

# Feeding Cows During Cold Weather

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**M**any cow/calf producers are not aware that cold weather brings added nutritional needs for cattle. Or, if they recognize that their cattle are stressed, they aren't sure how – or what – they should do to offset it.

Cold stress occurs when animals are exposed to weather conditions which put them below their lower critical temperature. For cattle with a dry winter coat, the lower critical temperature is 32 F. If the coat is extra heavy, that number drops to 18 F. If the normal coat is wet, however, the lower critical temperature may become 60 F.

When the environment results in an effective temperature below the animal's lower critical temperature, the animal must increase heat production to maintain a constant body temperature. To produce more heat, the animal either must receive an increase in energy from the ration or draw on body stores.

To compensate for the energy deficit created by the cold stress, follow this rule of thumb: Increase the amount of feed 1 percent for each degree of cold stress. If a wind chill is present, use that temperature.

Keeping hay in front of cattle will not take care of the problem. If the hay is good (cut before it matured and baled before it was rained on), cattle will probably make it through cold weather

in good condition. If hay quality is poor, the cattle may be in trouble. A 1,200 pound cow, in good body condition, needs a ration that has a minimum total digestible nutrient (TDN) value of 50 percent and crude protein (CP) value of 8 percent under neutral environmental conditions. The TDN value is often used to indicate the energy level of a feed. Concentrates have higher TDN values than forages, but do not generate as much heat. In comparison, shelled corn has a TDN of 90 percent and soybean hulls, 80 percent. If hay falls below the 50 percent TDN minimum, producers should consider supplementing with an energy-dense feed.

If protein levels are too low, rumen microbes cannot efficiently digest fiber. In that case, adding supplemental protein can increase hay consumption and digestion. High-protein feedstuffs include soybean meal (49 percent CP), cottonseed meal (41 percent CP) and corn gluten feed (19 percent CP). If both energy and protein are low, the supplement should contain a balance of both.

Provide some type of shelter such as woods, hills or buildings to protect cattle from winds. Reduce mud in and around feeding areas. Cold mud on cattle draws on their energy stores and body temperature, especially in young calves. Monitor weather reports and make adjustments in feeding 2 to 3 days before the weather front hits the area. Δ

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