Future Prospects for the Fertilizer Sector in View of CAP Reform

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1. Background

This paper assesses the potential impact of the 2003 Luxembourg CAP Reform Agreement on the future prospects for the fertilizer sector.

In this respect, it presents analysis from a number of sources including ICOS and FAPRI, together with the results of the most recent forecasts from the European Fertilizer Manufacturers Association (EFMA). In effect, the differing conclusions from the three sources present a scenario analysis. Such a scenario approach is important, as it is difficult to project the future impact of the Luxembourg CAP Reform on sector margins, production levels and input use levels. In addition to presenting information on the EU15, the EFMA forecasts also include forecasts for the ten new members which will join the EU on May 1st, 2004.

2. Potential Impact of the Luxembourg Agreement

It is expected that significant changes in the profitability of different enterprises will arise from the milk intervention price cuts and decoupling of direct payments. In addition, the relatively late payment of the decoupled payments will affect cashflow on farms, especially on dairy farms, which usually have monthly income receipts. There is also a concern that the requirement that decouple payment rights can only be exercised for a matching land area may slow down the transfer of land by sale, leasing and renting.

2.1 Impact on Sector Margins

Most analysis of the beef and sheep sectors confirms that their profitability to date has been equivalent to around the value of the direct payments on more efficient farms and below the value of the direct payments on less efficient farms. In the decoupled scenario, if the value of the direct payments is excluded from the analysis, it is clear that profitable production of sheep and cattle will require an increased focus on ensuring that the system of production is profitable. It is expected that very efficient producers will be profitable provided their level of intensity and the system of production ensures profitability.

FAPRI[1] projections are that Irish production of cattle and sheep will decline in the future allowing for decoupling, changes in the expected profitability and other factors. In contrast, it projects that crop production is expected to be relatively stable, as outline in the table below.

[1] *FAPRI Ireland Partnership; The Luxembourg CAP Reform Agreement: Analysis of the Impact on EU and Irish Agriculture*

Projections for Production Before and After Luxembourg CAP Reform			
	2003	**2012**	**% change**
Suckler cows	1.15m	0.9m	-22%
Other cattle	4.06m	3.35m	-18%
Ewe numbers	3.73m	2.90m	-22%
Lamb crop	3.62m	2.80m	-22%
Crops *(00ha)	274	251	-9%
**Does not provide for sugar sector reforms; Includes wheat and barley only; Source: FAPRI*			

2.2 Impact on the Milk Sector

The Luxembourg CAP Reform Agreement will reduce butter and SMP intervention prices by 25% and 15% respectively between 2004 and 2007. On average, this is equivalent to a 21% intervention milk price reduction by 2007. Direct payment compensation for the intervention price cuts is equivalent to around 57%, leaving a potential shortfall of around 2.7 cent per litre, if the intervention price cut impacts fully on the market on average.

The following tables assess the impact of such a scenario in a static analysis, based on full impact of the intervention price cut, with and without compensation. The static analysis does not allow for the impact of inflation or changes in efficiency. The impact analysis including compensation, which follows, assumes four different current margin examples for analysis purposes varying from14 cents per litre to of 5.6 cents per litre. The revenue/margin reduction per litre is calculated allowing for the likely gross milk direct payment levels. This figure will vary depending on the scale of the national reserve and modulation that applies to individual producers. Finally, the potential new margin is estimated and the percentage reduction compared with the assumed current margins.

The conclusions, based on the assumptions, are that margins from milk production could decline potentially by between 19% and 48% depending on the current level of margin being earned on farms. This static analysis sets out the basic position in the absence of other dynamic developments at farm, processing and marketing levels. Scope to increase efficiency through technology and modification of production systems may alleviate some of the decline. In contrast, production and family living cost inflation is likely to put downward pressure on real income. In addition, decoupling of all direct payments in Ireland will increase flexibility relating to land use and enterprises on farms, opening up scope for some milk producers to expand and/or reduce input costs and participate in REPS, to improve their income positions.

