



DAIRY HERD FERTILITY

CHALLENGE NOTE 4A - The Farmer-Vet Partnership

Infertility is a major issue in modern dairy herds of Holstein cows with an average conception rate of 40% and calving index of 405 days currently being attained in Northern Ireland (ARINI, 2003). This represents considerable financial loss to the industry, which could be in excess of £130 per cow per year. Improved record keeping, better heat detection and a closer working partnership with your local veterinarian are key elements in controlling infertility costs. This Challenge Note deals specifically with the fertility benefits of working closer with your vet.

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The Role of Your Vet

Fertility management in today's dairy herd should be a partnership between farmer and vet. This partnership should enhance the profitability of the farm through reduced culling for infertility and increasing the volume of milk sold per cow per year. Variations in farm management and treatment options make it difficult to accurately cost veterinary input, but a range of £17 - £40 per cow per year was reported by ARINI in a study of 19 dairy herds across Northern Ireland. Various studies examining veterinary intervention have reported considerable cost benefit of up to 1.08 pence/litre. Farms participating in NMR DAISY veterinary management programmes in England ranked among the top 20% of herds for both production and profitability.

Routine Veterinary Visits

Many veterinary practices recognise the needs of the modern dairy unit and offer routine visits during the breeding season to deal with infertility and other veterinary related issues in the herd. Such routine visits, generally conducted fortnightly and charged at an hourly rate, can result in early identification of potential problems and are therefore advantageous to both farmer and vet.

Practicalities of a Fertility Visit

If a farmer is to take full advantage of regular visits by a veterinary surgeon during the breeding season, the visit must be well organised. This should include:

- **Compilation of an action list;**
- **Segregation of relevant cows in advance;**
- **Provision of good handling facilities allowing safe, efficient examination**

Vets frequently use expensive and fragile ultrasound equipment that require sufficient cow restraint, level floors, suitable lighting and electrical supply;

- **Written record of the fertility visit**
This is essential as it allows conclusions to be drawn based on treatments given, together with details of follow-up treatments and examinations;
- **Transfer of findings to the main recording system**

This will ensure that subsequent management decisions are based on correct information, and that the action list for the next visit is accurate;

Cows identified for examination will generally require rectal examination, with some requiring more detailed vaginal examination or rectal ultrasound examination. Ultrasound scanning is useful for the examination of the ovaries and for pregnancy diagnosis, but requires the operator to be competent. Providing good records are kept, routine visits by your local veterinary surgeon offers the most effective fertility control strategy in the dairy herd.

During the routine veterinary visit, the farmer should make use of the vet's expertise and seek advice on herd fertility and other veterinary-related matters. Points to consider should include:

- Checking the fitness of your bull(s) to work;
- Monitoring the incidence of lameness;
- Seeking advice on management around calving, including monitoring calving difficulties and retained placenta incidence;
- Getting a second opinion on the body condition score of dry, fresh and stale cows;
- Taking blood samples for metabolic profiles. Reactive sampling of problem cows is not particularly useful as deficiencies generally occur before peak yield and may have been resolved. Sampling should be conducted early in the calving season from cows calved 10-20 days as these are most likely to identify excessive energy deficiency before body condition score loss;
- Checking vaccination regimes. This should involve consideration of implementing a full herd health plan.

Minimum Requirements for your Routine Veterinary Visit

To produce an action list for a routine veterinary visit the dairy farmer needs to maintain basic herd records with the following key requirements:

- Clear and unique cow identification;
- Calving dates;
- All observed heat dates;
- Service dates;
- Pregnancy test results, particularly negative results;
- Veterinary examinations and treatments.

Strategies for Selecting Cows for Routine Examination

There are various options the dairy farmer can use to prepare a veterinary action list:

1. Examination of every cow after calving:

This approach includes a vaginal inspection:

PROS: Allows early diagnosis and intervention if a uterine problem exists;

CONS: Is it cost-effective? The majority of cows are normal and served within a reasonable time period.

2. Selection of cows from the herd records:

This approach relies on the identification of cow from the herd recording system, either by:

- a) Automatically generating an action list from a computer based recording system held on-farm or by your local veterinary practitioner;
- b) Manual retrieval from handwritten herd records. While the second method would appear to be effective, it can be difficult to identify cows requiring examination until a problem arises (for example, cow missing a target) by which money could be lost in both time and production.

3. Prediction of potential problem cows using risk factors:

This system of selecting cows for veterinary attention is based on identifying cows with potential problems arising from risk factors such as dystocia (difficult calving) and uterine infection/endometritis (whites). The aim of this approach is to diagnose potential breeding problems early and take appropriate corrective action, shortening the number of days to first heat.

While three systems of identifying cows requiring veterinary examination have been identified, the most practical system is probably a combination of 2 and 3. Such a system offers the greatest flexibility and cost-effectiveness as it targets cows that have

missed key fertility targets while also targeting cows likely to miss these targets.

Cows presented to the vet should include:

- 1) Cows that have passed their voluntary waiting period (VWP) and have not been seen in heat;
- 2) Cows for pregnancy diagnosis;
- 3) Problem cows including cows with:
 - calving difficulty;
 - retained placenta;
 - irregular heats;
 - vulval discharge (>28 days calved);
 - repeat breeders (>3 services).

An overview of the herd may also identify additional cows requiring veterinary examination based on cows with:

- Body condition score at calving outside the normal range of 2.5-3.5;
- Excessive loss of condition in early lactation;
- Lameness;
- Disease, including milk fever, metritis, mastitis, ketosis.

Review of Findings from the Routine Fertility Examination

One of the most important factors is to review the findings of the veterinary visit before the vet leaves the farm. Time should be made for the farmer and vet to assess the findings of the veterinary examinations in view of the herd records as this can highlight possible causes of infertility and allow corrective action to be taken. These problems generally fall into three main categories:

- 1) Uterine problems – infections of the uterus;
- 2) Ovarian problems – not cycling, cystic ovaries or cycling but not seen in heat;
- 3) Conception problems.

Routine veterinary visits during the breeding season are key to maintaining good herd fertility, through targeting areas for improvement and offer an excellent opportunity to seek professional advice on veterinary related issues.

Summary

- Working closer with your vet can bring considerable benefit over cost.
- Many veterinary practices conduct routine fertility visits as a service to their customers.
- Farmers should be prepared for the visit by compiling lists of cows requiring a fertility examination.
- Routine visits give the opportunity to seek advice on general veterinary issues.
- Reviewing the findings of the veterinary visit is important and allows targeting of areas for improvement.