ewes in December 2006 compared to 100 in 1993. Although numbers have been falling they do not indicate any consolidation in the sheep sector or any shift to larger more commercial flocks. In an era in which part-time farming is becoming more the rule with many off–farm employment opportunities, many of the smaller flocks are managed by elderly or part-time farmers. The likelihood is that more of these will exit from sheep production unless

the sheep enterprise is made more compatible with the existence of part time farming. Innovation and better management are the key, with more emphasis on a model of easy care as is the case with New Zealand sheep production**.**

The strong home market continues to support the lamb trade and lamb prices to early November 2007 were 2.4% up on the same period in 2006. The downward trend in lamb numbers has resulted in tighter supplies suitable for the home trade and has led to stronger prices. It is expected that the strong home market will continue to support 2007 lamb prices and that this price trend will continue into the New Year.

The re-occurrence of foot and mouth disease in the UK also resulted in an increase in prices paid to Irish producers in 2007 for a short period. However a freeing up of the export rules towards the end of November led to more British players once again entering the French export market, where demand is still quite weak. This surge in British lamb has put Irish prices under further pressure.

Livestock production is seen to be a low margin business and the low margins in sheep production coupled with a lack of scale and efficiency and the high labour requirements hinders the viability of the sector. A combination of high weaning rates and good stocking rates is essential to achieving acceptable returns and this is borne out by NFS data on the top third of Mid-season lamb producers. This top third of producers are performing well but however even this group still have considerable scope to improve their weaning and stocking rates and so increase profitability. Sheep farmers need to improve technical performance and produce quality lamb in order to be competitive and also to provide viable returns for their labour and assets. Gross margins are estimated to increase for both Early and Mid-season lamb producers in the current year and the forecast for 2008 is a slight increase for Mid-season producers while Early lamb gross margins remain relatively static. Increase in meal prices next year will tighten margins even further. An expected lift in the lambing rate will somewhat offset the higher meal bills but in the long run the lamb trade must reach or go beyond the €100/head threshold if business is to be viable at farm level

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SITUATION AND OUTLOOK FOR TILLAGE 2007/2008

J. P. Breen[8] and F. S. Thorne[9]

Introduction

The 2006/2007 crop year has seen a continuation of the positive story that was witnessed in 2005/06. Increased demands from the US biofuel sector for corn, along with dwindling stocks and severe drought in Australia have combined to drive prices up globally. Irish cereal farmers also benefited from this price increase with prices increasing dramatically over what was witnessed in 2005/2006.

This paper offers a review of the past production year and draws comparisons with previous years as recorded by the Central Statistics Office (CSO) and the Teagasc National Farm Survey (NFS), (Connolly et al 2006). The authors examine crop yields, production and the price developments that have taken place in the past year and gross margins are estimated. A discussion of the major global factors that have driven the recent boom in cereal prices is also presented. Finally the authors examine the outlook for gross margins for the coming production year for the major cereal crops.

Price and Cost Developments[10]

The past year has seen cereal prices in Ireland reaching an unprecedented high in nominal terms. The prices paid in 2006/07 were significantly higher than in 2005/06, which were themselves substantially higher than average prices for the period 2000 to 2005. Feed wheat prices in 2007 were up approximately 75 percent on the 2006 price. Prices for feed and malting barley were up approximately 70 percent on their 2006 prices. The increase in the price of feed oats in 2007 was slightly less than that witnessed for the other crops, at approximately 66 percent, however feed oats prices had increased by more than the other crops in 2005, and many commentators on the oats market in recent times predicted that the price for oats in recent

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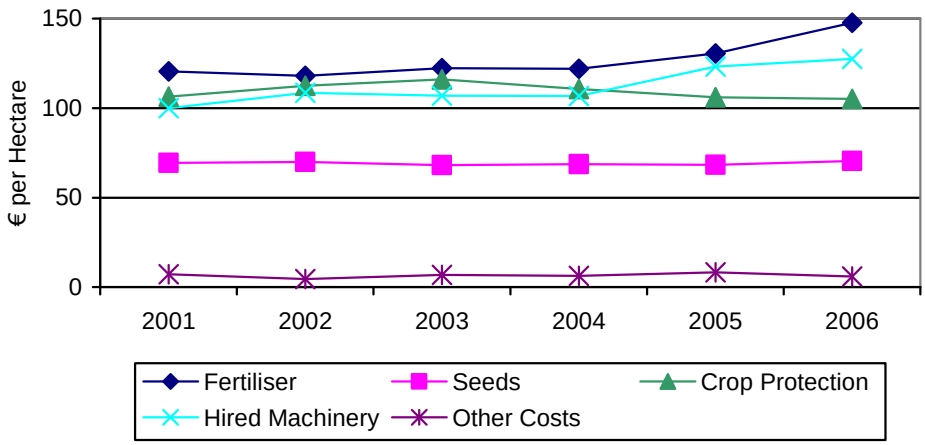
[10] All prices and gross margins quoted are excluding VAT.

