

Cold Temperatures and Cattle

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Since climatic conditions seem to be a hot topic, it may be a good time to review how these environmental issues affect the livestock we care for. The [National Weather Service website](#) has a calculator you can use to determine the wind chill factor for you, but how about your animals.

From information compiled by Roger Brownson and Dr. David Ames for the Cattle Producers Library, publication CL760, the effect of temperature on a specific group of animals may vary depending on species, breed, diet, hair coat, and management system. One result will remain the same – animals exposed to cold will have reduced gain and lowered efficiencies!

Data also shows that the estimated critical low temperature for cattle can change as much as 41 °F (60 to 19°F) in one year depending on season, hair coat, etc. – and that is just for maintenance! As the temperature drops below the animal's critical temperature, the nutrient level needs to increase. Gain may drop by at least one pound per day and feed efficiency may change by as much as 5.5 pounds. In other words, if the animal requires 8.2 pounds of feed per pound of gain on a 32 °F day, that animal would require 13.7 pounds of feed per pound of gain on a day that is -13 °F and still will probably be gaining less because more of the feed is going into maintaining the body. Especially for the energy requirements, there comes a point when the animal simply cannot eat enough to cover the increased nutrient level needed.

Some suggestions to help with cold stress include: providing shelter to reduce wind, moisture, and mud, use topography (i.e. – south facing slopes) in the construction of facilities, and provide bedding during extended periods of cold weather. Intermittent exposure is better than continuous exposure.

Source: Roger Brownson and David Ames. 2006. Winter Stress in Beef Cattle. Western Beef Resource Committee, Cattle Producer's Library, CL 760.