

The Canadian National Dairy Study – A Look at Recommended Milking Practices in Canadian Dairy Herds

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Why is this important?

Mastitis is one of the most important management issues facing dairy producers, with both clinical and subclinical mastitis remaining a problem in Canadian herds. This disease is one of the costliest, with average expenditures and production losses for clinical and subclinical infections reported as \$662 per milking cow per year. Current recommended milking procedures (RMP) include pre- and post-milking teat disinfection, wearing gloves, drying teats, fore-stripping, and implementing use of automatic takeoffs. Research has shown that the use of RMP reduces mastitis and intramammary infections by removing pathogens from the teat skin, protecting teat ends from damage, preventing transfer of pathogens between animals, and through prompt detection of existing infections. A set of recommendations for milking management and milk quality has been established through the mandatory Canadian proAction[®] program, which requires standard operating procedures for milking protocols. It is important to understand how broadly these RMP are being adopted and, if they are not in use, why not?

What did we do?

The National Dairy Study (2015) was designed to gather dairy cattle health and management data from dairy farms across all provinces. Targeted data included information about herd demographics, biosecurity, animal care, lameness, calf health and management, reproductive management, and udder health. The project included collaboration between the universities of Guelph, Montreal, Calgary, and Prince Edward Island. The project included two phases: phase I involved a comprehensive questionnaire and phase II consisted of farm visits to a subset of phase I participants.

The questionnaire included questions on milking hygiene and routine, mastitis management, methods of identifying cows with mastitis, and dry-off practices. The milk harvest practices of interest included the use of gloves at milking, glove disinfection, use of pre-milking teat disinfectant, fore-stripping, methods used to dry teats, use of automatic takeoffs, and use of post-milking teat disinfectant. In total, 1,193 surveys were collected and analyzed.



<http://www.mastitisnetwork.org/>; <http://www.delaval.com>

What did we find?

Most producers follow RMP, but some procedures are used more than others. On over 60% of farms, all workers used gloves during milking while nearly 16% of farms reported that no workers wore gloves. Generally, gloves were used more commonly with parlour herds and with larger herds. Herds with >200,000 cells/mL bulk tank SCC had a lower proportion of milkers wearing gloves. Over 60% of farms use a pre-milking teat disinfectant, with more parlour and larger herds adopting this practice compared to tie-stalls and small to medium herds. The majority (82%) of farms reported fore stripping during milking preparation and most farms (88%) dry teats before milker attachment, with 59% using disposable towels, while 12% of herds do not dry teats at all. Automatic takeoffs were used on 78% of farms and post-milking teat disinfection was used by 97% of producers.

Four focus groups examined why producers do not adopt certain RMP. Generally, producers expressed the following barriers:

- 1) Difficulty changing habits and routines
- 2) Perception of a good SCC (i.e. <400,000 cells/mL) as an indicator of no udder health problems
- 3) Perception of mastitis as a problem (or not) on their farm and importance relative to other illnesses or issues
- 4) Misconceptions about the importance or lack of information about RMP
- 5) Physical barriers such as finances, time, labour, infrastructure, convenience, and employee training

Producers also identified the following factors that would motivate them to improve udder health:

- 1) Pride and satisfaction of a job well done
- 2) Having healthy animals as a result of less mastitis
- 3) Influence of peers and education
- 4) Penalties, regulations, incentives or economic rewards, and ease of job

What does it mean?

One third of producers do not use a disinfectant when cleaning teats (although they do use water or a dry wipe) and 18% do not fore-strip. This is concerning, as both teat disinfection and fore-stripping are required elements of proAction® and are essential to prevention of mastitis and stimulation of milk letdown. The reason for implementing RMP must be clear. Producers stated that they appreciate training opportunities and tools such as producer meetings, online videos, and hands-on approaches. Producers are interested in and learning from successful operations and find that gathering new ideas from peers ultimately influences their own management. Therefore, an increase in peer learning opportunities would be useful in improving uptake of RMP on Canadian dairy farms.



<https://dairyfarmersofcanada.ca/>

Summary Points

- Recommended milking procedures are protective against mastitis and improve animal welfare and profitability.
- Fore-stripping, wiping teats, use of single-cow towels and use of post-milking teat disinfectant are widely adopted.
- Use of gloves, pre-milking teat disinfectant, and automatic takeoffs are not as extensively implemented.
- Increased producer learning and training opportunities will increase implementation of RMP on-farm.

The full published paper can be found at:

[https://www.journalofdairyscience.org/article/S0022-0302\(17\)30232-1/pdf](https://www.journalofdairyscience.org/article/S0022-0302(17)30232-1/pdf)

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