years was trading at prices above market clearing levels and an ultimate realignment of prices was inevitable.

Figure 1 below illustrates the breakdown of total direct costs per hectare of spring barley grown on Irish farms. Fertilizer, seed, crop protection and machinery hire account for the bulk of direct costs in spring barley production. The cost of fertilizer has grown from €120 per hectare in 2001 to €148 per hectare in 2006. Similarly the cost of machinery hire has grown from €100 per hectare in 2001 to €128 in 2006. The cost of crop protection increased in 2002 and 2003; however by 2006 crop protection costs were back to their 2001 level of approximately €105 per hectare. Over the period 2001 to 2006 seed costs and other costs in spring barley production were relatively unchanged. Fertilizer and machinery hire made up 30 and 25 percent of total direct costs in 2001 and by 2006 this had increased to 32 and 28 percent respectively.

Figure 1: Breakdown of Total Direct Costs per Hectare of Spring Barley (€ per Hectare)

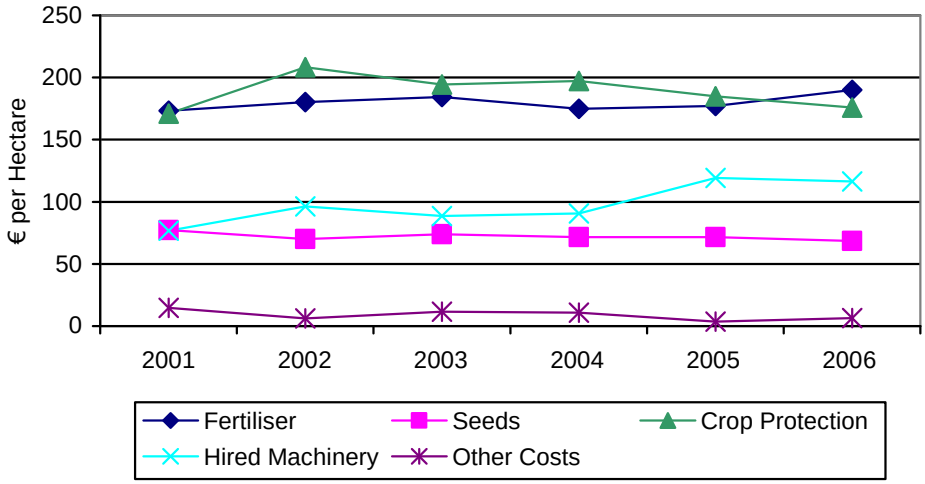


Source: National Farm Survey 2001-2006

The breakdown of total direct costs is somewhat different for winter wheat as illustrated by figure 2 below, with the cost of fertilizer and crop protection being significantly higher than the cost of hired machinery. Fertilizer costs increased from €173 in 2001 to approximately €190 in 2006, while crop protection costs increased slightly from €171 in 2001 to €176 by 2006. As with spring barley the cost of hired machinery for winter wheat increased significantly in 2005, in 2001 the average cost of machinery hire was €77 per hectare and by 2006 this had increased to €117. The average cost of seed and other costs decreased slightly over the period examined. Fertilizer

costs account for approximately 34 percent of the total direct costs associated with winter wheat production, while hired machinery's share of total direct costs increase from 15 to 20 percent over the period 2001 to 2006.

Figure 2: Breakdown of Total Direct Costs per Hectare of Winter Wheat (€ per Hectare)



Source: National Farm Survey 2001-2006

International Supply and Demand

The past year has seen Irish cereal farmers receive record high prices, while these prices have been in part due to a recent reduction in domestic supply; they are largely a result of international factors that are beyond the control of Irish farmers. These factors include the drought in Australia, biofuel demand and diminishing stocks globally. It is likely that these factors will play a major role in determining Irish prices in the coming year also.

