DAIRYING MANAGEMENT

Dairy Cow Fertility
Poor herd fertility is a major financial loss on many dairy businesses. Achieving good fertility is a complex issue involving correct nutrition and management. But the core essentials are detecting cows in heat, presenting these cows for service and achieving good conception rates.

Heat Detection
- There is no substitute for good records when it comes to monitoring fertility on a dairy farm.
- Records will allow farmers to monitor submission rates, that is the percentage of eligible cows that are presented for service within a three week period.
- Aim for 75 - 80% in most herds. It is essential to monitor submission rates at three week intervals as potential problems can be spotted early.
- Increased efforts in heat detection will pay dividends.
- Aim for a minimum of three, 20 minute periods per day with one of these last thing at night.

Conception rates
The number of cows holding to service, measured on a 60-day non return basis or from pregnancy diagnosis provides the measure of conception rate (PDs).
- The average for Northern Ireland is only 40% but with good management up to 60% can be achieved.
- Work closely with your veterinary practitioner.
- Routine examinations will allow for prompt diagnosis and treatment of problem cows.
- Reduce calving difficulties by preventing dry cows from becoming over fat.
- The service period should commence 45 - 60 days post-calving. Postponing beyond this time increases the incidence of cysts.
- Minimise nutritional stress by feeding a well-balanced ration, avoiding excessive starch and sudden dietary changes and ensuring adequate feeding space.
- Make cow comfort a priority to reduce stress
- Maintain herd health. If necessary on your farm vaccinate for BVD/Lepto/Salmonella.
- Handle frozen semen correctly.
- Consider culling cystic cows as this condition has been shown to be heritable.

Grassland Management
Leatherjacket populations rise in mild, wet weather causing significant damage to grass swards. The larvae of the crane fly feeds just below the surface of the soil destroying the
roots and the underground stems of grass causing the plant to die. Check swards, particularly those where crows are active for signs of damage, that is bare patches. Turn over sods with a spade and count the number of leather-jackets. Counts of over 10 per square 30 centimetres indicate a problem.

Leatherjackets lack a distinct head and are completely legless. They do not curl around when touched. Sprays containing chlorpyrifos give good control for leatherjackets.

## Preventing Staggers

Lush spring grass is low in magnesium. The high nitrogen and potassium levels in the grass can exacerbate the problem by tying up the magnesium available to the cow. Not all cows which are deficient become clinically ill but all are at risk. Stress factors such as a change in management or the onset of a period of poor weather, excitement, or change of diet can trigger the problem.

Cattle cannot store magnesium in their tissues, therefore, they must receive a continuous supply of approximately 30 grams of magnesium - the equivalent of 60 grams or 2 oz of calcined magnesite/cow/day.

<table>
<thead>
<tr>
<th>Method of supply</th>
<th>Comments</th>
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<tbody>
<tr>
<td>High magnesium concentrates</td>
<td>The most effective method. However, if feeding concentrates solely for magnesium the most expensive method at 13 p/cow/day.</td>
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<tr>
<td>Magnesium bullets</td>
<td>Relatively effective giving 4 - 6 weeks protection. Approximately 8 – 10 p/cow/day.</td>
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<tr>
<td>Free access lick blocks</td>
<td>Intakes are extremely variable between animals. Approximately 7 - 8p/cow/day.</td>
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<tr>
<td>Soluble magnesium salts added to drinking water via pump dispenser</td>
<td>Gives variable intakes especially when grass is wet and the risk is high. Approximately 5p/cow/day.</td>
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Apart from directly supplying additional magnesium other management steps can be taken to control Tetany:

- Lowering nitrogen and potash fertiliser levels will tend to increase magnesium absorption;
- Include clover or grasses with a higher magnesium content to increase magnesium intakes;
- Use magnesia limestone when liming;
• Avoid sudden changes to diets or environment;
• Introduce a high fibre source to give a greater time for magnesium absorption in the rumen.

