FARM INCOMES AND FINANCIAL ANALYSIS OF FERTILISER USE

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Farm numbers have been declining steadily in Ireland and this trend has been projected to continue by the Department of Agriculture and Food 2015 Committee. The most recent analysis from the National Farm Survey shows farm numbers in 2003 classified on the basis of financial viability and non-viability.

Figure 1: Categories of Farms Classified by viability - 2003

Total Farms 116,000		
Viable Farms 38,700	Non-Viable Part-time Farms 37,000	Non-Viable Transitional Farms 40,300

Source: National Farm Survey, Teagasc
Viable: Family farm income is sufficient to cover family labour and return on assets
Non-Viable Part-Time: Family farm income is insufficient to cover family labour and return on assets but farmer and/or spouse has an off-farm job.
Transitional: Family farm income is insufficient to cover family labour and return on assets and there is no off-farm employment.

The data shows 116,000 farms in 2003 of which 38,700 are financially viable with over 77,000 farms non-viable. Data in Figure 2 shows the projected farm numbers for 2015 resulting in 99,000 farms of which 45,000 are financially viable.

Figure 2: Categories of Farms 2015

Total Farms 99,000		
Viable Farms 40,000	Non-Viable Part-time Farms 45,000	Non-Viable Transitional Farms 14,000

Source: 2015 Committee Report, Department of Agriculture and Food

Trends in Farm Income

In the Teagasc National Farm Survey (NFS), the principal measure of the income, which arises from the year's farming activities, is Family Farm Income per Farm (FFI). This is calculated by deducting all the farm costs (direct and overhead) from the value of farm gross output. FFI represents the financial reward to all members of the family, who work on the farm, for their labour, management and investment. It does not include income from non-farming sources and thus may not be equated to household income. However, where it does represent all the income of the farm family, it is expected to provide for that family's living expenses as well as being a source of future investment in the farm business.

The NFS measures farm incomes across the main farming systems and size categories except for pigs and poultry, which are excluded from the sample. Also very small farms (under 2 European Size Units (ESUs)) – are excluded from the survey. These exclusions result in the NFS survey representing 113,261 farms in 2004 compared to overall farm numbers nationally of 136,200 based on (latest figure available 2002, CSO).

Table 1 shows average Family Farm Income (FFI) per farm in current and real terms over the period 1995 to 2004. The base year 1995 was chosen, as this was the commencement of the existing sample of farms having a minimum of 2 ESUs.

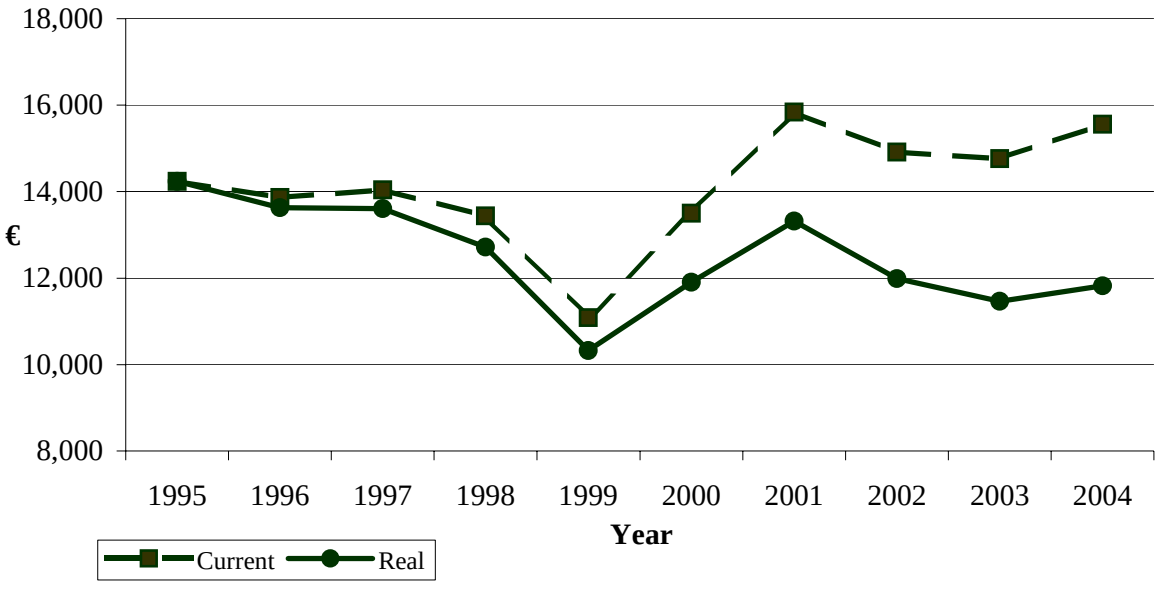
Table 1: Family Farm Income (FFI) per farm 1995-2004

	FFI (Current) €/farm	FFI (Real 1995 = 100) €/farm
1995	14,236	14,236
1996	13,866	13,634
1997	14,042	13,607
1998	13,442	12,717
1999	11,088	10,324
2000	13,499	11,903
2001	15,840	13,322
2002	14,917	11,991
2003	14,765	11,467
2004	15,557	11,822

Source: National Farm Survey, Teagasc – 2004

The data shows farm income in 2004 was 9% above that for 1995 in current terms. However when inflation (CPI) is taken into account it shows that FFI has declined from €14,236 in 1995 to €11,822 in 2004, a decline of 17% in real terms. The trend in FFI in current and real terms is shown in Fig 3. It is also worth noting that the average FFI of €15,557 in 2004 was 2% less than the FFI of €15,840 of 2001, both expressed in current terms.