In June 2007 the Australian Bureau of Agricultural and Resource Economics (ABARE) reported that the total area of winter crops grown in Australia was expected to be 20 million hectares, representing a 10 percent increase on the area planted in 2006. As a result of this increase in the area planted the total yield in 2007/2008 was initially expected to be approximately 33 million tonnes a 19 million tonne increase on 2006/2007 production. However due to below average rainfall in August, September and October ABARE have recently revised their expected yields downwards to 18 million tonnes. Table 1 below illustrates how ABARE have revised their forecasted yield downwards as a result of the low rainfall in

autumn. Table 1 also compares the production levels as forecasted in October 2007 with the actual production for last years harvest.

Table 1: Australian Actual and Forecasted Winter Crop Production (000,000 tonnes)

	ABARE forecast for 2007-08, made in;			Actual
	June 2007-08	**Sept 2007-08**	**Oct 2007-08**	**2006-07**
Wheat	22.489	15.475	12.095	9.819
Barley	9.051	5.895	5.045	3.722
Canola	1.399	1.116	0.909	0.513
Total	32.939	22.486	18.049	14.054

Source: ABARE 2007

On a global level world wheat production has increased since 2003 as shown in table 2 below. However United States Department of Agriculture (USDA) data for 2006 indicates that world wheat production was down by over 20 million tonnes on the production in 2004 and 2005. While they estimate world wheat production in 2007 to increase relative to 2006, it will still be below production in levels in 2004 and 2005. Meanwhile world wheat consumption in 2006 and 2007 is estimated to be above production and as a result we have seen a reduction in world ending stocks.

Table 2: World Wheat Production and Consumption 2003 to 2007 (000,000 tonnes)

	2003	**2004**	**2005**	**2006**	**2007**
Production	554.4	628.9	621.7	593.6	603.3
Consumption	588.4	608.7	624.4	617.2	617.6
Ending Stocks	132.3	150.4	147.6	124.1	109.8

Source: $USDA_1$ 2007.

The past three years have seen cereal stocks diminishing globally and this, along with the drought induced supply shock in Australia, has led to increased cereal prices globally. Table 3 below illustrates the recent change in ending stocks for some of the main exporters in the world wheat market. Over the last three years we have seen a significant decline in ending stocks of wheat from 150 million tonnes in 2004 down to 124 million tonnes in 2006 and this is forecasted to decline further to less than 110 million tonnes for 2007/08 ($USDA_1$ 2007). This is an expected decline of 27 percent in global wheat ending stocks between 2004 and 2007. Ending stocks within the EU 27 and the USA are forecasted to have declined by 38 and 42 percent respectively for the same period.

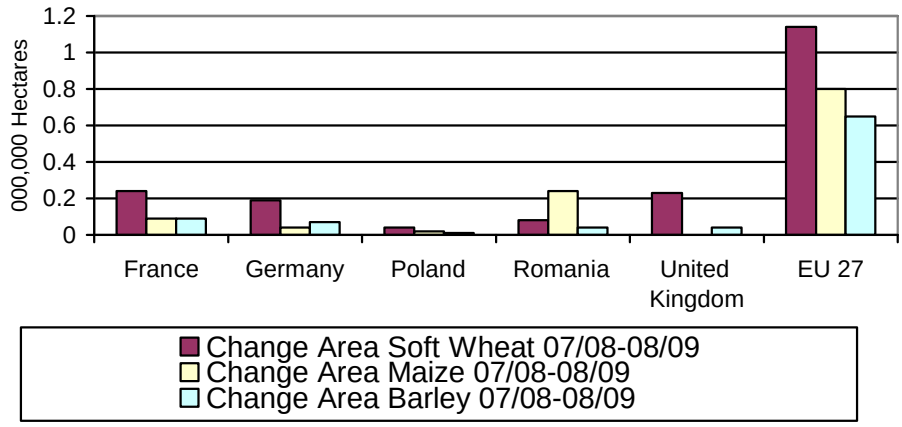
Table 3: Ending Stocks 2004, 2005, 2006 and 2007 (000,000 tonnes)

	Ending Stocks 2004	Ending Stocks 2005	Ending Stocks 2006	Ending Stocks 2007	% change 2004-2007
EU 27	25.206	20.177	14.7	15.728	-38
USA	14.699	15.545	12.414	8.488	-42
Canada	7.922	9.638	6.827	4.958	-37
China	38.819	34.89	35.59	35.79	-8
Russia	3.891	3.809	2.38	2.18	-44
Ukraine	2.609	2.414	2.071	2.408	-8
World	150.42	147.6	124.1	109.8	-27

Source: USDA selected reports 2007.

