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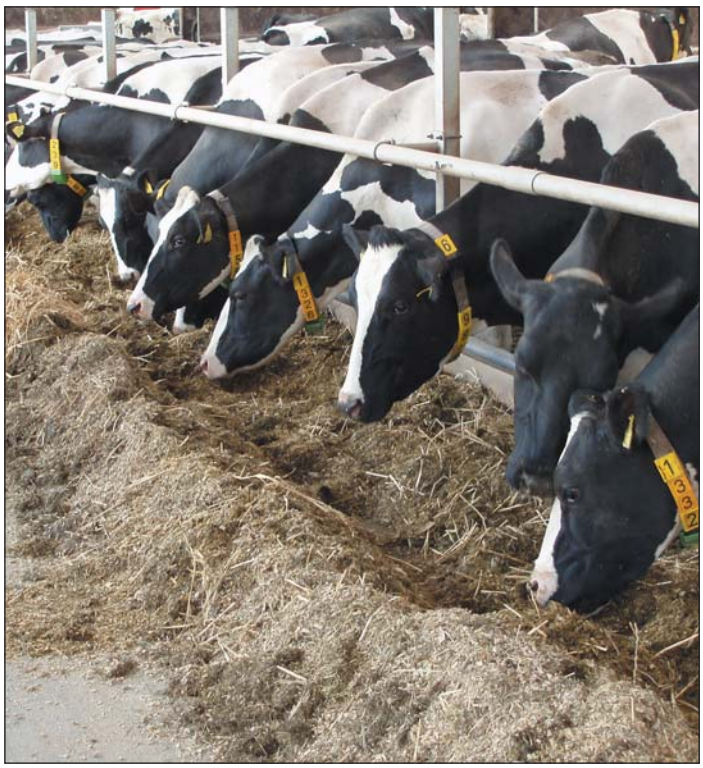
College of Agriculture, Food & Rural Enterprise

Dairy Bulletin

December 2006



RUAS Winter Fair 2006

The Royal Ulster Winter Fair takes place in the King's Hall, Belfast on Thursday 14 December 2006. The DARD stand will feature a number of informative exhibits including CAFRE Development Service which will focus on management options for dealing with organic nitrogen limits, improving efficiencies in the dairy business, highlighting the Animal Health Challenge and a demonstration of fertility benchmarking.

Practical Management Points

- Aim to calve down fit cows at body condition score 3.0. Dry-off earlier if cows are thin (less than condition score 2.25). Ensure cows remain healthy in the dry period, address health issues in consultation with your veterinary practitioner for example, liver fluke in heifers. Use a pre-calver ration or add dry cow minerals to forage only diets to achieve high herd health status.
- Monitor body cow condition in the critical early lactation period. Feed a balanced ration which compliments silage quality targeting 18kg+ dry matter intakes.
- Ensure high dry matter intakes by keeping fresh silage in front of cows and allow adequate feeding space (at least 460mm/18 inches per cow). Expect a 10% refusal of silage and offer this to dry cows/young stock.
- Avoid bullying of freshly calved heifers. Run a separate batch or introduce two or more heifers together to the main herd.
- The most important factor in fertility management is basic heat detection. Watch cows first in morning, midday and last at night along with milking times. Ensure cows have adequate space to exhibit familiar signs of heat. Ideally provide a roaming area and solid floor/non slip area.
- Reduce incidence of calf scours by getting 3.5 to 5 litres colostrum into the calf in first six hours. Provide clean, dry, well ventilated pens, avoid overcrowding and do not mix home-born and bought-in calves. Always adopt good hygiene practice. See section on treatment of calf scours.

Dairy Benchmarking 2005/06

Greenmount Dairy Benchmarking data has been collated for the 2005/06 year with some farmers having submitted data for seven consecutive years. Although the full cost of milk production data is only released to participating farmers certain performance trends can be noted.

The milk yield on benchmarked farms has continued to rise steadily since 2002/03. The average increase has been just short of 150 litres per cow each year. This is slightly faster than the rate of improvement in the genetics of the dairy herd which has increased by about 100 litres per cow in recent years. The change from 2004/05 has been an increase of 98 litres per cow with additional concentrate input of 125 kilos per cow. This has led to a decrease in milk from forage of 180 litres per cow on last year although a direct comparison is not possible as this is not a common sample of dairy farms.

