

# November 2003

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## CAP reform and the dairy farmer

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The political agreement of 26 June in Luxembourg will have far reaching consequences for all dairy farmers in the European Union (EU). The deal allowed Member States (and regions within Member States) a number of choices as to how and when they implement the agreement. DARD have launched a consultation with the agricultural industry in Northern Ireland as to how best to implement the deal in Northern Ireland. Responses are required by Friday 5 December 2003. A dairy premium has been established to compensate farmers for the lower milk prices that are likely to result from a reduced level of market support. After decoupling in the dairy sector (which will either be in 2005 or 2007), the dairy premium will be integrated into a single farm payment which can be paid on an historic basis or using a regional area-based system. A hybrid, which is a combination of an historic and area approach, is also possible. The dairy premium in 2004 will, however remain coupled. A payment of 0.85 pence per litre will be made based on quota held (owned and leased in) on 31 March 2004. This payment is likely to be made to dairy farmers in early 2005.

The following **example** shows the payments to a 80 cow dairy farmer **IF** the dairy premium is decoupled early **AND** is paid on an historic basis. This farm has no cereal or beef enterprises. It assumes that the 32% of the dairy premium in the form of a national envelope is paid as a simple top up

Average area on IACS form 2000, 2001, 2002 hectares	50
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Average slaughter premium claims 2000, 2001, 2002 claims	20
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Quota held in year of decoupling (assumed 31 March 2005) litres	520,000
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(Need to include 2005 calculation as it is referenced in the text)

In 2006, this farm would receive the following single farm payment (SFP) entitlement.

520,000 litres @ 2.56 ppl (assuming €1 = 70p)	£14,432
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Slaughter 20 claims @ £56/each

£1,120

The total payment due based on the 2005 calendar year would be £9,960 and would also be dependant on this farmer having 50 hectares on his IACS form in 2005. This is before reductions for modulation, financial discipline and the creation of the national reserve. (). The 2005 rate of dairy premium is lower than that in 2006.

The element of slaughter premium in the above calculation is based on the average claims in the three reference years times the 2002 rate for slaughter premium.

The total payment due to the farmer in 2006 would be £289/ha. This rate would then be carried into the future (until a further review of the CAP). Milk price is predicted to have fallen by 2006 and the dairy premium is only intended to compensate for part of this drop. If in any year the farmer had only 25 hectares claimed on his IACS form, for example, he would only be entitled to half of his single farm payment.

If a regional average payment was introduced (with no account taken of Less Favoured Area (LFA)/non LFA), the 2006 rate for Northern Ireland would be estimated at approximately £225/ha. However, there are a number of different variations on the theme of an area based system where different rates per hectare could be paid in LFA as opposed to lowland. It should be noted that all premia would be amalgamated under an area based approach and this would include the dairy premium. There are other options that could be used including a hybrid of historic and area based. A final decision on how the SFP will be implemented in

Northern Ireland is expected from DARD after the consultation period has ended and it is anticipated further information will be available in early 2004.

Dairy farmers will also receive three increases in the quota which they own of 0.5% per year beginning in 2006 and ending in 2008.

The final impact of the CAP reform will depend on individual farm circumstances. Your Dairy Development Adviser can help you to assess the likely impact on your dairy business.

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## **What is the true cost of dairy herd infertility?**

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Is a tight calving interval important? When should I start to re-breed high yielding cows? How can I improve my herd conception rates? What is the true cost of dairy herd infertility? How can it be reduced? These are some of the questions being asked by many dairy farmers across Northern Ireland. The Dairy Herd Fertility Challenge aims to help farmers find the answers to these questions. **A pilot programme will commence in late autumn 2003 involving four groups of farmers around Northern Ireland.**

### **Ideal Calving Interval**

The Dairy Herd Fertility Challenge will address the confusion that often arises among farmers over what the ideal calving index should be for their herds. Compare the fertility performance of two herds as outlined in Table 1 over the page. Which herd has the best fertility? Conventionally based on calving index, Herd A would

be presumed to have the best fertility given its lower calving index.

**Table 1. Calving interval and replacement rate**

	Calving index (days)	Replacement rate (%)
Herd A	365	35
Herd B	390	20

However, calving index is a very general measure of herd fertility performance as it ignores cows that do not calve again. In terms of replacement costs, cows culled not in-calf are the biggest cost of poor fertility. In the 8,000 litre, 100-cow herd example above (Table 1), Herd A culls an extra 15 cows per year in an effort to achieve a calving interval of 365 days. Replacement heifers cost £830 to rear, produce £170 less milk in their first lactation and the value of cull cows has been £270 on average over the past few years. Each extra cow culled thus costs Herd A £730. Herd A has an extra replacement heifer cost of £10,950 per year as indicated in Table 2 compared to Herd B.