Earlier in 2007 the European Commission announced its decision to reduce the rate of compulsory set-aside to zero for 2008/2009. The combination of higher cereal prices and the relaxation of the set-aside policy constraint are likely to lead to an increase in the EU crop area for the coming year. The projected area under cereal cultivation in 2008/09 for the EU 27 is projected to be 58.9 million hectares up 5 percent from the 2007/08 level (Strategie Grains 2007). Figure 3 below illustrates the projected change in crop area for the EU 27 and some of the main EU grain producing countries. The soft wheat area for the EU 27 is forecasted to increase by 1.14 million hectares or 5 percent. The area of Maize grown within the EU is forecasted to increase by 0.8 million hectares or 10 percent while the area of barley grown is forecasted to increase by 0.65 million hectares, an increase of almost 5 percent.

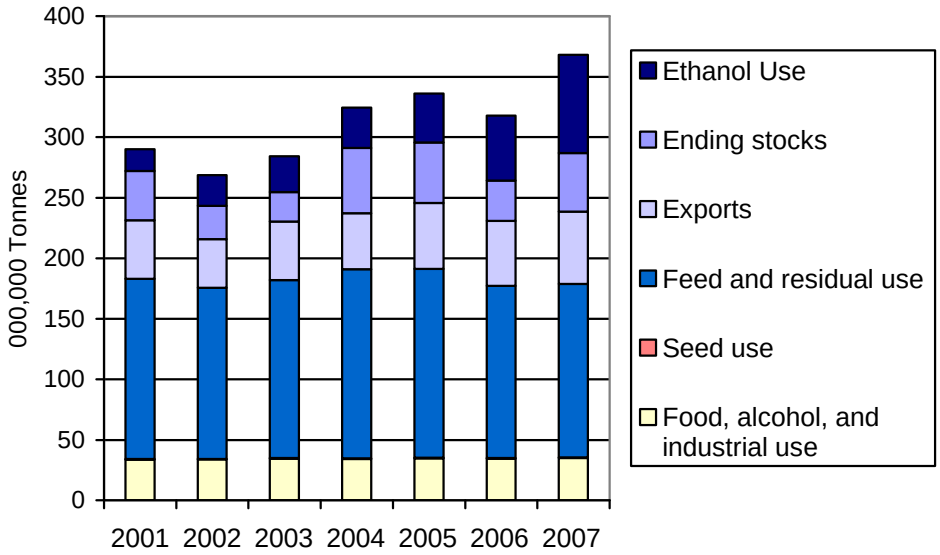
Figure 3: Forecasted Change in Crop Area from 07/08 to 08/09 crop year for the EU 27 and Selected Member States (000,000 hectares)



Source: Strategie Grains “November Report” 2007

The growing demand from US biofuel producers has been cited as one of the main drivers of increased grain prices globally. Figure 4 below illustrates how US corn supply and use have evolved over the past 7 years. As we can see from the graph US corn supply has generally been on an upward trend and corn supply in 2007 was approximately 370 million tonnes compared with approximately 290 million tonnes in 2001, an increase of almost 28 percent. This increase in corn supply has been largely due to yield increases. However there was also a significant increase in the area harvested in 2007, which increased by almost 6 million hectares (approximately 18 percent) compared with the 2001-2006 average. On the use side, food alcohol and industrial use excluding ethanol has remained quite static over the same period increasing from 33.5 to 34.7 million tonnes. The increase in seed use has also been quite small 0.51 to 0.58 million tonnes. Feed and residual use increased from 149 million tonnes in 2001 to 156 million tonnes in 2004 and 2005, but has since declined to approximately 144 million tonnes in 2007. The main growth in corn use over this period has been in ethanol use which has increased from 18 million tonnes in 2001 to 81 million tonnes in 2007, an increase of over 350 percent. Researchers at FAPRI-Missouri have projected corn ethanol use to increase to approximately 97 million tonnes in 2008 however from 2009 onwards it is projected to plateau at about 105 million tonnes (FAPRI 2007).

