

Baby, it's cold outside! Winter calf care essentials

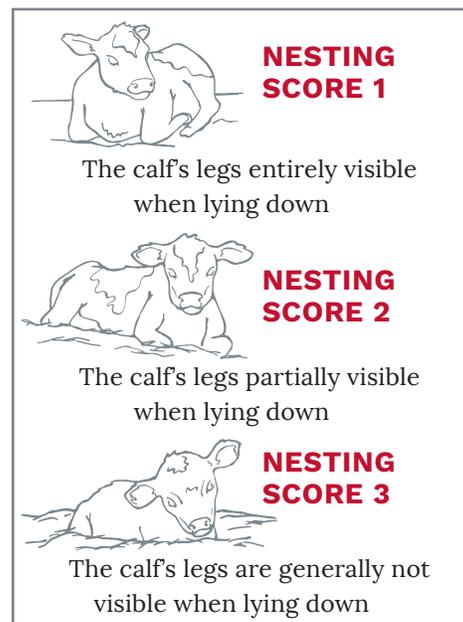
By Kathy Barrett and Jerry Bertoldo

The value of consistency, doing the little things right every day, these are always good ideas, but even more so in the current dairy climate. Cold weather calf care is a great example of how recommitting to the basics, and consistently doing things right, pays off in improved calf health and down-the-road cow productivity.

Cold weather presents its own set of challenges for calves. Calves are born lean with very little body fat. Consequently, they don't have much energy reserves to maintain their body heat when it gets cold. This also results in less energy for the immune system, which then limits the ability to fight disease. To offset these heightened demands, a calf's nutritional requirements change in the cold weather. As temperature decreases, maintenance requirements for the calf increase. Calves need more nutrients just to stay warm. Nutrients for growth and

health requirements are met only after the maintenance requirements are met. The increase in nutrient requirements can sneak up on a farmer because young calves will feel the cold before we do. Calves less than three weeks of age need extra energy to keep warm below 59°F. Calves older than three weeks need extra energy to keep warm below 42°F. Add wind and wet conditions to the mix, and the calf has to work even harder to stay warm, further increasing the nutrient requirements.

Management can mitigate the impact a dropping thermometer has on calves. If you haven't already done so talk to your nutritionist. Increasing milk volume at each feeding is a good start. As important is providing the optimal energy intake, which requires balancing both fat and carbohydrates. This is where your nutritionist comes in. They can recommend the appropriate feeding rate whether its milk or



milk replacer based on your situation. More importantly they can adjust the milk replacer and starter feed composition to compensate for the cold weather as well. Feeding calves three times a day evens out the nutrient availability to the calf. This reduces the time the calf is both cold and hungry.

WATER, THE ESSENTIAL NUTRIENT

It's obvious in the hot weather that calves need

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more water. It's not so obvious that they need more water in the winter. Cold, dry air can cause dehydration. Depending on the age of the calf, they should drink one to two gallons of water a day. Feed warm, not cold, water. Cold water causes the calf to use energy to warm the water up to their body temperature. Feeding water at 101 to 102°F is ideal, but at 80°F as-fed. This can be tough in the cold weather especially if calves are in hutches. Water can be heated to a higher temperature to allow for some cooling off by the time it gets to the calves. Of course, frozen water doesn't help anyone.

The two most common findings on a young stock necropsy are dehydration and undernutrition. Adjusting the nutritional program and feeding strategies in the cold weather helps keep calves healthy.

DRAFT FREE

Young calves are especially susceptible to drafts. It doesn't take much either. Air movement over a dry calf, less than three weeks old, at a temperature under 50°F

in excess of one mile per hour (MPH) is considered a draft. If you can feel the draft, your calves surely can too. The chilling effect of a draft is another draw on the calf's energy. If calves are in hutches, keep them well bedded and open to the south. If calves are indoors, keep them draft-free, but appropriately ventilated. You should not be able to smell ammonia in the barn.

BEDDING AND CLEANLINESS

Clean and dry is key no matter what bedding material is used. Wet calves will have to use energy to maintain body temperature. Dirt and mud increases the pathogen load a calf is exposed to at a time when its immune system may already be challenged. Disinfectants work better after dirt and organic material has been removed. Follow the label for the disinfectant. Their efficacy can be impacted by temperature, concentration used, pH of the water, water hardness and presence of organic matter.

In the winter months straw bedding is the preferred

material for calves. Straw insulates better than sawdust and other bedding choices. Dr. Ken Nordlund, UW-School of Veterinary Medicine, has done a lot of work in this area and developed a nesting score for calf beddings. The nesting score describes the amount of bedding needed to provide a calf a comfortable environment. During the cold weather a nesting score of 3 is recommended.

Whether homemade or store bought, calf jackets add another layer of insulation against the frosty weather. If calves are exposed to snow and rain, waterproof jackets are worth considering. Regardless of the style, they need to be clean, dry and washed between calves.

This article is a synopsis of the "Baby, It's Cold Outside! Winter Calf Care" webinar that is available on the Cornell CALS PRO-DAIRY website: prodairy.cornell.cals.edu. ■

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