**Table 2. Financial cost of calving index versus replacement rate**

	Calving index (days)	Extra fertility cost (£)	Replacement rate (%)	Extra fertility cost (£)
Herd A	365	-	35	10950
Herd B	390	4300	20	-
<b>Extra herd fertility cost (£)</b>				<b>6650</b>

The longer calving index of Herd B means that daily and annual milk yields are reduced compared to Herd A. The cost per day of extended calving interval using Northern Ireland costs based on University of Reading calculations for an 8,000 litre herd is approximately £1.72 taking into account milk price, quota leasing, concentrate and other costs. For the 100-cow herd, this adds up to a total cost of £4,300. This cost varies considerably depending on the length of the calving interval and the herd yield, being lower for high yielding herds.

Of the two herds, Herd A with the 365-day calving interval has an overall **extra** fertility cost of £6,650 per year. Herd B with the 390-day calving interval has the lowest overall fertility cost as a result of fewer cows

culled not in-calf. This means that while farmers should strive to re-breed cows to calve as close as possible within a year after the previous calving. Farmers should avoid culling valuable cows simply to maintain a short calving index. **However, improving dairy herd fertility management and performance will help reduce both the number of cows culled not in-calf and the cost of extended calving intervals.**

### **Improving Dairy Herd Fertility Performance**

Dairy cow infertility is a complex problem. There is rarely a single simple solution, but there is a wide range in herd fertility performance as shown by the Agricultural Research Institute of Northern Ireland (ARINI) fertility study funded by Agrisearch (Table 3).

**Table 3. Range in dairy herd fertility performance in Northern Ireland**

<b>Fertility measure</b>	<b>Average</b>	<b>Range</b>
Heat detection rate (%)	72	55-89
Interval to 1 <sup>st</sup> AI (days)	84	67-119
Calving rate to 1 <sup>st</sup> AI (%)	41	18-61
Calving rate to all AI (%)	39	22-53
Calving interval (days)	404	371-447

Source: ARINI, Hillsborough (2003)

Getting cows pregnant using artificial insemination (AI) involves two main steps:

Firstly the cows must be seen on heat, and secondly the cows must successfully conceive and hold to the insemination. The many factors influencing heat detection and conception rates are listed below.

### **HEAT DETECTION**

Nutrition  
 Building layout  
 Floor surface  
 Time spent observing  
 Lameness  
 Use of heat detection aids  
 Use of records  
 Accurate cow identification  
 Familiarity with secondary signs of heat

### **CONCEPTION RATE**

Nutrition  
 Accuracy of heat detection  
 Disease status  
 Timing of AI (post calving)  
 Timing of AI (from onset of heat)  
 AI technique  
 Semen handling  
 Sire choice  
 Handling facilities

The Dairy Herd Fertility Challenge will help farmers address these issues. Over the next six months, four dairy farmer development groups will participate in the Dairy Herd Fertility Challenge at locations across Northern Ireland. If you would like to find out more about the programme, contact your local Dairying Development Adviser.

Due to this variation, it is important to get silage analysed in order to get an accurate picture of the quality of the silage available on your farm. On many farms first cut silage is not much better than last year's and indeed silage dry matter may be lower as a result of the wet weather in May 2003. This is in contrast to the very good conditions for subsequent cuts and some farmers may find second and third cuts are of a higher quality and should be fed to all milking cows.

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## **Silage analysis and winter feeding**

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### **Why analyse silage?**

Silages produced in 2003 and analysed to date at ARINI are showing significant variation in quality.

### **Ration Formulation**

For cows in early lactation the target of 17-18% protein **in the complete diet** is recommended to maximise yield. Crude protein levels in silages are varying between 8-15% this year.

At low silage protein levels, higher protein concentrates must be fed. However, the cost of raw materials and their relative value are quite different from last year *so do not assume that last year's ration will do this year.*

### Feed Level

A silage analysis will also help you determine the optimum feed level. Remember concentrates should be limited to 4-5kg per feed in the parlour. Where there is a need to feed more than 9-10kg of concentrate then a mid-day feed is an option. If mid-day feeding is to work successfully a feed space of 700mm per cow will be necessary. For those with mixer wagons, high levels of concentrate can be fed with minimal or no feeding in the milking parlour. This of course assumes cows can be suitably batched to make best use of the ration fed. There is no profit in over-feeding cows in late lactation. If high feed levels are required to compensate for poor silage quality and you are limited by feed options or space, then it is essential to feed a high digestible fibre concentrate. Quality digestible fibre sources are sugar beet pulp, citrus pulp or soya hulls. Cows in early lactation or high fertility cows require a balanced quality ration to maximise profitable performance.

