

### Recommended body condition scores at different stages of lactation

Stage of lactation	Body condition score
Calving	3.0 – 3.25
Early lactation	2.0 – 2.5
Mid lactation	2.5 – 3.0
Drying off	2.75 – 3.0

Carefully monitor winter feeding. Keep a check on silage dry matter intakes, milk yield performance and cow body condition. Feeding a balanced diet of sufficient quantity ensures healthy, productive dairy cows.

### Dairy Herd Fertility

Economic studies conducted at Greenmount Campus have shown that fertility have a significant impact on the level of dairy herd profitability. The cost of infertility is due primarily to the increased level of culling. Prolonged calving intervals mean there is a loss of potential production due to the delay in getting back to peak yield at the start of the next lactation.

In an attempt to quantify the costs of infertility, the fertility of the Premium Milk Herd has been monitored since 2002. Fertility performance of the Premium Milk Herd has generally been above the benchmarked average of herds from across Northern Ireland that took part in the Dairy Herd Fertility Challenge programme. The main reasons for this are:

- Shorter average interval to first service (three weeks on average) due to strict adherence of a 42-day voluntary waiting period.
- Higher submission rates. More cows are bred in the three weeks following the voluntary waiting period due to recording of pre-breeding heats. In addition a range of heat detection methods including manual observation four times-a-day, use of a vasectomised teaser bull and pedometers to monitor cow activity.

- Routine veterinary visits every three weeks where examination is conducted on cows not seen on heat, repeat breeders and for pregnancy diagnosis later in the breeding season. This is particularly important for the identification of cows that are not in calf.

It has been calculated that a 10% improvement in both submission rate and conception rate is worth approximately £88 per cow per year in a typical Northern Ireland dairy herd producing 8000 litres per cow per year. This saving comes from a reduction in both the number of cows culled for infertility and a shorter calving interval, which means that cows get back to peak lactation again quicker.

Dairy Herd Fertility Challenge groups are commencing in your local area at present, contact your local Dairy Development Adviser for details.

### Organic Milk Production

The first organic milk was produced in Northern Ireland in April 2000 at a time when less than 500ha of land were registered as organic. Currently a small number of organic milk farmers produce over 10 million litres of organic milk annually. A further two producers have herds in conversion to organic milk production. There is currently strong demand for organic milk.

Organic milk production is not an easy option and requires a high standard of management but should prove profitable for some dairy farmers. Farmers converting to organic production can avail financial support through the Organic Farming Scheme and technical support from the organic advisers based at Greenmount Campus. For further information about organic milk production contact David Alexander, Organic Development Adviser, on the DARD stand at the Winter Fair or visit the website: [www.ruralni.gov.uk/bussys/organic/](http://www.ruralni.gov.uk/bussys/organic/) for more information.

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# Dairy Bulletin



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### RUAS Winter Fair 2005

The 20th Royal Ulster Winter Fair takes place in the Kings Hall, Belfast on Thursday 15 December 2005. The DARD stand will feature a number of informative exhibits including CAFRE Development Service which will focus on financing farm development and effective business planning.

Many dairy farmers are currently considering substantial investment on farm. In most cases this will involve borrowed capital. The level of borrowing that can be repaid by the business depends on a number of factors:

- Farm performance;
- Number of dairy cows;
- Milk price over the loan term;
- Loan repayment term;
- Potential off-farm income;
- Level of borrowing;
- Will the Single Farm Payment be used to help repay the loan?

It is important that farmers do not over borrow based on optimistic expectations of milk price. It may be that milk price will fall over the term of the loan leaving the farm in a negative cashflow situation. All farms are different and the more efficient farms can support a much higher level of borrowing than poorly managed farms. Therefore, farmers need to assess current profit from milk on their own farms through benchmarking before taking on substantial investment. The subject of borrowing capacity will be covered in detail at the CAFRE exhibit at the Winter Fair.

The Business Challenge for Dairy Farmers is a training course designed to help measure farm performance and plan development of the business. If you are interested in benchmarking your dairy business or attending a local Business Challenge group, speak to one of the Dairying Development Advisers at the Winter Fair.

## Farm Nutrient Management Scheme Update

The deadline for applications under the Farm Nutrient Management Scheme (FNMS) has been extended until 31 March 2006. It is essential that each dairy business considers the various options necessary to comply with the Nitrates Directive. There are a number of steps that must be followed:

- Calculate the amount of slurry produced by livestock and consider allowances for stock on straw bedding and any rented tanks.
- Calculate the quantity of dirty water (including parlour washings) and clean water that enter tanks and consider ways to reduce this amount. Grant is available to install guttering/drainpipes, diverters and channels.
- Determine the volume of additional storage required to achieve a 22 week storage period (26 weeks for pig/poultry enterprises).
- NIE consent is required for any work carried out within 30m of a power line.
- DOE Planning Permission will be required if the total construction area including reception tanks exceeds 600m<sup>2</sup>; if the site is within 75m from a neighbouring dwelling house; less than 24m from the edge of a motorway or the middle of a major road (9m for a minor road); and if it is greater than 3m in height and within 3km of an airport.
- DARD environmental impact assessment may be necessary if the planned development involves the removal of hedges, trees or the loss of species rich grassland.
- Ensure the construction is more than 10m from a watercourse and 50m from a well.