Figure 3: Family Farm Income per Farm (€) 1995 - 2004



Average Family Farm Income

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 2004 across the range of farming systems.

Table 2: Family Farm Income by System Farming (FFI) – 2004

Dairying	Dairy Cattle	Cattle Rearing	Cattle Other	Mainly Sheep	Mainly Tillage	All
			FFI €/Farm			
34,400	24,900	7,300	8,700	11,000	24,000	15,600

Source: National Farm Survey, Teagasc - 2004

There is considerable difference in the levels of average FFI across the farming systems. The average FFI on the Dairy and Tillage systems are far higher than those on the drystock based systems. Average farm income on the Cattle Rearing and Cattle Other Systems was €7,286 and €8,712, respectively per farm, compared to €34,421 on the Specialist Dairying System. The average FFI for the Cattle and Sheep systems is below the average agricultural wage rate of €14,581 so that those farm families do not receive a full return for their labour and no return on management or investment.

Fertiliser use and cost

Data on fertiliser use and costs in this paper are based on special analysis of the Teagasc 2004 National Farm Survey data. Average cost of fertiliser on farms since 1995 is shown in Table 3.

Table 3: Trend in Fertiliser Cost/Farm

Year	Fertiliser €/Farm	Fertiliser % Direct Costs	Fertiliser % Farm Income
1995	2,380	19	19
2000	2,620	19	18
2001	3,080	21	19
2002	3,020	19	20
2003	3,075	20	20
2004	2,940	19	19

Source: National Farm Survey 2004, Teagasc

Fertiliser cost peaked in 2001 at €3,080 per farm and has remained almost static at approximately €3,000 since then. Direct costs ware defined as those directly incurred in the production of a particular enterprise and fertiliser accounted for on average 20 per cent of direct costs over the 10-year period. Feed and concentrate costs would be the biggest contribution to direct costs. It is interesting that fertilisers accounted for almost exactly similar percentage of average family farm income i.e. 20%.

Data in Table 3 refer to all farms; however, there is considerable variation in fertiliser use on different farm systems as shown clearly in Table 4.

Table 4: Fertiliser Cost – All Farms – 2004

	Dairying	Cattle Rearing	Sheep	Tillage	All
Fertiliser €/Farm	5,800	1,230	1,580	7,490	2,940
% Direct Costs	17	19	16	26	19
% Farm Income	17	17	14	31	19

Source: National Farm Survey 2004, Teagasc

Tillage and dairy farms have the highest cost of fertiliser at €7,490 and €5,800 per farm respectively, with suckler farms only spending on average €1,230 per farm. However, on a per ha basis dairy farms were the biggest users, as tillage farms are much larger than dairy farms. With exception of tillage farms, fertiliser cost accounted for approximately 18% of total direct costs and also family farm income. The percentage spent on fertiliser was far greater on tillage farms i.e. 26% of direct costs and 31% of farm income.

Fulltime farms in the National Farm Survey are defined as those requiring a minimum of 0.75 labour Units to operate the farm business based on Standard Man Days. This sector therefore represents the more commercial side of Irish farming. Fertiliser use on fulltime farms is shown in Table 5.

Table 5: Fertiliser Cost – Fulltime Farms – 2004

	Dairying	Cattle rearing	Sheep	Tillage	All
Fertiliser €/Farm	6,115	2,990	3,445	12,266	5,947
% Direct Costs	17	20	18	26	19
% Farm Income	17	19	17	32	19

Source: National Farm Survey 2004, Teagasc

Tillage farms are by far the largest users at €12,266 per farm compared to €6,115 on dairy farms. There was a substantial increase in fertiliser usage on fulltime cattle rearing farms compared to part time cattle rearing farms. Fertiliser cost as a percentage of all direct costs and farm income was similar to the all farm situation.

The National Farm Survey database can also be used to examine fertiliser usage by region and this in shown in Table 6.

Table 6: Fertiliser Cost by Region 2004

	East	South-East	West
Farm Income €/farm	20,800	24,600	8,600
Fertiliser €/farm	4,480	5,390	1,250
Fertiliser % direct cost	21	20	16
Fertiliser % Farm Income	22	22	14
% National total fertiliser	9	23	10

Source: National Farm Survey 2004, Teagasc

The data shows highest fertiliser usage in the South-East Region (Carlow, Kilkenny, Wexford, Waterford, Tipperary South) followed by the East (Kildare, Meath, Wicklow) with the West (Galway, Mayo, Roscommon) having the lowest at €1,250 per farm. The South East was responsible for the highest percentage of total national fertiliser usage at 23%.

Finally data on fertiliser usage on REPS farms were used to compare to non-REPS farms and results are shown in Table 7 by system of farming.

Table 7: Fertiliser Costs REPS v Non-REPS Farms 2004

	Dairying	Cattle rearing	Sheep	Tillage	All
REPS	4,040	1,430	1,510	3,860	2,160
Non-REPS	6,280	1,130	1,620	9,170	3,290

Source: National Farm Survey 2004, Teagasc

Fertiliser cost was lower for all systems in REPS with the exception of the cattle rearing system. Nationally the average cost of fertiliser was €2,160 per farm on REPS farms compared to €3,290 on non-REPS farms.

In summary therefore the National Farm Survey data show:-

- Farm numbers declining with viable farms remaining constant
- Farm incomes virtually static
- Dairying enterprise profitable whilst drystock enterprise in difficulty
- Fertiliser cost per farm static
- Tillage and dairy farms – biggest users of fertiliser
- Fertiliser cost 52% higher on Non-REPS farms than on REPS farms

References

Connolly, L., et al., National Farm Survey, 2004. Teagasc, 2005.
Department of Agriculture and Food, Report of Agrivision 2015 Committee, Dublin 2005.