Figure 4: US Corn Use 2001-2007 (000,000 tonnes)

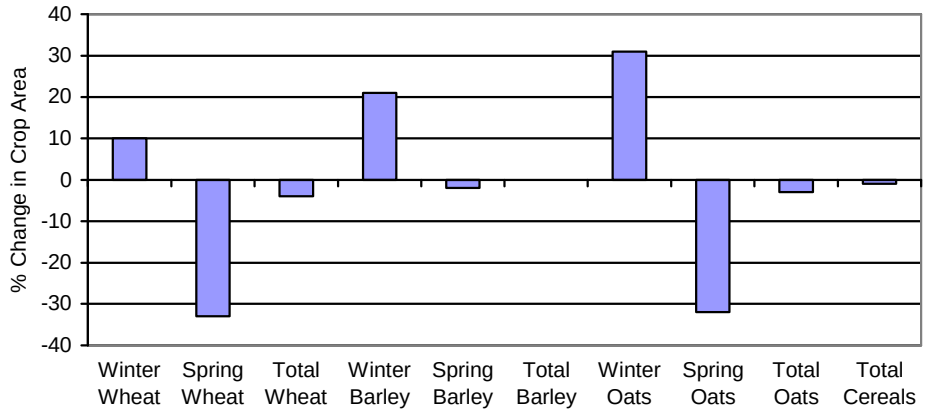


Source: USDA

National Crop Area

Figure 5 illustrates the changes that have taken place in the area of all crops sown in Ireland between the 2005/06 and 2006/07 tillage years. The areas of all three winter cereals have increased relative to the 2005/06 year, while the areas of all three spring cereals have decreased. The area of winter wheat sown increased by 10 percent from 59,000 hectares in 2006 to 65,000 hectares in 2007. The area of spring wheat grown was down by approximately 33 percent; however the total wheat area grown was down by only 4 percent. The area of winter barley grown was up 21 percent compared with a decrease of 2 percent in the area of spring barley grown (down from 152,000 hectares to 149,000 hectares) however the total area of barley grown was unchanged at approximately 168,000 hectares in 2007. The area of winter oats grown was up 31 percent while the area of spring oats grown was down 32 percent and the overall area of oats grown was down 3 percent to approximately 20,000 hectares in 2007. Finally, the total cereals area grown in 2007 was 278,000 hectares in 2007, and this was down 1 percent on the 2006 total.

Figure 5: Percentage Change in Irish Crop Area from 2005/06 to 2006/07 crop year

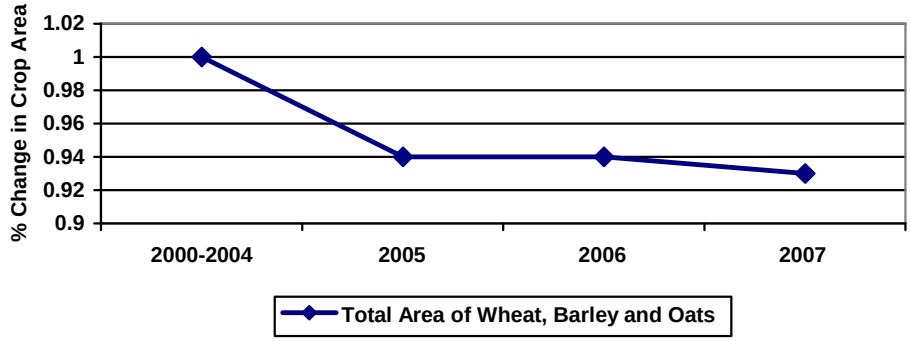


Source: Teagasc Harvest Report

Figure 6 below illustrates the changes that have taken place in the total area of wheat, barley and oats grown in Ireland since the introduction of decoupling in 2005. The average total area of these three crops grown between 2000 and 2004 was approximately 293,000 hectares. With the introduction of decoupling this area fell by approximately 6 percent and by a further 1 percent in 2007. This decline in national cereals production has been one of the factors that has led to an increase in the Irish cereals price. However given the high prices that were earned in 2007 some supply

response can be expected in 2008. The FAPRI-Ireland analysis has projected that cereal area grown in 2007/2008 will increase to 99% of the pre-decoupling average. While members of the Teagasc advisory service expect that in 2008 the area of these three crops grown will be back up to the average of the four years seen pre-decoupling.

