

Vet's Corner: Killer Colostrum

In February, our practice hosted renowned calf raising expert, Dr. Sam Leadley for an evening discussion. Prior to the meeting, colostrum samples were collected from various farms to detect coliform bacteria level. During the presentation, it was stated that 4 of 5 samples test with loads of coliform that are high enough to infect calves. Would the farms from our practice fare any better? NO WAY. All eleven samples tested with high coliform loads. A few case histories follow that may sound familiar on your farm.

On a farm with the most sanitary maternity pens in our practice, calves were scouring at 3-5 days of age. Navels are dipped; pens are monitored every two hours so calves are removed ASAP, and 3-4 quarts of colostrum is fed or tubed before 2 hours old. Yet *E. coli* was isolated from fecal scour samples. The colostrum culture result for coliform was TNTC (Too Numerous To Count). In this case calves were being fed Killer Colostrum. The first milking was performed with a bucket milker, after milking the milk pail was being rinsed out with hot water, but not sanitized. Since adopting proper cleaning procedures with sanitizer and acid rinse for the milk bucket, scours cases dropped off.

On another farm, 2-4 day old calves were dying of septicemia and scours. Killer Colostrum was also being fed to these calves. In this 3x milking herd, the fresh cows are milked for the first time in the parlor with the mastitis cows. Bottles with Colostrum are placed in snow banks or pails of water with freeze packs to chill before placement in the refrigerator. (Dr. Leadley informed us that the refrigerator's function is to hold items at a low temp and is not efficient at reducing the temp to stop coliform growth for several hours, so the colostrum has to be chilled before placing in the refrigerator.) Within an hour of birth, fresh colostrum is taken from the refrigerator, warmed, and fed to each calf. What could be wrong with this procedure? This colostrum did not test high for coliform; instead it had low IgG content. Serum protein concentrations read 4.0 g/dl or less on 2-6 day old calves. During this calf scours episode, it was found that the night crew was not milking the newly calved cows, so some colostrum was from cows that had calved more than a half day before. The drop in IgG was due to dilution of the colostrum because the udder filled after calving. Now, only colostrum from cows less than 6 hours fresh is saved for newborn calves.

Unfortunately, there are other causes of Killer Colostrum. Whenever investigating deaths in calves under a week old, colostrum handling procedures should be reviewed.

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