Heartland
YOUR PARTNER IN PREVENTION, HEALTH AND PERFORMANCE

LISTOWEL
#8451 Road 164 Hwy 23, North
Listowel, ON N4W 3G6
1.800.565.2047
T 519.291.2060
F 519.418.2065
E lclinic@heartlandvets.ca

MOUNT FOREST
322 Main Street, N.
Mount Forest, ON N0G 2L2
1.877.523.4422
T 519.323.4422
F 519.323.4334
E mfclinic@heartlandvets.ca

DRAYTON
89 Wellington Street, S.
Drayton, ON N0G 1P0
T 519.638.3391
F 519.638.5858
E dclinic@heartlandvets.ca

Vol. 37 No. 354 July, 2023

Colostrum Storage & Handling

That's right, another colostrum article. I know you've heard all about the 4 Q's and how important colostrum is for giving newborn calves a good start. However, I still seem to run into enough issues on farm regarding colostrum storage. I would like to take this opportunity to talk about colostrum handling practices I often see mismanaged on-farm. I think we often get away with these practices during the winter, but the summer heat is less forgiving. Even when we do a good job collecting colostrum from the dam with minimal manure contamination and use sanitized equipment and storage containers, there will always be a little bit of bacteria present in the collected colostrum. You cannot completely eliminate the risk of contamination. The problem is, the longer this colostrum sits before being fed, the more the bacteria present will proliferate, and this process happens way faster at warmer temperatures. I have taken samples from colostrum stored in refrigerators to submit them for bacterial counts as part of a workup for calf scour problems and have had some instances where we start with relatively low bacterial counts at the beginning of storage and have too many colonies to count at 24hrs. If the exponential growth of bacteria happens this fast at refrigeration temperatures, just imagine how fast it occurs at 25°C.

The problem is bacterial contamination of colostrum or milk can denature essential proteins like immunoglobulins and greatly reduce the immunological and nutritional value of the colostrum. This results in poor passive transfer of immunoglobulins, digestive upsets, and poor palatability.

Here are some suggestions to help reduce bacterial growth in colostrum:

Collect it clean
Make sure the cows' teats are prepped and wiped. Collect colostrum using milking equipment and storage containers cleaned and sanitized to the same standards as your bulk tank and main milking equipment.

Do not let it sit
Do not allow colostrum to sit at ambient temperatures. Either feed immediately or prepare for storage.

Use small containers or bags
When refrigerating or freezing colostrum, do so in small containers so the colostrum can cool or freeze quickly.

Heartland
YOUR PARTNER IN PREVENTION, HEALTH AND PERFORMANCE

LISTOWEL
#8451 Road 164 Hwy 23, North
Listowel, ON N4W 3G6
1.800.565.2047
T 519.291.2060
F 519.418.2065
E lclinic@heartlandvets.ca

MOUNT FOREST
322 Main Street, N.
Mount Forest, ON N0G 2L2
1.877.523.4422
T 519.323.4422
F 519.323.4334
E mfclinic@heartlandvets.ca

DRAYTON
89 Wellington Street, S.
Drayton, ON N0G 1P0
T 519.638.3391
F 519.638.5858
E dclinic@heartlandvets.ca

Do not mix
Avoid pooling colostrum, since one contaminated sample could compromise the whole batch. Do not add more colostrum to colostrum already stored in the fridge. The constant rewarming will promote bacterial growth.

Consider pasteurizing
When done properly, pasteurization of colostrum will kill any bacteria present in the colostrum and greatly increase its shelf life. Bear in mind this must be done early with clean colostrum. If colostrum already has high bacterial numbers, the damage to its quality is already done and you will not be able to fix it with pasteurization.

Consider using a preservative
Adding a preservative, like potassium sorbate, does not kill bacteria but will inhibit bacterial growth and increase the shelf life of stored colostrum. This can be used in combination with pasteurization or on its own if pasteurization is not practical.

Get ready for feeding
Thaw or rewarm colostrum relatively quickly in a warm water bath. Do not exceed 60°C in the water bath as this can denature proteins in the colostrum. Aim to feed colostrum at 39°C.

Thomas Veens, DVM

Upcoming Stat Holdidays

The clinic will be closed for the Civic Holiday, August 5-7. As always, veterinarians will be available 24-7 for emergency service. The Saturday fee schedule will remain unchanged from non-stat weekends.

Fly Control

Have you heard the buzz? Large animal technicians are now offering fly prevention in combination with dehorning services. Ask your large animal tech for more information!