Figure 6: Percentage Change in Irish Crop Area since Decoupling



Source: CSO

Yields and Quality

Table 4 below compares the estimated yield per hectare in Ireland for the 6 main cereal crops in 2007 with the yield as recorded by the CSO in 2005 and 2006 and the simple average yield per hectare for the period 2000 to 2006. The most notable yield difference is in winter wheat which is estimated to be 8.3 tonnes per hectare in 2007, down 1.5 tonnes on the CSO average for 2006. This yield decline is significant given the area of winter wheat grown. Winter barley and oats yields are estimated to be unchanged from 2006. Yields for the three spring crops in 2007 are estimated to be down slightly on the previous year. When we compare estimated yields with the 2000-2006, average we see small differences in all yields with the exception of winter wheat which is down 1.1 tonne from the 7 year average calculated. Despite a wet start to the 2007 harvest, average moisture contents were good due to the dry weather experienced during the bulk of the harvest. The Teagasc harvest report indicates that average moisture contents were between 17 and 18 percent for most crops.

Table 4: Estimated Cereal Yields 2005, 2006 and 2007 (Tonnes per Hectare) in Ireland

	2005[1]	2006[1]	Average 2000-2006[1]	2007[2]
Winter Wheat	8.8	9.8	9.4	8.3
Winter Barley	7.4	7.9	7.7	7.9
Winter Oats	7.3	8.0	8.0	8.0
Spring Wheat	7.6	7.8	7.9	7.5
Spring Barley	6.1	6.7	6.5	6.6
Spring Oats	6.1	6.4	6.5	6.3

[1]CSO Average [2]Estimated

Cereal Production

Table 5 combines actual CSO total cereals production for 2006 with estimated cereals production for 2007. The estimated 2007 production of wheat, barley and oats is based on 2007 yield estimates from the Teagasc harvest report and CSO statistics for the 2007 area planted. The estimated production levels of all three crops for 2007 are down on their 2006 levels. The estimated wheat production is down almost 117,000 tonnes (approximately 14.5 percent) on the 2006 level. While area of wheat sown was down almost 3,500 hectares the reduction in wheat production was due largely to the significant drop in wheat yields that have been estimated for 2007. As already discussed, estimated declines in the yields of barley and oats were negligible and given the small changes in area planted of both these crops, the estimated change in production is minimal. Barley production is expected to decline by about 7,000 tonnes less than 1 percent, while oats production is estimated to decline by only 300 tonnes again less than 1 percent. Overall cereal production is estimated to be down 124,000 tonnes or 5.9 percent.

Table 5: Actual and Estimated Cereal Production 2006 and 2007 (000 Tonnes) in Ireland

	2006[1]	2007[2]	%Change
Wheat	801	684.5	-14.5
Barley	1,136.9	1,129.8	-0.6
Oats	145.2	144.9	-0.2
Total	2,083.1	1,959.2	-5.9

[1]CSO [2]Estimated

Gross Margins

Given the record high prices that have been paid in 2007, estimated average gross margins are up for the six main cereal crops in comparison with 2006 gross margins. It should be noted from Table 6 below that 2006 average gross margins are themselves significantly higher than the average

gross margins for the period 2000-2005. It should be noted that the average gross margin for 2000-2005 is a market based average gross margin and does not include the area aid payments that would have been received in the years prior to decoupling. Gross margins for winter wheat are estimated to be up by approximately €400 per hectare (59 percent). While gross margins for spring barley are estimated to be up by over €500 per hectare (171 percent).

Table 6 also includes a forecasted gross margin for each of the crops in 2008. In order to forecast gross margins for 2008 a yield for each crop was estimated based on the distribution of historical yields. These forecasted gross margins are based on London and Paris futures market prices (taken from the HGCA website), as well as consultation with international market analysts and domestic purchasers. Given the supply response that is taking place within the EU, it is anticipated that cereal prices will be back about 20 percent on their 2007 prices. A decline of this magnitude would still leave 2008 cereal prices approximately 40 to 50 percent higher than their 2006 level.