### Condition Scoring

The target condition score between drying off and calving is between 2.75-3.0. Late lactation cows in poor condition can be dried off early and offered 2kg of concentrate. There is some benefit in feeding 'lactation

silage' and 1–2kg of concentrate 7-10 days before calving. This will get cows accustomed to the new ration and minimise stress post calving.

### Conclusions

Get your silage analysed now! Contact your local Dairying Development Adviser who will assist you in planning your winter feeding. As a result of the rising cost of concentrates and the variability in silage quality, failure to plan and monitor your winter feeding could be an expensive mistake.

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### Economic feeding levels this winter

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Increasing levels of milk production in the UK will mean that a super levy situation may be likely this year. This has had the effect of driving quota prices up to levels not seen for the last four years.

With the combination of higher milk quota and meal prices albeit with a better milk price this autumn, many dairy farmers are asking what is the most profitable and economic level of feeding this winter.

The level of concentrate required to support a specific yield will depend primarily on the quality and quantity of silage being fed.

Table 4 shows the meal supplementation needed to achieve a similar yield of milk from three silages of different quality. It can be seen that for a given level of production the poorer quality silage needs 4kg more than the good quality silage.

**Table 4 typical meal feeding levels kg/cow/day to support 32 litres**

	Silage quality		
	Poor ( ME 9 DM 20% )	Medium ( ME 11.3 DM 20% )	Good ( ME 12.4 DM 35% )
<b>Meal fed to yield 32 litres</b>	12	10	8

However, it is also important that the dairy farmer is aware of the meal feeding level that obtains maximum economic response in his own situation. This will mean identifying the optimum level of meal feeding over which the return in milk sales does not cover cost of extra feed and quota needed. The optimum feeding level will vary according to silage quality.

Table 5 shows the level of meal feeding required to optimise margin over feed and forage per cow per day for three silages fed to the same herd for 2003 compared to 2002 when milk price, meal price and quota price were quite different.

2002:- milk price 17.5ppl, meal price £140 per tonne and milk quota price 1ppl

2003:- milk price 20ppl, meal price £160 per tonne and milk quota price 5ppl

**Table 5 Optimum feeding levels**

	Poor quality silage		Medium quality silage		Good quality silage	
	2002	2003	2002	2003	2002	2003
Meal fed	14kg	14.3kg	11kg	11.5kg	7kg	7.4kg

**In this herd** feeding more meal than indicated would lead to a reduced margin per cow. It can be seen that feeding levels have not changed significantly in the two years. In this example it is assumed that **milk yield**

**over 25 litres per cow has to be leased.**

The decision to feed more concentrates will also depend on the response in milk yield which will be affected by cow type, cow condition and stage of lactation.

### **Feeding for the marginal litre**

Many dairy farms have the ability to produce more milk than their present quota availability allows. The main costs incurred in producing extra milk are feed and quota leasing costs as well as some labour, electricity and dairy sundries. Producing these extra litres will yield a reducing profit per litre until the last litre produced covers the extra meal and quota leasing costs. These litres are called marginal litres.

The decision to feed more concentrates will also depend on the response in milk yield which will be

affected by cow type, cow condition and stage of lactation.

In summary:

- Analyse silage as soon as possible to plan winter feeding strategy;
- Review predicted milk yield response to concentrate feeding on a weekly basis;
- Optimum meal feeding level increases as silage quality decreases;
- Optimum feeding level is also dictated by milk price, meal price and quota price;
- In 2003 in the same herd of cows the increase in milk price has compensated for increases in milk quota and meal price leading to similar feeding levels.

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**Plan your spring slurry application now**

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Regrettably agriculture is responsible for around 30% of pollution incidents in Northern Ireland each year. A significant number of these incidents are the result of spreading farm wastes when land or weather conditions are unsuitable.

In recent years there has been an upsurge in the use of novel methods for slurry spreading, sludgigators, umbilical systems, over hedge boom systems and the use of low ground pressure tyres on tractors and tankers used for field spreading. While each of these methods has potential advantages in reducing the severity of soil compaction and increased outputs, their inappropriate use can lead to increased pollution risk. The Codes of Good Agricultural Practice for the Prevention of Pollution were distributed to every farmer earlier this year. The Codes state that slurry should not be spread on waterlogged or steeply sloping fields or when ground conditions are incapable of carrying conventional slurry equipment.

