

Quick and easy milk quality investigations

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Mastitis and milk quality have always been major challenges faced by the dairy industry at large. Focusing on key factors which impact BMSCC during milking enables the design of a quick and easy template for on farm milk quality investigations.

In 2021 Vetora Te Awamutu began trialling a simplified version of the Mastitis Investigation Kit (MIK) from Dairy NZ, with the goal of providing our members with a more streamlined and affordable service that still allowed farmers to achieve their goals for improvement.

In 2023, a refined template was rolled out across all Vetora Waikato clinics. After running this service for two years in Vetora, we are able to show some of our findings in central Waikato milking sheds, as well as some practical tips and considerations for implementing the service.

The Vetora milk quality WOF (warrant of fitness)

Our aim with this template was to provide solid, simple recommendations, along with some avenues for further investigation that the client could undertake at will. This enables farmers to be active participants in the investigation and improvements.

Currently included in the Vetora milk quality WOF:

- Teat score
- Teat spray check including:
 - Dilution rate and mixing procedure
 - Batch longevity
 - Volume used per cow
 - Teat spray coverage
- Milking times, focussing specifically on
 - Milk let down
 - Overmilking assessment
- Hygiene and cow comfort.

The on-farm investigation is designed to be run by either veterinary technicians or veterinarians, and a report template has been created so that veterinarians are able to easily collate the farm data into a report with practical recommendations. References to relevant DairyNZ technotes are noted at the start of each section so that veterinarians can easily reference and check their recommendations. This set up allows for the report to be individually tailored to each farm.

Findings and trends in central Waikato sheds

The following trends were noted from the data gathered during the last three years of milk quality visits on farms serviced by Vetora Waikato. Overall, this data represents information from 21 dairy farms, with a herd size ranging from 150 cows to over 600 cows. Shed types represented were divided into herringbones over 30 aside, herringbones under 30 aside, and rotaries of any size.

Teat scores

- The number of cows scored with rough or very rough teat ends varied wildly between farms, ranging from 0% to 61% of cows assessed.
- In farms where the herd is split into an older and younger mob, cows in the older mob had a higher incidence of teat end damage.
- Incidence of teat end damage was notably higher in herringbone sheds which milk over 30 aside, compared with sheds which milk under 30 aside. The only exception to this rule is large herringbones with ACR's (automatic cup removers) installed.

Teat spray

- Approximately 60% of herds assessed were either not mixing teat spray to the correct dilution rate or were using a concentration that was too low for the environmental challenge.
- Teat spray coverage in herringbone sheds ranged from 100% adequate coverage down to 51% adequate coverage.
- The number of cows with adequate teat spray coverage from hand spraying ranged from 100% down to 40%.
- The level of teat spray coverage achieved by hand spraying can vary significantly between operators in the same shed.
- The lowest level of coverage was seen in a herd with a fixed position automatic sprayer at the platform exit, with only 32% of cows receiving adequate coverage.
- Position of automatic sprayers has the largest impact on adequate coverage. Interference by weather, or poor positioning of the cow within the bale were the most common factors resulting in inadequate teat spray coverage.
- Overall, the best levels of coverage resulted from good hand spraying technique. Poor hand spraying technique tends to perform either on par with, or worse than automatic spraying.

Milking times

- Only 20% of sheds assessed showed a consistent pattern of overmilking. All these sheds were herringbones over 30 aside, with no ACR's installed.

On farm results

Measuring the outcome of these milk quality visits depends to a degree on the farmer's reason for asking us on farm. The most common reasons farmers have requested a Milk Quality WOF include:

- Reduction in BMSCC.
- Reduction of clinical cases.
- Teething problems in new sheds resulting in reduced milk quality.
- Part of an udder health plan to assist with the move to selective DCT.
- Peace of mind.

Overall, the majority of visits have resulted in a reduction of BMSCC in the subsequent season. Farmers have also noted that their team has had more confidence in approaching mastitis management in shed.

The milk quality visits have often generated further work with clients in the consultancy space, including meetings to discuss further intervention and on farm training around mastitis management, along with increased use of milk cultures and on farm diagnostics.

Conclusion

The use of a simplified milk quality investigation template on farm allows veterinarians to offer a cost-effective way for farmers to improve their milk quality and mastitis management. Uptake and feedback around this service has been extremely positive from our members, and we are seeing some excellent improvements in BMSCC and clinical cases in the subsequent season.