However, increased costs of production are expected to reduce farmers' gross margins further. As was shown earlier the cost of machinery hire in cereal production has increased significantly since 2005 largely a result of rising oil prices. Hired machinery now accounts for 28 percent of total direct costs in spring barley production and 20 percent of total direct costs in winter wheat production. The price of crude oil is currently 30 percent above the average price of crude oil for the first half of 2007 and this is likely to have a significant impact on cereal gross margins. Secondly, an increase in the costs of phosphate and urea along with increased global demand is expected to lead to an overall increase in fertilizer costs. Figure 1 and 2 indicated that fertilizer was the single largest total direct cost in the production of both winter wheat and spring barley and so an increase in the cost of fertilizer components would have a significant impact on the gross margins earned by Irish cereal farmers. While there is some capacity to reduce fertilizer use and to switch to less expensive blends this analysis assumes that fertilizer expenditure in 2008 will be 20% higher than fertilizer expenditure in 2007. Finally due to the high prices that were paid for crops in 2007 it is expected that seed prices will be significantly higher in 2008. Irish merchants are already indicating that an increase of €100/tonne on the 2006 price can be expected this would equate to an increase of over 20 percent in the cost of seed to Irish cereal farmers. Fertilizer, machinery hire and seed collectively accounted for 76 and 67 percent of the total direct costs per hectare associated with spring barley and winter wheat production respectively. Given their total contribution to direct costs an

increase in region of 20% or more in these costs will have a significant impact on gross margins.

Teagasc National farm survey data indicates that the price of rented land per hectare over the period 2001-2006 has decreased for all cereal crops. When compared with the average conacre price paid in 2002-2004, 2006 conacre prices are down by approximately 10 percent on average. This decrease in the conacre price was to be expected given the decision to decouple the direct payments including area aid.

If we assume that the forecasted price and cost changes outlined above take place then average gross margins will return to a level close to those recorded in 2006. The 2008 average gross margin for winter wheat would be approximately €40 above the 2006 average gross margin, while the average gross margin for spring barley would be €8 above the 2006 level. If the forecasted gross margins are accurate this would represent a significant decline on those gross margins earned in 2007. However, it should be noted that as illustrated in Table 6 below, the forecasted average gross margins for 2008 as well as the actual average gross margin recorded in 2006 are significantly higher than the average gross margins earned by farmers over the period 2001-2005.

Table 6: Actual, Estimated and Forecasted Crop Gross Margins 2001-05, 2006, 2007 and 2008 (Euros per Hectare) in Ireland

	Average 2001-2005[1]	**2006[1]**	**2007[2]**	**2008[3]**
Winter Wheat	463.9	696.8	1,105.6	735.0
Winter Barley	328.7	575.7	997.2	505.9
Winter Oats	321.2	553.6	1,032.2	516.9
Spring Wheat	344.2	432.5	1,017.9	584.9
Spring Barley	179.02	281.4	761.4	289.1
Malting Barley	256.78	338.7	879.4	415.4
Spring Oats	288.76	456.2	794.4	365.2

[1]NFS Average [2]Estimated [3]Forecasted

Conclusions

The 2006/2007 production year proved to be a very successful year for tillage farmers. Depletion of global stocks, drought in Australia and the demand for corn from US ethanol producers led to a dramatic price increase for all cereals within Ireland and globally. These price increases will in turn lead to a supply response, within the EU the area of wheat grown is projected to increase by approximately 5 percent. This increased production will in turn have a negative impact on cereal prices. However it is anticipated that corn demand from the US ethanol industry along with

diminished global stocks and further drought in Australia will offset some of this production increase. As a result of these factors prices in 2008 are expected to be down on 2007 levels but to remain above their 2006 level. However more worrying for farmers is the potential cost squeeze that lies ahead of them in 2008. If crude oil prices remain at their current high level and fertilizer prices increase significantly then this will erode farmer's gross margins per hectare and lead to gross margins returning to a level similar to those earned in 2006.

One final note of caution is that based on 2007 prices farmers' expectations for high prices and gross margins in 2008 may lead to land rental price inflation. However, the authors believe that this expectation is overly optimistic, prices are likely to decrease on their 2007 level but remain above the 2006 level. If fertilizer, energy and seed costs increase by the magnitudes forecasted in this paper, gross margins will return to a level similar to those earned in 2006. Therefore any inflation in land rental values could seriously undermine farm profitability.

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