Bedding Management and Udder Health

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Dairy herd SCC values usually fluctuate seasonally, with higher values occurring during the wetter, more humid, hotter months of the year. Many producers, however, have experienced slowly rising SCC values throughout the entire last year or more. In the majority of herds, environmental bacteria are the principal pathogens causing the SCC values to increase. To combat this udder health situation, more care should be given to the management practices that affect the cleanliness of the udders and teats. Bedding management is one of the practices that needs more attention in many herds.

Researchers from the University of Minnesota published a report on bedding management in the Proceedings of the 2002 National Mastitis Council Annual Meeting. I think their paper provides some good guidelines for producers to use in evaluating the adequacy of the bedding material for their cows’ comfort and cleanliness. The following is an edited section from that report.

Frequently, the “knee test” can be used to test if the resting surface is comfortable and, to a degree, clean enough for the cow to lie on. Kneeling on one knee in the stall or on the dry lot (bedded pack) area, rock back and forth to perform the test. How does it feel on your knee? If it feels comfortable, it is probably all right for the cow to use as she shifts in the stall. However, it is recommended that you also try a second test. From a standing position in the stall or on the bedded pack, drop quickly to your knees. Does the impact feel comfortable? If the answer is yes, the cows should not be reluctant to lie down (stall size and other factors can also affect acceptability). If it hurts, most likely the cows will be reluctant to use this area. Next, stand up and look at your knees. Are they wet or covered with manure? If they are, your stalls or the bedded pack needs some serious maintenance attention, as well as fresh bedding. The last and maybe most telling test is would you lie on the bedding? If not, change it immediately.

After the knee test, evaluate the visual cleanliness of your cows and heifers. Looking at the tail head, flank, belly, udder and lower rear leg of each animal, or a representative number of animals from each group or the herd, use a 5 point scoring system to rate how clean they are in each body area. An overall herd average score will give you an indication of how clean the herd is. Cows or dairies with low SCC values have fewer animals with manure on their udders. The amount of manure on the udder is often related to the amount of manure on the feet and legs. It has been shown that the higher on the leg that manure gets, the higher the probability that the cow will end up with manure on her udder. Thus, you want low individual cow and herd cleanliness ratings.

Besides the cleanliness of the bedding material having an effect on the SCC values of cows and herds, the type of bedding material used also has an effect on the number of bacteria present in the bedding. When deciding which bedding material to use, keep in mind that bacteria need moisture, organic nutrients and appropriate temperature to
grow. Inorganic materials (such as sand) are the best to use. However, if the manure handling system cannot handle sand, then an organic material must be used. In general, the best organic materials to use are pine, cedar and other softwood shavings. Hardwood shavings and sawdust are less desirable, and straw is the least desirable from the standpoint of supporting bacterial growth. The particle size of the bedding is also a factor to consider, with coarsely ground materials being preferred over finely ground or chopped bedding. Bacteria grow faster/better in finely ground bedding.

While bedding management is not the only factor that must be carefully looked after to help keep herd SCC values low, it is an important one that needs more attention on many dairies. Ask your extension agent, milk plant or co-op field rep, veterinarian, or other knowledgeable consultant for further guidelines that will improve the udder health, milk quality, and profitability of your dairy herd.