

Week of December 5th-9th 2016

POST ROCK EXTENSION ANSWERS

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K-State Research and Extension

According to the weatherman, our first blast of arctic temperatures will be arriving this week. Cold temperatures, wet conditions and wind all cause a tremendous demand on the bodies of livestock for heat production. To combat this demand, some management adjustments must be made. Is your operation prepared for the cold?

What nutritional adjustments should I make for my livestock during the extreme cold?

A bodily response to cold stress in cattle and other species of livestock is an increase in dry matter intake. Livestock perform optimally in the thermo-neutral zone where temperatures are neither too cold nor too hot. The amount of natural insulation on the animal influences their lower critical temperature (temperature at which performance is affected by environment). Research done at Kansas State University showed that beef cattle with a dry winter coat have a lower critical temperature of 32°F. Cattle with a dry heavy winter coat have a lower critical temperature of 18°F. The general rule of thumb is to increase the winter rations energy one percent for each degree below the lower critical temperature. This includes the wind chill factor. Provide the added energy through feeding more hay, not grains. The only adjustment in cow rations caused by weather is to increase maintenance energy. Protein, mineral and vitamin requirements are not changed by weather stress.

Horses are no different. The estimated lower critical temperature for a horse in moderate body condition with a heavy hair coat is 30°F. The one percent rule applies the same for horses as it does in cattle. For example a horse with a heavy hair coat (lower critical temperature 30°F) in an environment where the wind chill is 20°F would result in the horse having an increased energy requirement of ten percent. Meaning a 1,000 lb. horse normally consuming approximately 15 lbs of hay per day should now consume around 17 lbs of hay to maintain body condition.

It is important to make sure horses have access to warm drinking water. Why warm water? As temperatures drop, so does the water consumption of the horse. Despite the cold weather horses still need to consume 8-12 gallons a day. It is recommended that the water source maintain a temperature between 45 and 65°F. Water colder than 45°F will reduce consumption even more. According to a news release from Texas A&Ms Veterinary Medicine school, “Insufficient water intake can result in dehydration and decreased blood volume (resulting in fewer nutrients to cells and decreased efficiency of waste removal). When water intake is decreased, your horse has an

increased chance that its intestines may become impacted and colic.” Bottom line, horses are eating more hay and drinking less water increasing the risk of colic, so make sure your horse is provided quality warm water, to ensure the constant intake of water, reducing this risk.

Animals are able to adapt to a wide variety of environments. It is our duty as caretakers for these animals, livestock and pets, to make this adaptation process easier, ensuring optimum health and performance from the animal. Be sure to make the proper nutritional adjustments when the next cold weather snap arrives.

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