

Tried and True Calf Tips to Get Through the Winter

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Every year, starting around February, we start to see more outbreaks of neonatal scours. While this can and does occur during other times of the year, February on some farms is as reliable as heifers unlocking an unchained gate. The obvious difference with February is the temperature. It's cold. Miserably cold most days. Everyone is well versed on how the colder weather takes a toll on calves, but it also does on the humans too.

Yep, I get it. Taking a few extra minutes to add extra bedding, to top up starter, to check the "not quite right calf" is not as easy when you can't feel your fingers. Or your toes. Thoroughly washing hutches or pens is put off until that elusive warmer 7th day in the forecast. But, as all Canadian farmers know, that 7th day is rarely as nice as we thought it would be and the job is often put off yet again. All of these little things can begin to add up and before you know it you are spending an extra hour treating sick calves.

Most dairy farmers know all the major points about general calf and winter care by now. Move the calf ASAP! * The 5 C's of colostrum management! * Extra long straw to conserve energy! * Extra feedings/litres of milk to increase available energy! * Put a coat on!

These are 100% correct and hopefully standard at your operation. However, here are some practical take home, tried and true tricks that I have seen work on many farms. My goal is that you can implement at least one of these tips tomorrow and improve the quality of your calves.

Practical Take Home Tips

❖ Remove the Calf ASAP:

- Hard rubber or plastic troughs are easily accessible and affordable calf containment units that can be moved just about anywhere, including to clean them thoroughly between each calf.
- Fresh straw can be added to help keep the wet calf warm, aim to bury them above their legs when laying down.
- Leave the container in the corner of the pen, this allows the cow to lick the calf which will help dry the calf sooner.

❖ Navels:

- Use a 7% Iodine solution, not iodine teat dip.
- Squirt or spray liberally onto the navel ensuring it is covered 360° from the tip to the base.
- Dipping can give good coverage but the container can become contaminated quickly:
 - A good solution to eliminate the tendency to re-use dirty containers is to use paper based disposable shot-glass sized cups.
 - These cups are meant to be single use and then discarded because the paper base will dissolve, this eliminates our inclination to save and reuse them.

❖ Colostrum Storage:

- Store good quality, clean colostrum in 1-2L bags (Ziplock type bags work great but specific colostrum bags are commercially available) and freeze laying flat. This will reduce thawing time comparing to storing in a bottle.
- Colostrum can be stored for up to 1 year and retain immunoglobulin quality in a freezer that remains consistently at -20°C (not a frost-free freezer).
 - Be sure to label the cow number, the date of collection and the Brix number on the bag.

❖ **Colostrum Preparation:**

- Remove the tendency to thaw too quickly in hot water which will destroy necessary immunoglobulins by using a Sous vide/Immersion cooker and an inexpensive insulated cooler.
 - These can be purchased at most homewares stores.
- Place a wire rack in the bottom of the cooler.
- Fill the cooler with enough water to fully submerge the colostrum and the cooker.
- Place the bag(s) of colostrum (~4L per calf) on the rack in the water.
- Mount the cooker and set to 50°C or 120°F.
- Place the lid to cover the cooler without displacing the cooker or, cut a hole in the cooler lid (cup holder space works well) and secure the cooker with caulking.
- Colostrum should thaw in approximately 30 minutes.

❖ **Transition Milk:**

- Sick Calves:
 - Use transition milk (the 2-4th milkings after colostrum collection) for sick calves in place of whole milk or milk replacer during feeding.
 - Transition milk contains higher amounts of fat than regular whole milk which allows sick calves to get more calories in a smaller volume.
 - It also contains anti-inflammatories which may provide relief from the gastrointestinal discomfort often experienced by calves during a bout of diarrhea.
 - Store and thaw collected transition milk using the same process as colostrum.
- Newborns:
 - Transition milk can also be used in healthy calves for their regular 2nd to 6th feedings.
 - The benefits listed above also help the newborn calf achieve a good start and the best part is it is free!

