

MILK QUALITY

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Program to Reduce Fresh Heifer Mastitis

Study Analyzes Impact of Fresh Heifers to Herd SCC

The following is information from an article by Andy Johnson in the Progressive Dairyman.

On many farms, fresh heifers actually contribute to a higher herd SCC rather than dilute the existing SCC. The goal for any dairy operation is to have less than 10% of the heifers calve with an SCC over 200,000 or a linear score of 4.0. Dr. Johnson has studied records from thousands of dairies, and it is typical to find 25% to 35% of the heifers over this threshold level on their first test.

Two studies looking at more than 150,000 animals analyzed the impact of fresh heifers having a SCC over 200,000 at their first test over the entire lactation. In 1990, Dr. Steve Stewart showed on over 200,000 heifers' full lactations that those with a first test SCC over 200,000 – regardless of where the SCC dropped after that – had over 1,400 pounds (636 kilograms) less milk in that lactation.

Dr. Mark Kirkpatrick did a similar study in 2015 on 164,000 heifers and found these animals produced 1,583 pounds (720 kilograms) less milk in that lactation. His study also looked at other factors and found that animals with SCC over 200,000 on first test left the herd three times sooner and had clinical cases of mastitis 57 days sooner than those who tested with a lower SCC. Animals with a high SCC or an early-lactation case of clinical mastitis were also declared open for 17 more days than herd mates. Interestingly, this study showed the negative impact of a high SCC on the first test (1,583 pounds) was more costly than a case of clinical mastitis (1,007 pounds).

Dr. Johnson developed a program to detect high-SCC heifers early. Heifers that calve on Sunday, Monday or Tuesday get purple duct tape around both rear legs.

Heifers that calve Wednesday, Thursday, Friday or Saturday get yellow duct tape around both rear legs. On Friday, the herd manager or similar person attends the milking of the fresh animals and finds all the heifers with purple duct tape and performs a California Mastitis Test (CMT) on those animals.

Any animal with a positive CMT reaction is cultured and treated according to herd protocol for the bacteria isolated. On Wednesday, the herd manager attends to milking of the fresh animals and finds all heifers with yellow duct tape, does a CMT on those animals and follows the same protocol. This only requires extra effort at the dairy two milkings a week, but the results can be very positive.

If animals are calving with an infection, evaluating the pre-fresh and heifer facilities is critical. Dirty heifers will generally cause more SCC issues at freshening. If CMTs are negative at calving but SCC is high on first test, then one should concentrate on the facilities post-calving, the milking routine for fresh animals and the milking

equipment being used to milk the fresh animals.

There are two common programs dairies with excellent milk quality are using to reduce the number of infected animals. Those programs are as follows. Dr. Stephen Oliver from the University of Tennessee published a study about pre-treating heifers, which showed a very positive result. His research showed treating heifers 10 to 14 days before calving with an approved lactating tube lowered mastitis, SCC and increased milk production. Another popular protocol is to dry-treat heifers 30 to 45 days before calving using an approved dry cow treatment, along with either an external or internal teat sealant.

Dr. Johnson recently surveyed the herds he consults with that have bulk tank SCC under 100,000 and found that 75% were pretreating heifers by using one of the two procedures listed above.

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Structured Employee Training is Critical

This article is taken from the National Mastitis Council's newsletter Udder Topics.

During the 2024 National Mastitis Council Annual Meeting, Ian Ohnstad, a dairy consultant with The Dairy Group, Taunton, Somerset, United Kingdom, described the shrinking labor pool. Based on personal experience and numerous published papers, Ohnstad firmly believes that implementing structured training and development programs helps attract and retain good staff. Ultimately, this provides a more secure labor force for the future.

“Unfortunately, very few farms adopt a structured training program relying on new members of staff being trained by existing staff, often perpetuating poor practices,” he noted. Research done by Vibeke Fladkjaer Nielsen, a Danish dairy consultant, showed in her research that motivation comes from two sources. First, employees can be motivated externally if their actions are rewarded or if their actions avoid something unpleasant. Some refer to this as the, “carrot and stick approach,” whereby the carrot is the reward for doing something correctly and the stick is the unpleasant consequence for doing something wrong. Second, employees can be motivated internally. They take action because a topic is interesting or enjoyable.

“Intrinsic motivation also involves seeking out and engaging in activities that are challenging, interesting and internally rewarding – although not always with the prospect of an external reward,” Ohnstad explained.

“Achieving a behavioral change is always challenging and expecting immediate engagement and massive behavioral change with a milking team is somewhat naïve,” Ohnstad continued. He warned the NMC members that change is usually resisted because it is

easier to stay with a known practice. “The current practice feels safe and is habitual. However, and more importantly, the adopted practice we are looking to change is usually easier to carry out than the old practice.” According to Danish research, to change behavior and routines, you should first understand what motivates an individual. Ohnstad shared five motivational profiles – perfectionist, result-oriented workhorse, focused workhorse, equilibrium employee and worker. “An individual’s motivation influences how they learn,” he noted. “A ‘one-size-fits-all’ approach is unlikely to be successful.” Thus, conduct training in small groups – after you understand what motivates individuals. Create small groups so “like-minded” (similar motivational profiles) individuals are in the same group. Ohnstad reminded NMC members that Standard Operating Procedures (SOP) are invaluable in fostering consistency among employees. “However, issuing an SOP without following three implementation steps is likely to lead to lower levels of acceptance.”

- What? This describes the action that needs to be taken.
- How? This describes how the activity should be completed.
- Why? This explains the activity’s importance and what can happen if it is not implemented.

Ohnstad concluded that dairy farm employee recruitment and retention will most likely continue to be a challenge. Thus, he recommends identifying each employee’s motivational profile, so you can offer a more targeted training program.

“Training is an investment in your business,” Ohnstad stated.

National Dairy Quality Awards Nominations

The National Dairy Quality Awards, now in its 30th year, recognizes the very best in quality milk production. The goal of the NDQA program is to honor dairy producers from across the United States who have successfully placed high priority on producing milk of the highest quality.

Producers are nominated using a short questionnaire. Somatic cell count and standard plate count data are based on June 1, 2023-May 31, 2024. It has been our experience that to qualify for an award your SCC needs to be under 100,000 for each month and the plate counts needs to be under 5.

The top applicants will be selected based on the data provided in the questionnaire. The finalists (and their nominators) will be asked to complete a more detailed application form used for final judging. Judges will evaluate the final applications for measures of milk quality, systems of monitoring udder health, milking routine, protocols for detection and treatment of clinical and subclinical cases, treatment protocols and strategies for overall herd health and welfare. The deadline for submitting nominations is **August 31, 2024**. If you think that you would be eligible to win an award and would like to be nominated, please let us know and we will fill out the application. Winning an award makes your farm more desirable to milk processors.