Benchmarking Your Dairy Herd
Benchmarking provides a detailed analysis of the physical and financial performance of your farming business. This enables you to compare your business performance with others. The information is invaluable in identifying the strengths and weaknesses of your farming business enabling the preparation of an action plan to improve farm profits. This is currently of great importance, when key decisions need to be taken such as use of the Single Farm Payment and investment in slurry storage facilities.

Information required includes sales off the farm, for example, milk, calves and culls and all expenses or purchases, for example, fertiliser, fuel, conacre etc. Most of the information is available from your VAT records and accounts, milk dockets and stock records. If you are interested in taking part in this exercise, for year ending 31 March 2005, your local Dairying Development Adviser will be willing to provide assistance.

Results for each individual cost or return and measure of physical performance is shown separately on a per litre, per cow and per hectare basis. Results for the year, ending 31 March 2004 indicate a wide range of physical and financial performance. Farms in the top 25% (based on net profit per litre) produced almost 1,000 litres more milk from forage than those in the bottom 25%, clearly emphasising the importance of good quality grass/silage.

Due to a combination of higher milk prices and lower production costs, there was a difference in net profit of approximately six pence/litre, between the two groups whilst the yield was just over 200 litres higher in the top 25%.

Forage Maize
Forage Maize is now recognised as a quality feed for dairy cows with over 6,200 hectares sown last year. There are a number of key points to note if you are thinking about growing forage maize this year:

• Maize is not tolerant of acid soils. Soils should be tested and fields limed accordingly;
• The soil test will also measure the P and K indices. At index 1, a total application of 100,000 litres of cow slurry per hectare in two dressings provides most of the crop requirements (80kg N, 85 kg P₂O₅ and 205 kg K₂O per hectare);
• Wait until ground conditions are suitable before making the seedbed. Forcing a seedbed can lead to soil compaction, causing yield loss. Field headlands will benefit from a run with a “shakerator” before ploughing;
• With crops sown under plastic, drilling can commence early in the month. In open establishment the crop should not be drilled before late April;

• Forage Maize varieties have been trialed at the Plant Testing Station, Crossnacreevy since 1997 providing local information on varieties. The top recommended varieties for plastic are Justina, Goldcob, Tassilo and Crescendo. The top recommended varieties in open establishment are Goldcob, Kingdom, Crown, Speedy, Tassilo, Crescendo and Nescio;

• Crossnacreevy recommend the use of two or three varieties across the farm or sowing two similarly maturing varieties from alternative hoppers of the drill to provide alternative pollination sources;

• The DARD Forage Maize Recommended Varieties for Northern Ireland 2005 is available at local DARD offices;

• Good seedbed preparation and retained moisture in the seedbed are essential for the successful use of atrazine applied as a pre emergence weed control in first and second year crops. Tank mixes with bromoxynil should be considered in later years.

Brucellosis – How to protect your herd

Brucellosis in cattle has become very much more prevalent in recent years and poses a very real threat to individual farms and the livestock industry as a whole. Brucellosis causes abortion in cattle, usually in mid to late pregnancy. It can also cause infertility. Slaughter of infected animals can lead to loss of valuable blood lines. The disease can be transmitted to those handling infected cattle.

Cattle which have not been tested recently for Brucellosis may be harbouring the disease. It is important at turnout that farmers consider how they can protect their cattle from this disease. The most common way in which disease may enter your herd is through contact with cattle on adjoining land. Farmers can help to protect their cattle by avoiding the grazing of fields where neighbouring cattle are present in marching fields. If this is not possible, double fencing with a gap of at least 15 metres will help.

The main symptom of Brucellosis in cattle is abortion. Recent legislation defines a bovine abortion as “any bovine foetus or calf born dead or which dies within 24 hours of birth”. In calf cows and heifers should be checked regularly for any sign of abortion. All abortions must be reported immediately to your Divisional Veterinary Officer who will arrange for the animal to be tested for Brucellosis.

Further advice on protecting your herd from Brucellosis can be obtained from your local Divisional Veterinary Office.

DARD Farm Management Notes for April 2005 have been prepared by Greenmount Campus, College of Agriculture, Food and Rural Enterprise - Tel: 028 9442 6771. We acknowledge the
contribution from Veterinary Service. For further information contact your local DARD Development Adviser.