Impact on Milk Margins (from 2007/08) with Compensation (Static Analysis) Based on the Full Intervention Price Cut				
	Very High	**High**	**Medium**	**Low**
Assumed current margin:				
Cents/litre	14	11.2	8.4	5.6
Pence/gallon	**50**	**40**	**30**	**20**
Revenue/Margin reduction				
With compensation (current)				
Cents/litre	2.69	2.69	2.69	2.69
Pence/gallon	**9.64**	**9.64**	**9.64**	**9.64**
Potential new margin				
Cents/litre	11.3	8.5	5.7	2.9
Pence/gallon	**40.4**	**30.4**	**20.4**	**10.4**
% reduction in margin	**19%**	**24%**	**32%**	**48%**
Source: ICOS Analysis				

From the 1st April, 2005, milk direct payments will be decoupled from milk production and quota. Therefore a producer buying additional quota from that date forward will be buying quota without any compensation rights attached to that quota. Likewise, milk producers will receive the milk decoupled payments on the quota they have on 31st March 2005 whether they produce milk or not from April 1st, 2005, onwards. The above decoupling decision implies that analysis of milk margins excluding compensation will become relevant in farm planning exercises. The table below is based on the same assumptions as the previous table, except that no compensation is included. The conclusion, based on the assumptions, is that margins from milk production could decline potentially by between 45% and 111% depending on the current level of margin being earned on farms.

Impact on Milk Margins (from 2007/08) with No Compensation After Decoupling (Static Analysis) Based on the Full Intervention Price Cut				
	Very High	**High**	**Medium**	**Low**
Assumed current margin:				
Cents/litre	14	11.2	8.4	5.6
Pence/gallon	**50**	**40**	**30**	**20**
Revenue/margin reduction				
With no compensation on quota				
Cents/litre	6.24	6.24	6.24	6.24
Pence/gallon	**22.35**	**22.35**	**22.35**	**22.35**
Potential new margin				
Cents/litre	7.76	4.96	2.16	-0.64
Pence/gallon	**27.6**	**17.6**	**7.7**	**-2.3**
% reduction in margin	**45%**	**56%**	**74%**	**111%**
Source: ICOS Analysis				

The above analysis is based on the full intervention price cut impacting on market prices. The likelihood of this occurring depends on the product mix, markets served, EU support levels for exports to non-EU markets and the general supply/demand situation in all markets. In view of the EU's relatively high level of exports to non-EU markets, the level of export subsidy provided on these exports is one of the key determinants.

If the Commission continues to manage export and other supports to take account of the scale of the intervention cuts, it is assumed that intervention price reductions may come through on average over the years. FAPRI estimates are more optimistic and project that the price reduction will be equivalent to the compensation, or 57% of the gross intervention price reductions. These FAPRI milk price projections are unlikely to be a prudent basis for planning, especially where dairy farmers are planning to expand production, based on borrowings to fund capital expenditure.

The overall conclusion is that profitability from milk production is likely to decline significantly, especially in a decoupled analysis. Higher margin producers are best positioned to expand, especially on farms where decoupling of direct payments in all sectors provides greater land use and enterprise flexibility than heretofore. In general, it is expected that the rate of milk quota restructuring will increase significantly from around the 2% average annual rate of recent years. This will occur, as an increasing number of milk producers will decide to cease production because of reduced profitability, age, lack of a successor and decoupling.

2.3 Potential Impact on Farm Input Use

The FAPRI analysis projects the impact of the Luxembourg CAP Reform on farm input levels. It evaluates a number of decoupling options including full decoupling (max). This is the option which is to be implemented in Ireland for all sectors. Therefore, the max scenario provides a projection, which should be relevant. The main reservation is that the max scenario also assumes that similar full decoupling will apply in all EU members states. As this is unlikely to occur, the FAPRI EU supply, demand and price projections are more open to a greater level error than would otherwise apply.

The table below summarises the FAPRI farm input and income projections under the full decoupling option. It projects a relative small reduction in the fertilizer sales in value terms and a much larger reduction in feedstuffs. Overall, the total value of input sales are projected to decline by 8% by 2012 compared with 2003, whereas farm income is projected to increase by 4% and net subsidies to increase by 15%.