Average physical performance on benchmarked farms for last three years

	2003/04	2004/05	2005/06
Milk yield (litres/cow)	6639	6795	6893 *
Meal fed (kg/cow)	1799	1847	1972
Milk from forage (litres/cow)	2641	2691	2511
Replacement rate %	25.5	26.5	26.5
Butterfat %	3.86	3.93	3.98
Protein %	3.22	3.22	3.21

* Note: milk yields and overall performance can vary as more farms submit benchmark data.

Average data from benchmarked farms often masks the wide range in results from one farm to another. Milk yield has ranged from 3900 litres per cow to 10100 litres per cow. Meal feeding has ranged from 700 kilos to 4100 kilos per cow. Some farmers feeding the benchmarked farm average of two tonnes of meal achieve a yield of 5500 litres per cow while others have herds yielding 8500 litres per cow – a massive 3000 litres per cow more.

The response to meal tails off from around 2.5 tonnes per cow. This depends mainly on cow genetics, management and feeding system but it is apparent that continuing to push yields higher on additional meal input is unlikely to be economic at these high levels of meal. The optimum system for Northern Ireland dairy farmers would appear to be a meal input of just over two tonnes and milk yield of 8000 litres per cow. Few farmers are actually achieving this level of performance but it is a very challenging target.

To Benchmark your own dairy farm contact your local CAFRE Dairy Development Adviser.

Winter Feeding

Silage quality and dry matter intake are critical aspects of feeding management. Most silages have been analysed at this stage. The information contained in this analysis will provide a guide on the type and level of meal input needed to sustain required milk yield and maintain body condition.

Stage of lactation

In early lactation cows are unable to consume enough energy to match production and they mobilise body tissue to meet this energy gap. This negative energy balance leads to loss of body condition and can lead to low milk composition and poor fertility. Regularly assess cow body condition and feed accordingly.

Meal input

Dairy cow rations should include 30-45% cereals (maize, wheat, barley), 15-25% digestible fibre (citrus pulp, sugarbeet pulp, soya hulls), 15-25% protein sources (soya, rapeseed), 15-20% cereal by-products (distillers grains, maize gluten) and a small percentage of protected fats and minerals.

Total diet protein content for dairy cows in early lactation should be 17-18%. Grass silage with a crude protein content of 12-14% should be supplemented with a meal containing 21% crude protein (on a fresh weight basis). If the crude protein of the silage is lower then a higher protein concentrate should be fed. It is important to have a balance of rumen degradable and undegradable protein sources for example, rapeseed, soya bean.

The level of concentrate input will be determined by silage quality, cow body condition and required milk output. The table overleaf gives suggested feed levels for cows in early lactation based on peak milk yield and silage quality.

Concentrate level (kg fresh weight)

Cow performance		Silage Feed Value		
Herd yield (litres)	Peak yield (litres)	Poor	Average	Good
5500	27	9.5	7.0	3.0
6500	31	11.5	9.5	6.0
7500	35	12.5	10.5	7.0

Feed a maximum of 10kg meal per cow per day (8kg for heifers) through parlour. If feeding higher levels of meal consider a midday feed, out of parlour feeders or diet feeder. Feeding cows on a little and often basis reduces the risk of digestive upsets.

Remember:
With current lower milk prices there may be a temptation to cut back on meal feeding. Do not risk it, cows need adequately fed to produce good quality milk, maintain body condition and get back in calf.

Calf Scour

The heifer calf is the future of the dairy herd. Scour problems during the first few months can reduce liveweight gain and delay age at service. This means extra rearing costs. Most losses are in the first month of life and scour is the main cause of death.

The newborn calf has no active immunity (takes three weeks to develop) and is at risk from infection. Protection is achieved by ensuring that the calf drinks approximately 10% of body weight (3.5 – 5 litres) of colostrum within six hours of birth. Colostrum is rich in nutrients and contains antibodies providing the calf with immunity to infection. If there is any risk of Johne's disease infection in the herd do not use pooled colostrum.

Risk factors:

- Insufficient colostrum
- Poor hygiene – calves reared on wet bedding are nearly twice more likely to develop scour. Disinfecting pens considerably reduces the incidence of scour and all buckets, feeders should be kept scrupulously clean.
- Reduced biosecurity – bought in calves (or cows) may carry scour germs that infect other stock. A calf with scour should be isolated and treated to avoid spreading the infection to the remainder of the batch.

