



SCC DIAGNOSTICS TOOL BOX



R-MR-3: What Makes These Farms Excellent?

Jeffrey K. Reneau

Department of Animal Science, University of Minnesota, St. Paul

Published in Dairy Star, January 2011

Over the past 6 months, the Extension Dairy Team held 14 milk quality field days on Minnesota farms with records of outstanding milk quality. I had the opportunity to learn a lot from the producers as they described how they have achieved such consistently good results. In reflecting on the comments I heard at each farm, observing the management practices first-hand and studying their DHI records, several familiar themes prevail.

- **Good communications and teamwork really matter.** These farms set a high priority on working together to achieve their farm goals. Everyone seemed to be on the same page, knew how to get the job done right, and seemed to be having fun.
- **Consistent attention to detail – no shortcuts.** Their attitudes were in sync on paying attention to details.
- **Cow comfort and hygiene are emphasized.** Their cows' hygiene scores were 0.5-1.0 units cleaner than average Minnesota dairies. One farm not only routinely removed udder hair but also clipped rear legs in an effort to keep lower legs and udders cleaner.
- **Use more intense bedding management.** The importance of using dry bedding and more of it was often mentioned to improve cow cleanliness and cow comfort. Manure is removed from stalls at each milking and bedding is changed frequently... usually daily for organic beddings like sawdust or straw. While sand bedded roomy freestalls were viewed as the optimum, many were effectively managing the use of sawdust and straw bedded mattresses.
- **Milking routines are well defined and consistently followed.** Each farm had a specified milking procedure that everyone followed consistently.
- **Milking equipment was meticulously maintained on a regular basis.** These farms have close working relationships with dairy supply and milking equipment service providers to assure that milking equipment is routinely checked and always in good working order.
- **Dry period teat sealers are utilized.** Most farms used a teat sealer along with dry cow antibiotic treatment. Their DHI SCC records showed reductions in percent cows calving with SCC greater than 200,000. The most frequent improvement needed on these farms was to reduce percent positives on first test, indicating transition cow management is still a challenge that needs attention on even high milk quality farms.
- **All herds had a few individual cows that contributed significantly to their herd DHI SCC.** This is generally true on every farm unless those high quarters are identified and the affected milk diverted from the bulk tank. This emphasizes the need for monthly individual cow SCC testing.
- **As expected, all had superb mastitis/milk quality records.** Table 1 shows key averages of the 14 field day host farms as compared to all Minnesota DHI dairies.

Table 1. Averages of 14 Field Day host farms as compared to all Minnesota DHIA dairies.

MN DHI SCC variable	2010 Milk Quality Field Day Dairies (averages)	State Average MN DHI Dairies
Herd DHI SCC	121,000	293,000
New infection rate	7%	13%
% chronic infections	6%	20%
% cow > 200,000	13%	25%
% > 200,000 on 1 st test day	16%	35%

- **Higher than average milk production and pregnancy rates.** Generally the host farms had higher than MN DHI average milk production (23,000 lb) with a range from 18,300 (Jersey herd) to 29,000. Their herd pregnancy rates were also higher (average 20%) with one herd at 28% without the aid of any estrous synchronization program. Although it has been known for a long time that lower SCC cows are more productive, it is only recently that higher pregnancy rates have been shown to be physiologically associated with low SCCs. A detailed 2007 survey conducted among the top 100 MN DHI milk quality herds drew similar conclusions. Achieving low SCCs is not rocket science but it does require consistent application of well known practices.

A 2007 United Kingdom case-control study by Martin Green and his associates serves to demonstrate the point that there is not a lack of information, but rather a lack of consistent application of what we already know. In this study, two groups of dairy farms with higher than average SCCs and clinical mastitis cases were carefully evaluated. Similar dairies were paired with one group designated as a control group. Very specific recommendations to remedy the high SCC and clinical mastitis problems were given to each of the other dairies. The results (see Figure 1) showed that herds implementing greater than 66% of the recommendations made much more progress than either the control herds (where no recommendations were made) or those implementing fewer recommendations.

My experience has been that most dairies are already doing many of the “right” things to achieve low mastitis levels and quality milk but are not getting them done consistently. Now that we are in a new year, this is a perfect time to make a SCC self assessment to be sure that you are doing all you can to improve milk quality in 2011. To get started, try our interactive milk quality self assessment quiz, which can be found at:

<http://www1.extension.umn.edu/dairy/milk-quality-self-assessment/>.

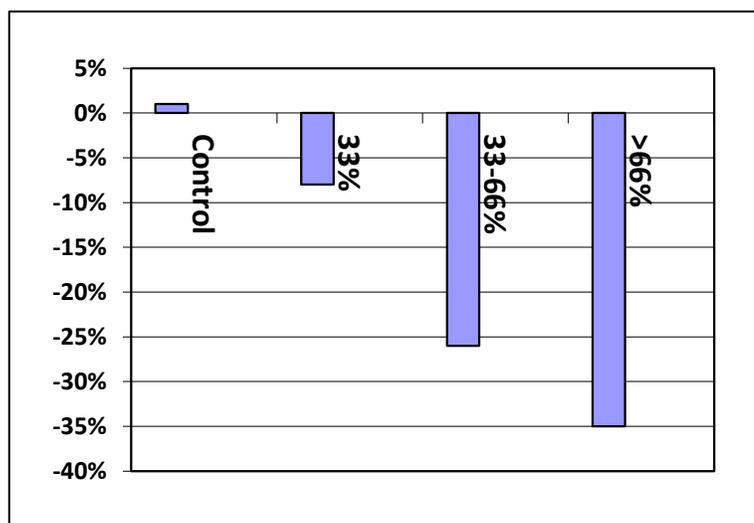


Figure 1. Percent reduction in clinical mastitis and herd SCC based on level of compliance/implementation of recommendations in U.K. case-control study.