Some farmers are considering construction of a below ground slurry tank with the option to construct a house on top at a later date. The internal design of the house is extremely important and there are a number of issues to be taken into account:

- **Silage Feeding** – each cow requires at least 460mm (18 inches) feeding space for silage/TMR. The width of the feed passage will need to be at least 4.27m (14 feet) when using a diet feeder. If a midday feed is offered allow a feeding space of 910mm (36 inches) per cow.
- **Cow Flow** – allow at least 1.3 square metres (14 square feet) per cow in the collection area. Locate the collection area behind the parlour to ensure free cow flow. Avoid making cows turn sharply at any point in the house.
- **Cubicles** – an average Holstein cow will need a cubicle dimension of 2.44m (8 feet) by 1125mm (45 inches).
- **Passageways** – cows should have room to feed, drink, roam and display signs of heat. Allow at least 2.44m (8 feet) between rows of cubicles and at least 3.35m (11 feet) behind a feed passage.
- **Calving pens and bull pens** – allow a minimum calving pen size of 3.66m (12 feet) by 3.66m (12 feet). Allow sufficient solid floored pens for isolation and bull housing.

*Staff will be present at the DARD stand to discuss the FNMS. A number of CAFRE Development Advisers are available to visit your farm and provide specific advice on the FNMS. Contact your local DARD Office for further details.*



## Winter Feeding Management

Feeding a well balanced diet for dairy cows this winter will pay dividends through high quality milk and good cow health. Several steps are involved in planning and implementing a successful dairy cow diet. All steps are dependent on silage quality and dry matter intake.

### Step 1. Silage quality and intake

Silage analysis will provide key figures of its quality such as intake potential, crude protein, dry matter and ME. (Remember to use an auger to get a more representative sample of silage).

Wrong assumptions are often made about silage intakes. Check the amount of silage cows are eating. Weigh cells on the diet feeder are ideal. Otherwise take a block of silage to a convenient weighbridge. If batching cows in groups then assess the silage intake of each group.

#### Practical points to consider:

- Consider keeping a separate group of first lactation heifers to avoid bullying by older cows;
- Keep a fresh supply of silage in front of cows at all times;
- Be prepared to move the last 10% of silage not eaten and offer to dry cows or young stock;
- Allow at least 460mm (18 inches) of feeding space per cow;
- An acid buffer may have to be used with low pH silage to encourage higher intakes;
- Ensure fresh water is available for each group, the higher the dry matter of the silage the more water the cows will need.

### Step 2. Balance the silage with a suitable concentrate

The recommended concentrate will depend on silage quality. For the dairy cow the crude protein content of the total diet should be 17 to 18%. Grass silages tend to have between 12 to 14% crude protein content and therefore

the concentrate needs to be approximately 20% crude protein on a freshweight basis.

Many farmers include a second forage in the diet to encourage increased dry matter intake. **Maize silage** can replace up to two thirds of the grass silage in the diet and should lead to higher dry matter intakes, higher milk yields and milk protein content. Maize is low in protein (8 – 9%) thus the protein percentage in the concentrate must be increased accordingly. **Whole crop silage** can replace 25 – 50% of the grass silage in the diet and again lead to increased forage intake of 1 – 2kg dry matter intake per day. As with maize silage, protein content is low (8 - 9%) and concentrate with a higher protein percentage must be fed.

### Step 3. Level of concentrate input

The level of meal feeding will depend on silage quality, cow body condition and required milk output. At Greenmount Campus this year the dairy herd is receiving silage capable of supporting maintenance plus 9 litres of milk for cows and 7 litres for heifers. Cows yielding above this level are fed 0.45kg of concentrate per litre of milk produced. This ensures that the cow produces adequate milk while minimising loss of body liveweight.

The maximum amount of daily concentrate fed through the parlour is 10kgs for cows and 8kgs for heifers. Where higher levels of concentrate are fed on farm consider using either out-of-parlour feeders, mid day feed or diet feeder. Remember digestive upsets are minimised if concentrates are fed little and often.

### 4. Evaluate performance throughout the winter

Regularly assess cow body condition as excessive loss of body condition in early lactation will lead to low milk compositional quality and poor fertility. The body condition of a dairy cow at her various stages of lactation is a reflection on the quality and level of concentrate fed. Recommended body condition scores for each stage of the cow lactation cycle are given in the table.