Uterine health in a pasture based production system

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Summary

- Uterine infections reduce cow fertility.
- The metricheck device is a useful tool to assess the presence of uterine infections before the breeding season.
- Early identification of cows with endometritis allows time to take appropriate action.

Introduction

Reproductive performance is one of the most important factors influencing the profitability of dairy herds, with optimal financial performance arising from a 365 day calving interval. Following calving, the uterus of every cow becomes contaminated by bacteria. Most cows have the ability to clear these bacteria naturally without treatment. Around 10–20% of animals will be unable to clear these bacteria in a timely manner, and will subsequently develop clinical endometritis (with purulent vaginal discharge) or sub-clinical endometritis (without purulent vaginal discharge). Endometritis is a chronic infection of the uterus in dairy cows, often without symptoms of illness, and has an adverse effect on reproductive performance. Early identification of uterine infections allows treatment before the breeding season commences, and this in turn increases the chances of successful pregnancy establishment.

The Metricheck Process

Examination of vaginal discharge using the metricheck device should take place 3–5 weeks before the mating start date on all cows calved ≥14 days. The metricheck device is composed of a rubber cup attached to a steel rod. Metrichecking is a simple procedure (Figure 1) that can be implemented as a routine practice before the breeding season begins. The vagina is cleaned and sanitized using cotton wool soaked in dilute disinfectant solution. The metricheck device is carefully inserted into the vagina and extended forward as far as the cervix, and the device is then removed at an upward 45 degree angle. The discharge collected in the rubber cup is then examined and a score is assigned based on Figure 2. Following each examination, the metricheck device should be sanitized in dilute disinfectant solution.

Figure 1. *Procedure for conducting vaginal discharge exams using the metricheck device*

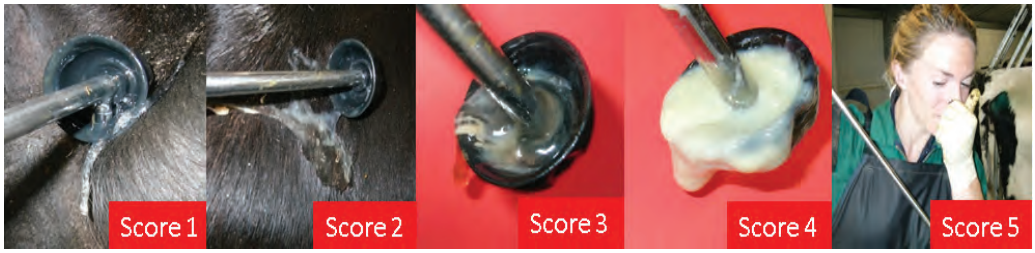

Figure 2. *Vaginal discharge scoring chart. Score 1 = clear mucus only; Score 2 = mostly clear mucus with small flecks of pus; Score 3 = mucus containing <50% pus; Score 4 = mucus containing ≥50% pus; Score 5 = mucus containing ≥50% pus and odour.*

Cows diagnosed with clinical endometritis based on the vaginal discharge recovered in the metricheck device are at significantly higher risk of reduced fertility performance compared with cows without endometritis. The cows at risk of endometritis, the consequences for reproductive performance and the treatment options are outlined in Table 1. Research from the *Next Generation Herd* indicates that cows with a high genetic merit for fertility have a faster recovery from uterine infection following calving.

Table 1. The factors affecting uterine recovery and return to score 0 and possible treatment options for cows

At risk cows	Consequences of failing to detect endometritis	Treatment
• Difficult calving • Twins • Retained placenta • Metabolic disease • Dead calf • Displaced abomasum • Low fertility sub-index	• Lower submission rates • Lower 6-week in-calf rate • Lower final pregnancy rate • Reduced days in milk	• Cycling cows » Metricure » Prostaglandin injection • Non-cycling cows » Metricure

Conclusions

Examination of vaginal discharge score is a useful management tool that can aid identification of cows with clinical endometritis before the start of the breeding season. Failure to identify and treat these cows can result in reduced fertility performance. Uterine health and the fertility performance of the herd can be improved through the selection of sires with a high genetic merit for fertility traits.