FAPRI Farm Input and Farm Income Projections (millions €)*			
	2003	*2012*	*% change*
Fertilizer	**327**	**316**	**-3.3%**
Feedstuffs	**909**	**651**	**-28%**
Total inputs	**3,149**	**2,896**	**-8.0%**
Farm income**	**2,426**	**2,532**	**+4%**
Net subsidies	**1,626**	**1,871**	**+15%**
*Based on max decoupling; ** operating surplus; Source: FAPRI			

2.4 European Union Fertilizer Use Forecast

The European Fertilizer Manufacturers Association's (EFMA)[2] most recent forecast was finalised in August 2003, based on national forecasts and taking account of other analyses such as the USDA, FAPRI, OECD and other reports. Its forecast volumes of P and K are expressed as phosphate (P_2O_5) and potash (K_2O).

The EFMA overview is that, on average, between 2000 and 2003, mineral fertilizers carrying 9 million tonnes of nitrogen, 3 million tonnes of phosphorous and 3.4 million tonnes of potassium were applied by European farmers. In the next ten years, use of nitrogen, phosphorous and potassium in the EU (15) is expected to decline by 5.1%, 14.1% and 11.86% respectively. By 2013 forecasters expect mineral fertilizers to supply EU(15) farmers with 8.6 million tonnes of nitrogen, 2.5 million tonnes of phosphorous and 3 million tonnes of potassium.

EU15 Forecast Fertilizer Ingredient Use		
Ingredient	***% change (2000/03 to 2012/13)***	***2013 volume***
Nitrogen	**-5.1%**	**8.6 mt**
Phosphorous	**-14.1%**	**2.5 mt**
Potassium	**-11.8%**	**3.0 mt**
Source: EFMA		

2. EFMA; Forecast of food, farming and fertilizer use in the European Union, 2003 to 2015

These EFMA fertilizer forecasts project a 3.7% reduction in the area of crops grown in the EU15, as outlined in the table below. Overall it concludes that crop yields are expected to be stable.

Forecasts for 2013 Grown Crops in the EU15 Compared with 2000-03 on Average	
Crop	**Area Grown**
Barley	- 11.5%
Rye	- 15.1%
Sugar	- 20.4%
Wheat	+ 3.6%
Oilseed Rape	+ 8.4%
Total EU arable	- 3.7%
Source: EFMA	

The following forecasted changes in the fertilizer use by crops are based on the area changes above, coupled with changes in the application rates. Overall, use of phosphorous and potash is projected to decline for all crops by between 5% and 25% depending on the crop. Likewise, nitrogen use is forecast to decline for most crops except for wheat and oilseeds.

Forecast Changes in EU(15) Fertilizer use by Crop 2012/2013 Compared with the 2000 – 2003 on average (%)			
Crop/Product	**Nitrogen**	**Phosphorous**	**Potash**
Wheat	+6.4	-14.8	-19.0
Coarse Grain (Barley/Rye)	-12.0	-21.5	-17.5
Sugar Beet	-18.5	-24.5	-25.0
Oilseed & Pulses	+7.7	-9.5	-4.0
Fodder Crops	-16.1	-17	-12.5
Potatoes	-6.5	-7.0	-5.0
Grassland (Fertilizer)	-12.8	-14.8	-14.0
Source: EFMA			

2.5 Fertilizer use Forecasts for the Ten Accession Countries

The EFMA forecasters analysed the current situation and future trends in the ten accession countries. Enlargement will increase the EU agricultural area by 40%. Productivity in the accession countries varies significantly and is expected to remain below the EU 15, on average. Overall, fertilizer consumption in these countries is expected to increase by about 29% from the 2000-03 base. This would result in an increase of 0.8 million tonnes in ingredient use of N, P and K included in mineral fertilizers. The table below outlines the projected use of fertilizer ingredients in these countries.

Fertilizer Ingredient Use Forecast for the 10 Accession Countries for 2012	
Nitrogen	2.1mt
Phosphorous	0.64 mt
Potassium	0.84 mt
Source: EFMA	

3. Conclusions

Irish agriculture is facing very significant changes due to decoupling and the milk intervention price cuts. Some farmers will reduce intensity due to the flexibility arising from decoupling, while others will remain intensive. Irish agriculture is facing a price/cost squeeze, which will restrict the sector's ability to increase nominal income to offset the effects of inflation. In addition, price cuts in milk are partially offset by direct payments, which will not be paid until December or the first part of the following year. This will create cashflow delays in the sector compared with heretofore. Overall, fertilizer use is expected to decline, either marginally based on the FAPRI projections or to a greater extend based on the EFMA EU(15) projections.