

Ask A Vet: Real Guidelines for Animals in Cold Weather

Sunday, January 11, 2015

Dear Dr. Weldy's,

Lately there is so much in the news about animals out in this cold weather we are currently having. Are there any specific guidelines for livestock and pets that are outside in this winter weather?

-Freezing in Foraker

Dear Reader,

Timely question indeed! As I write this it is -7 F and the wind is blowing - wind chill in the -30s! There are variables that influence the ability of animals to withstand wintertime temperatures. Temperature, moisture, and wind on the weather side and type of animal, body condition, nutrition, and hair coat on the critter side.

For specific guidelines I will use examples from some real cold weather experts. Advice on cattle is from North Dakota State University beef cattle specialist Carl Dahlen. The horse guidelines come from University of Minnesota Extension specialists Marcia Hathaway and Krishona Martinson. The pet guidelines are from sled dog veterinarian Dr. Sophia Yin.

Today on my rounds my patients varied from furry horses and cattle out in the wind and snow that were quite satisfied to be in the winter weather to sleek fine coated show horses in a heated barn. My last call tonight was a sow having pigging problems in a toasty 80 degree farrowing barn. When I got home I greeted my own dogs in their heated dog house. The Jack Russell terriers were inside and my Labrador was happily orbiting around the dog yard rolling in the snow. I marvel as I drive by my farm and notice my horses out in the snow covered pasture in the below 0 wind chill by choice when they could be in the barn munching on their hay and drinking their heated water. I do admit that they look a bit like woolly mammoths - they are trail horses, not show horses and as the days get shorter their hair coats prepare for winter. Today's examples illustrate the great diversity between species of animals and types of animals within the species in coping with cold weather.

According to North Dakotan Carl Dahlen feeding cattle an energy dense high quality nutrients help cattle cope with extreme cold weather. The combination of cold, wind, and moisture can be deadly when poor nutrition and inadequate shelter are involved. I grew up on a cattle ranch in eastern Colorado where the winter wind was endless and the snow was powdery and dry. On our remote pastures there were no barns but every pasture had a windbreak the cattle could get behind in a blizzard. We fed them well during the storms and the dry snow built up on their hair coats but did not wet their skin and they coped well in the - 30 degree temps that sometimes occurred. According to the studies from North Dakota the critical temperature for cattle is around 18 degrees, colder than that the nutritional energy demands increase in order for them to maintain their body temperature. If they get wet all the way to the skin this critical

temperature is 59 degrees! High energy nutrition, bedding, and shelter are a must in wet extreme cold wet weather.

According to the Minnesota study horses, like my own, prefer and are better off outdoors if given the opportunity to acclimate to cold weather. Their studies found that in horses with a winter coat the critical temperature for increased energy demands is 18 degrees and 41 degrees if they have a summer hair coat. Energy maintenance increased 1% for each degree below 18 degrees F. Accordingly at 0 degrees a horse needs about 2 additional pounds of quality high energy forage to maintain body temperature. Access to fresh water is vital - we treat dehydration colic in horses frequently because their water sources freeze. Studies show that when water is warmed above freezing during cold weather they drink 40% more. Loose salt available free choice stimulates increased water intake and is necessary year round.

As you can imagine the diversity of the canine species puts them all over the map in their ability to cope with winter weather. Dr. Yin states that dogs bred for and raised in cold climates do amazingly well in the extreme cold. That's hard to imagine for people who think 32 degrees is extreme cold! Think of the difference of a toy breed that shivers in a cool breeze to a sled dog that sleeps in the snow curled up with their tails covering their nose. Of course having shelter, a dry hair coat, and high fat high energy food makes all the difference for dog in the extreme cold just as it does for livestock.

Hope this answers your question - Let It Snow!

-Dr. Jerry Sellon