❖ **Colostrum Supplementation:**

- Colostrum can be used in place of transition milk for both sick calves and newborns.
- Freeze good quality, clean colostrum in ice cube trays and store in the freezer for use in calves that are still drinking but are experiencing clinical disease.
 - The colostrum cube is added into their milk bottle or pail before feeding.
- The colostrum cubes can also be used for newborns as an added supplement with their regular milk feeding.

❖ **Handle Sick Calves Last:**

- This is a simple biosecurity standard but often forgotten in the moment.
 - 1) Treat and manage the sick calves after you have finished the feeding chores for all the healthy calves.
 - 2) Whether doing regular chores or managing the sick animals, always work from the youngest to the oldest.
- This will reduce the spread of pathogens to the most vulnerable animals.
- Always wear gloves and always wash your boots after handling sick calves.
 - A separate pair of coveralls dedicated for handling sick calves is also a good practice.

❖ **Fresh Water:**

- This should be always available, even during a deep freeze.
- Scouring Calves:
 - Fresh available water allows them to keep up with their initial fluid loss which can occur before outward signs of clinical diarrhea.

- As excess fluid collects in their gastrointestinal tract (diarrhea), less fluid is available for the rest of the body to use.
- When this occurs, the calf is driven to drink more fluid if it is available which can increase their ability to stay ahead of the fluid loss.
- Calves that can begin replacing fluid losses right away are less prone to becoming lethargic and are more able to drink enough fluids on their own during a bout of diarrhea.
- **This does not replace additional fluid therapy such as electrolytes (mixed as per package directions with water) that should be given to calves with clinical signs of diarrhea in addition to regular offerings of milk and freely available water.

➤ Starter Intake:

- Water availability can drive starter intake and during the winter months this can be used to an operations advantage when a third milk feeding is not an option.
- Add an *extra* water feeding in between milk feedings during freezing temperatures and make sure the calf starter is kept fresh.
 - Water should be refilled regularly after each milk feeding as well.
- When temperatures are below freezing, offer body temperature water - even if it only stays unfrozen for an hour, it is better than not offering it at all.

❖ **4 Step Cleaning:**

- There is a tendency to cut corners on a proper cleaning protocol in the winter which will lead to a gradual build-up of pathogens in the calf environment and is often one of the main reasons we begin to see problems during the winter.
- A proper cleaning protocol for all feeding and housing equipment includes:
 - 1) Luke warm water rinse to remove organic material.
 - ◆ With housing surfaces this is the pressure washer step.
 - ◆ With feeding equipment this is a rinse to remove milk residue.
 - ◆ Using hot water during this step will cause proteins in milk or manure to stick to the surface which is a great place for bacteria to hide.
 - 2) Hot water manual scrub with Alkaline detergent.
 - ◆ Water should be at least 120⁰F/50⁰C.
 - ◆ Using gloves and a brush that can reach all areas scrub to remove the fat layer that builds up and allows pathogens such as cryptosporidium to hide or bacteria to grow.
 - ◆ This is the most important step and removes 95% of the pathogens.
 - 3) Rinse with luke warm water and then rinse with a safe disinfectant.
 - ◆ Chlorine Dioxide is a safe and effective disinfectant that can be used for feeding equipment and calf penning/housing.
 - 4) Air Dry completely before reusing.

❖ **Dishwasher - Daily washing of feeding equipment**

- *Disclaimer: a dishwasher will not do as good a job or as thorough as a dedicated person.*
- Using a dishwasher to wash calf bottles, buckets and nipples is an excellent way to standardize the washing protocol on farms where time or personnel are limited.
- Once per week (twice for residential dishwashers) thorough, manual cleaning by a person using the 4 Step Wash Protocol should also be done to reduce build-up of residue and bacteria in hard-to-reach corners.
- Feeding equipment cleanliness can be easily maintained by running through the washer after each feeding and will be ready for the next use.
- Industrial/restaurant grade dishwashers are the most thorough but regular residential dishwashers can also work.