Infected calves will have diarrhoea of varying severity, dehydration and appear dull with a reluctance to feed. Most scour cases are caused by a number of organisms, both bacterial and viral. E coli is the main cause of scour in calves under seven days old with the calf deteriorating very quickly. Rotavirus and Coronavirus can cause scour in calves usually from 1-3 weeks of age and cannot be treated with antibiotics as they are viruses. Other sources of infection are Cryptosporidium, Coccidiosis and Salmonella with mixed infections very common. Seek advice from your veterinary practitioner.

Treatment:

- Isolate the infected calf.
- Give electrolytes to replace lost fluid. Ideally one litre of an electrolyte containing glucose and bicarbonate should be given every two hours that is little and often. If the calf has deteriorated badly then the electrolytes should be administered intravenously by a veterinary practitioner.
- Kaolin/morphine or some other general scour formula may be useful in drying up the scour and slowing the rate of dehydration but it does not treat the cause.
- Feeding natural yoghurt may help in restoring a healthy gut.

Prevention:
Ensure adequate colostrum after the calf is born, maintain a high standard of hygiene in the calf unit, avoid buying in calves, and prevent the overstocking of susceptible calves.

Calf health is covered in the Animal Health Challenge for Dairy Farmers which is a training programme designed to improve the health and welfare of cows and calves on dairy farms. Groups are currently up and running at a venue near you, contact your local CAFRE Dairy Development Adviser for details.

Fertility Benchmarking Online

Poor dairy cow fertility is a widespread problem in Northern Ireland dairy herds. For many herds the average calving interval is over 400 days. This is largely due to poor heat detection and poor conception rates. Prolonged calving patterns result and reduced financial performance of the herd.

Through Fertility Benchmarking Online the dairy farmer can compare the fertility performance of his herd with that of other herds throughout Northern Ireland and estimate the cost of infertility.

Fertility Benchmarking Online was developed jointly by CAFRE and AFBI. It can be accessed through the Rural Portal website at www.ruralni.gov.uk/fertilitybenchmarking. Herd fertility information with calving dates, service dates and pregnancy diagnosis can be manually entered onto the application online. Alternatively it can be uploaded to the system using Farmwizard, Kingswood or Sum-IT Agridata software.

What does it tell about the herd fertility?

Two reports are available to assess the herd's fertility performance. The interim report is available throughout the breeding season and gives details on the herd submission rate. This is the proportion of cows intended for breeding that are served within the target period and is a measure of heat detection efficiency. This report also gives an early indication of conception rate. A more accurate indication of conception rate is given in the annual report which is available at the end of the breeding season when all cows are confirmed either pregnant/non-pregnant. The annual report also estimates the cost of infertility in your herd based on the cost of:

- Extended lactations in cows with a prolonged calving interval. If these cows were to calve again sooner they would have a higher annual yield since they would be back to peak yield sooner.
- Replacing cows not-in-calf at the end of the breeding season.

For further information on Fertility Benchmarking Online contact your local CAFRE Dairy Development Adviser.

New Entrants Scheme for the Under 40s

Young farmers are a key factor in the development of rural areas and DARD considers support to this category of farmers a priority. For the purposes of the New Entrants Scheme, young farmers are defined as less than 40 years of age. The benefit of this Scheme is that up to £17,000 of interest payments can be reclaimed over a five year period. On the other hand, an investment plan is needed to justify a loan from a Bank and the need for re-imbursement of interest.

What can be included in an Investment Plan?

Under this Scheme, most capital items with an agricultural purpose can be included in the investment plan. On dairy farms, typical items include new milking parlours or improvements to existing parlours, cow or heifer purchase, milk quota, new cubicle housing, mixer wagon and tractor upgrading. In fact there are only three excluded items – land, SFP Entitlements and machinery for contracting purposes.

How do I qualify for the Scheme?

First of all, a young farmer must be under 40 years of age at first application. Secondly, an applicant must have become 'head of holding' within the 12-month period prior to first application. Head of holding is largely determined through names associated with the Business Reference Number. It is worth clarifying the position for your particular circumstances before applying for the Scheme.

Application Procedure

There is a two stage application process. Stage 1 is to determine eligibility. Stage 2 includes a feasibility test of the proposals, negotiation of a loan from a Bank and application for the grant. The investment plan should not be started until Stage 2 is complete.

Assistance with all stages of application is available from Philip Downey (028) 7772 1819, Colin Rea (028) 9442 6609 or your local CAFRE adviser.

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