Many farms in Northern Ireland have at least three months slurry storage capacity. The prolonged spell of dry weather this autumn should have resulted in slurry tanks and middens being emptied before the winter housing period. This should substantially reduce or eliminate the need to spread farm wastes during November, December and January when there is little nutrient benefit to crops and an increased risk of pollution due to surface run-off.

The Code of Good Agriculture Practice for the Prevention of Pollution of Water contains valuable practical advice on storage and spreading of farm waste. There is also a useful section on the preparation of a Farm Waste Application Plan for your farm.

Greenmount Campus, College of Agriculture, Food and Rural Enterprise, has prepared a Farm Waste Application Plan and uses it as a management tool for slurry applications. Greenmount Campus follows the Code of Good Agricultural Practice when spreading slurry, including avoiding spreading slurry in November, December and January and no slurry applications within 10 metres of watercourses, 50 metres of wells or boreholes and one metre of hedges.

### **New legislation**

The Control of Pollution (Silage, Slurry and Agricultural Fuel Oil) Regulations (Northern Ireland) 2003 were made on 21 July 2003. From that date anyone proposing to construct, substantially enlarge or substantially reconstruct a silo, slurry storage system or fuel storage area, must notify Environment and Heritage Service (EHS), an agency within the Department of the Environment (DoE), specifying the type of structure and its location at least 28 days before it is to be used.

The regulations specify the minimum building standards that these stores must meet. Existing stores can continue to be used, but if on inspection by a representative of EHS they are found to present a pollution problem, the DoE may require their repair, or improvement, sufficient to remove the potential for pollution. Where this is necessary a notice will be served and if the terms of the notice are not complied with within the time-scale set, the store will lose its exempt status.

For further information contact EHS on 028 9025 4734.

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**Good Business Sense**

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Greenmount Campus, College of Agriculture, Food and Rural Enterprise, are now enrolling for the Good Business Sense (GBS) programme. This programme consists of two levels of business management training, delivered locally to all farmers in Northern Ireland. A training allowance payment of £100 per farm business is payable if a minimum of 3ha of actively farmed LFA land is registered on the farm business IACS form.

**Level 1 - Introductory Good Business Sense:** four sessions are available:

- Livestock traceability;
- Planning for livestock subsidies;
- Keeping track of farm finance;
- Farm records.

Relevant practical examples and case studies are used during each training session to enable those taking part to apply the information gained to their own farm business.

**Level 2 - Intermediate Good Business Sense**

The Intermediate Good Business Sense course aims to provide a progression route for those completing the introductory course. three workshops are available.

- Completing farm VAT returns;
- Calculating enterprise gross margins;
- Time management.

### **Accreditation**

All candidates can receive accreditation for any units they have completed successfully on the Good Business Sense programme.

If you are interested in enrolling on the Good Business Sense programme or obtaining further

information on any of the workshops please contact: Greenmount Campus on 028 9442 6819. Applicants can also complete the application form which can be downloaded from the Greenmount website <http://www.greenmount.ac.uk/> (Click on short courses).

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## **The on-going battle with brucellosis**

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The farming industry has been fighting to eradicate brucellosis for 40 years. We had it defeated but it has been fighting back with some success over recent years.

Following an extensive review, DARD is making a number of changes to its brucellosis eradication programme. One of these is the introduction of annual testing of cattle for brucellosis. During the period when brucellosis infection was absent or running at low levels, biennial testing of cattle was the norm. However, two years ago, when spread of the disease in some areas gave rise for concern, annual testing was introduced into the Veterinary Service's three most heavily infected divisions – Armagh, Enniskillen and Newry. However, sporadic outbreaks in other areas have led DARD to introduce annual testing in the other seven divisions. Also, annual testing is required by EU regulations when disease levels rise to those we are experiencing currently. DARD will return to the traditional testing regime as soon as it feels it is safe to do so.

Dairy herds undergo monthly milk testing for brucellosis. This detection method has proved to be of great value in the identification of brucellosis. Because of this testing, all dairy herds may not be required to move to annual blood testing, for example, if they are located in lower incidence areas. However, this may not be the case in all situations, for

example, high risk areas, where there is a suckler section to the herd or where herd numbers are high. Such decisions will be made after local

assessment of the circumstances in particular herds.

DARD is currently writing to all cattle breeders to explain the situation.

## Dairy Bulletin

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