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# Handling a Harsh Winter

**Tips to keep your herd in top shape when the weather takes a downward turn.**

by *Stephanie White*

For many, cold winter storms merit an excuse to stay indoors, avoiding exposure to the extreme outdoor conditions. For beef producers, that luxury is not an option. To keep cattle

healthy and productive through harsh winter conditions, it is vital to establish an effective management strategy.

“Herd and pasture health during the winter months is not an easy thing to

maintain,” shares Kansas State University Agriculture Extension Agent Charlene Miller. “One of the things to keep in mind as we work through a harsh winter, is also one of the primary things our cattle need anytime of the year, and that is to keep up with our cattle’s water requirements. Even though their daily intake will go down, it is still very critical for them in order to meet their daily consumption needs.

“Making sure their water tanks are open and that rivers or streams are continuously opened and water does not become stagnant in high traveled areas is very important and a good starting point when worried about herd health during the winter,” she adds.

Preparing for winter is helpful, but it is not too late to protect cattle from the harsh winter environment, despite being in the heart of winter.

## Stay within the thermoneutral zone

“Cold stress can become a problem very quickly as we move into more of the cold and critical winter months. For producers, I find it very important for them to be prepared and have proper shelter ready for our livestock,” Miller explains. “Cattle, like most animals, have a thermoneutral zone. While they are in this zone they do not have to use extra energy to keep their body temperature at a normal level. This zone is also where they perform at their best and are not too hot or too cold. Once cattle are below their zone levels, this can cause them to form cold stress.”

In healthy cattle, the thermoneutral zone is between 32 and 72 degrees Fahrenheit. Cattle exposed to temperatures below this range are considered to be below their critical temperature range. When cattle have a wet or summer coat in cold temperatures, their lower critical temperature limit exists at about 59 degrees. However, if they have a dry and heavy winter coat, their critical temperature can go as low as 18 degrees.

“Being aware of our conditions and our weather environment for our livestock will help any producer be better prepared for how they need to feed and care for their livestock,” Miller says. “A wet coat is going to have a higher critical temperature than a dry, heavy winter coat. A heavy winter coat will allow the cattle to stay at a lower temperature because the conditions are dry and their heavy coat will protect them from the cold wind.”

Both natural and manmade shelters will help appease the overall effects a severe winter can have on cattle. Miller advises cattlemen to make proper windbreaks for their herds.

“Protecting our cattle from these conditions is a great step in helping them maintain and regulate their



PHOTO BY STEPHANIE WHITE

Cattle with a dry and heavy winter coat have a critical temperature as low as 18 degrees Fahrenheit, compared to 59 degrees with a wet, thin coat.

## Estimated lower critical temperatures for beef cattle

Coat description	Critical temperature
Wet or summer coat	59°F
Dry fall coat	45°F
Dry winter coat	32°F
Dry heavy winter coat	18°F



PHOTO BY KYSON SMITH

Creating different feeding areas in the pasture can aid in alleviating the issues associated with dirty feeding conditions.

body temperature. Some pastures have natural windbreaks where cattle can seek shelter. However, not every pasture will have adequate amounts for either the amount of cattle in the field or dry space. Creating a manmade windbreak for them to get through the winter months can help with your cattle saving energy. Which, in return, will help them use this stored energy in other ways, like nursing a calf or gaining weight.”

### Implement a feeding strategy

There is no need to adjust mineral or protein levels because of changes in the weather, but keeping a sufficient ration is critical.

“Energy requirements are important when critical temperatures are reached,” she says. “It is vital to provide enough energy and sources of food to keep the animal comfortable and healthy through these conditions. A good rule of thumb is that you need to increase energy requirements or to go up as the temperatures go down. For each degree below the critical temperature for their coat condition and weather condition, you have to increase the energy ration by one percent.”

Even though it is important to adjust diets by increasing energy levels, Miller says to proceed with caution when adjusting those levels.

“Whether it is through winter months or anytime of the year, you do not want to make a drastic change to any livestock’s

diet. A gradual change — changing it little by little each day — is the best bet for transitioning to the ration that you are needing to be at,” she advises. “The energy requirements are really what goes up for livestock during the winter months, not so much the protein but the energy to keep them comfortable and functioning at their best rates.”

Miller suggests taking advantage of your state’s Extension agents and the tools they have available. There are many great recourses that exist to help producers figure out exactly what they need to be feeding their cattle. Extension professionals can help ranchers and cattle producers determine the optimal ration for their herd during any time of year, particularly during the winter months. This can be done to suit each individual herd — and individual animal — depending on body scores and a producer’s overall operational goals during the winter months.

The timing of each feeding should also be addressed in your feeding strategy. Even though feeding strategies should be made to suit each herd, many producers tend to feed toward the evening. “Feeding in the evening, especially when calving, is a great way to encourage cows to calve during the day,” Miller notes. “Research shows that [higher percentages] of cattle tend to calve during the day if they are fed at a later time. This not only helps the producer when it comes to checking on cattle, but encourages cows to calve during a warmer part of the day, when hopefully the sun is out.”

Moving and creating different feeding areas in the pasture can help alleviate issues associated with dirty feeding conditions. This way cattle are not constantly standing in mud, reducing the potential for hoof issues. As cows start calving, newborns and older calves have a higher chance of getting scours and contracting other health issues if they are constantly in an area with a high amount of manure and

stagnate water or mud.

“Another option, which is a great one for areas that see lots of snow, is clearing or pushing snow off the ground. If you have a tractor that has a snow blade or a bucket, using it in your pasture during the winter is great,” Miller says. “Put out dry bedding in the cleared area, such as large amounts of straw or corn stalk bales, which work great for bedding this time of the year. Having a dry base for your cattle to lie on will help reduce stress and help them maintain a dry coat, keeping them from having to shiver and use needed energy.”

### Adjust accordingly

Miller encourages keeping a regular schedule when checking on your herd. “Keeping an eye on your herd and checking them regularly will help you notice negative changes in their attitude, appearance and needs,” she explains. “We can visually see that cattle are cold if they are standing bunched up, or huddled in a group. This probably means that they are needing a better windbreak.”

Concerns should arise over individual cattle that do not want to join the rest of the herd at the hay ring or that become standoffish. “If this is the case, I would not so much become concerned about the entire herd, but be looking at that individual’s health requirements,” Miller notes.

Miller concludes that when it comes to winter and livestock, there really is not a one-stop shop or answer on how to feed, ration or shelter cattle. It all depends on the overall condition of the herd, the weather breaks that become available and, of course, the type of weather affecting your area.

“Temperature fluctuations are the hardest situations for both producers and cattle to deal with,” she says. “If it would be cold and stay cold, it is a lot easier for our cattle to adjust to that temperature over time. The warm days and then the cold days with or without snow and the back and forth is not easy to manage and puts severe stress on our animals.” **HW**

Increased maintenance energy cost for cattle per degree Fahrenheit coldness				
	Cow weight (pounds)			
	1,000	1,100	1,200	1,300
Coat description	Percentage increase per degree coldness			
Summer coat or wet	2.0	2.0	1.9	1.9
Fall coat	1.4	1.3	1.3	1.3
Winter coat	1.1	1.0	1.0	1.0
Heavy winter coat	0.7	0.7	0.6	0.6

Ames, Kansas State University.