



Dairy Details

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NORTHERN VALLEY DAIRY PRODUCTION MEDICINE CENTER

Adapting the 5 C's to Cold Weather

The 5 "C's" of Calf Care

- Colostrum
- Consistency
- Comfort
- Calories
- Cleanliness

No matter the time year, it's important to always be thinking of the 5 "C's" when caring for calves. They are a good reminder of the basics in keeping calves healthy. As we move into colder weather it's important to consider how these 5 "C's" change.

Colostrum Availability

Many farms struggle with having an adequate amount of colostrum to feed their calves as the weather turns colder because we often see cows make less colostrum. So, what can we do to make sure we are still able to provide calves 1 gallon of quality colostrum? First, take advantage of the months where you have more colostrum than you need. Invest in a freezer where extra colostrum can be stored for up to 6 months. I always try to encourage clients to store extra colostrum rather than sell it to companies. It's worth much more going into your calves, then you will get paid for it.

Consider investing in a refractometer (they can be found on Amazon started at ~\$124) to test the quality of all colostrum. Label colostrum before storing it. When you know you might be short on colostrum, keep colostrum that tests 18 or above. Feed bull calves colostrum that tests below 22 and feed heifer calves colostrum that tests above 22. And a last resort is to always have some colostrum replacer on hand. Make sure it's a product that provides at least 150 grams of globulin protein and is colostrum based and NOT serum based. These products can be expensive, but a calf that doesn't receive colostrum will be even more expensive.

Consistency- Not too cold, not too hot

When we refer to consistency in calves, we are usually referring to timing of feeding, temperature of milk, and the solids concentration in the milk. In cold temperatures, the temperature that the milk is when it reaches the calf changes much more than when milk is delivered to calves on a nice 80-degree day. Milk often needs to be warmed up to a higher temperature so that by the time it reaches the calf it is as close to the calf's body temperature as possible (~101.5 degrees F). It's a good idea to check the temperature of milk when it reaches the last calf at feeding time to see if you should be warming it up to a higher temperature before feeding.

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Comfort- As snug as a bug in a rug

Keeping calves WARM and DRY are imperative in cold temperatures. When we do this, they spend less energy on keeping themselves warm and more energy on growing and keeping up a strong immune system. While sand or shavings may be good choices for bedding in the warm months, they are not suitable when temperatures reach below 60 degrees F, which is below a calf's thermal neutral zone. This means when temperature drop below 60 degrees, calves need to start using some of their energy to keep themselves warm. In cold temperatures, calves need bedding that is deep enough for them to nest in. When calves are properly bedded in the Winter, you should not be able to see their legs at all when they are laying down. You may also need to bed more often when it snows regularly to keep bedding dry, as laying in wet bedding can cause calves to lose body heat more easily. Calf jackets are also a great tool to keep calves comfortable in cool weather. Just make sure they are removed when temperatures are above 60 degrees F, so that they aren't getting too warm during then day.



Calories are King in Cold Weather

Nutrient requirements increase as calves expend more energy to keep themselves warm. Calves are born with 3-4% body fat. This obviously doesn't leave a lot to spare in cold weather. If calves experience negative energy balance for more than 3-5 days, starvation will start to occur, which leads to body systems to shut down in order to preserve energy. To keep calves healthy and gaining in the cold weather one must provide more calories in providing more milk to calves. This can be done in two ways:

1. Feed a larger volume at your usual feeding times. If you use bottles to feed calves, the gallon bottles available from Land O' Lakes can be helpful.
2. Feed the same amount more often (3-4 times a day instead of 2 times a day). There should be at least 12 hours between the first and third feedings of the day. The more frequently you can distribute the calories over a 24-hour period, the better.

Cleanliness

Yes, bacteria still can grow and live in cold temperatures. And yes, I know how much it sucks to clean things with wet water when it's below zero. Even though cleaning in the winter presents extra challenges, cleaning protocols still need to be maintained in cold temperatures, especially since calves may be slightly immune suppressed if they are in a negative energy balance.

In conclusion, don't cut corners when it comes to the "5 C's" of calf care, even when you're freezing your behind off and want nothing more than to be inside! In the end, you will most likely spend less time out in the elements treating sick calves if you pay attention to the details from the start.

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