

VETERINARY CALL

by Bob Larson, Kansas State University

Preparing for Winter Calving

In colder months, producers must be ready to care for new calves.

Some areas of the United States do not have to worry about cold weather when taking care of newborn calves, but spring-calving herds in most of the country must consider the risk of moderately to extremely cold temperatures. Because calves are born wet, have thin skin and have very little body fat, they lose body heat very rapidly and can quickly become severely cold stressed. Contact with snow or wet ground will increase the amount of time a calf stays wet and in danger.

Calves are born with a body temperature of about 100° F. When exposed to cold, heat is generated by brown fat that surrounds the kidneys and by shivering. Calves can conserve heat by reducing blood flow to the body surface and extremities (feet, ears, etc.).

Severe cold stress occurs when the body temperature drops below 94°. At this temperature, the brain and other organs are affected, and the calf becomes depressed, unable to rise, unwilling to suckle and will temporarily lose the ability to shiver. The good news is that if the calf can be warmed up and its body temperature can begin to rise, the shivering response will return and the core body temperature will slowly increase.

During periods of cold or wet weather, newborn calves (less than one to two days of age) should be checked every few hours with a thermometer, and any calf with a below-normal temperature, even if it appears okay, should be warmed.


Calves suffering from cold stress must be warmed so that body temperature can rise above 100°. If body temperature has not dropped too far, putting the calf in the cab of a pickup and out of the wind, rain or snow will warm the calf.

In more severe cases, calves can be placed in specially designed warming boxes or near a heat source such as an electric blanket, heat lamp or hot water bottles. To avoid skin burns, the heat source should not exceed 108°. In addition to an external heat source, cold-stressed calves should be fed warm colostrum, milk or electrolyte fluid with an energy source using an esophageal feeder.

Prevention of cold stress involves management to ensure calves can be born with no or minimal assistance, so both the calf and dam can stand shortly after calving to begin suckling. Calving difficulties are minimized by proper heifer development, proper bull selection for calving ease, and proper nutrition so heifers and cows calve in a body

condition score (BCS) of 5 to 6 on a 9-point scale. Cows with large teats or that are not attentive mothers should be culled.

Use of pasture as the primary forage source during calving encourages cows to keep spread apart and minimizes development of muddy areas. If supplemental hay is fed during calving, I suggest bales be unrolled and the feeding area changed with each feeding. Unrolled bales will have greater hay waste but reduced chance for mud caused by concentrating the herd into small feeding areas. Unrolled hay also provides bedding for newborn calves so they are not in direct contact with the ground.

By planning for cold weather, ranchers can avoid being caught off-guard by extreme events and can manage the typical weather conditions. 

Editor's note: Robert L. Larson is a professor of production medicine and executive director of Veterinary Medicine Continuing Education at Kansas State University.