

Winter Always Brings Cold and Questions

Do Woolly Bear Caterpillars forecast winter weather?



According to legend, the wider that middle brown section is (i.e., the more brown segments there are), the milder the coming winter will be. Conversely, a narrow brown band is said to predict a harsh winter. If this is true, we are in for a long winter, as most of these woolly creatures I have witnessed have a very narrow brown band and some have been completely black. Is your horse prepared for the cold days?

The Omaha area has an average high temperature of 35 degrees and an average low temperature of 16 degrees for December, January and March. These are average air temperatures not including wind chill or the effects of moisture. How does your horse cope with these elements? What can be done to minimize this stress? The following will provide some winter tips to help understand your horse's natural ability to cope and things you can do to help thwart problems.

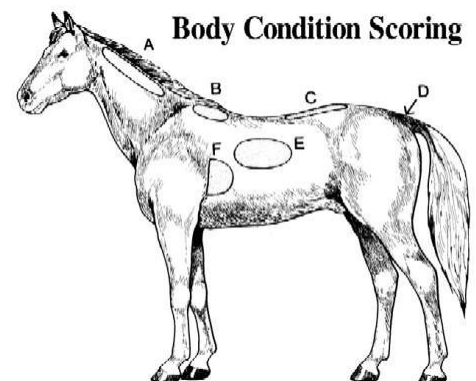
Energy Requirements

Establishing a body condition score for your horse at the start of winter will provide a marker to gauge whether your horse is maintaining its weight through the winter months. This score will range from 1 to 9 (1 is emaciated and 9 is obese). The goal would be to maintain a score from 4 to 6. Each number represents approximately 50 pounds of body weight. The following websites provide pictures and guidelines on how to give accurate body condition scores:

<http://www.thehorse.com/pdf/nutrition/bcs-poster.pdf>

<http://purinamills.com/animal-nutrition-information/articles/horses/body-condition-scoring/>

As cold weather sets in the horse has to maintain a normal core body temperature to survive. This is accomplished by producing heat either generated from a feed source or by consuming body fat stores. If the nutrition is insufficient then the horse will lose weight and body mass. Thus, we must feed the horse an appropriate feed and an appropriate amount to maintain its weight. When the temperature plunges, the horse has to work harder to maintain its core body temperature. This is especially true in thin horses that lack an insulating layer of fat. To avoid losing weight, horses must increase their caloric intake roughly 15-20 percent for every 10-degree drop in temperature below 30 degrees Fahrenheit.



Contrary to popular belief, its hay, not grain, that is the best choices for helping a horse generate body heat. Forages are digested in the large intestine by bacterial fermentation, a process that generates heat and raises the

horse's core body temperature. Grain, which is digested in the stomach and small intestine, creates much less heat. So, the key is to provide plenty of good-quality hay during very cold weather, free choice, if possible.

Water Requirements

Another crucial consideration during the winter months is the horse's water intake. The incidence of impaction (constipation) colic significantly increases during the coldest months and is often due to inadequate water intake and lack of exercise. A horse cannot meet its daily water requirements by eating snow. Not only does snow not provide enough water, it requires more energy to consume, and can chill old or debilitating horses. Although a horse's water consumption varies depending on temperature, diet and exercise, an average 1000-pound horse requires at least 10 gallons of water each day for maintenance.



Unfortunately, during cold weather, many horses fail to drink enough because the water is too cold and it chills them. Recent research has demonstrated that horses will drink more water during cold weather if the water is warmed to fall between 45°F and 65°F. There are several mechanical and electrical devices on the market that will keep tanks or buckets ice-free. However, if an electrical device is used, ensure that the horse does not have access to the electrical cords because curious horses can chew through the cords and electrocute themselves.

Shelter

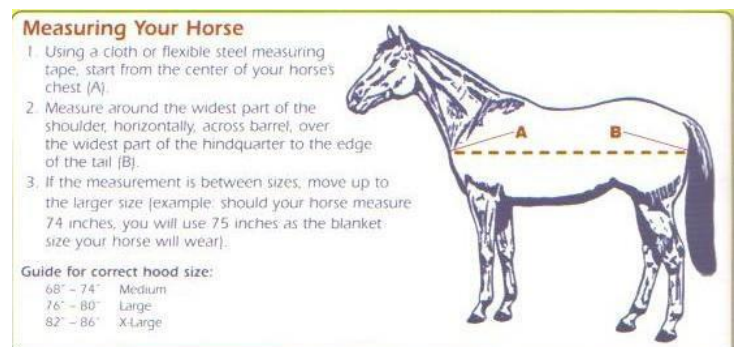
Horses should have access to shelter from wind, sleet, and storms. Free access to a stable or an open-sided shed works well, as do trees if a building is not available. In the absence of wind and moisture, horses tolerate temperatures at or slightly below 0°F. If horses have access to a shelter, they can tolerate temperatures as low as -40°F. However, horses are most comfortable at temperatures between 18 and 59°F, depending on their hair coat. A general rule of thumb for run-in or open-front shed size is 240 square feet for 2 horses (i.e. 12 x 20 feet) and 60 square feet (i.e. an additional 10 x 6 feet) for each additional horse. These recommendations assume horses housed together get along well.

Blanketing

The hair coat acts as insulation by trapping air. If the hair is wet or full of mud, air is excluded, reducing its insulating value and increasing heat loss. As little as 0.1 inch of rain can cause cold stress by matting the hair and reducing its insulating value. It is important to keep the horse dry and sheltered from moisture. As expected, a horse with a thicker hair coat can retain more heat. Research has been conducted on the benefits of blanketing a horse to reduce the effects of cold weather. Most horses are blanketed because of personal beliefs of the owner. However, blanketing a horse is necessary to reduce the effects of cold or inclement weather when:

- There is no shelter available during turnout periods and the temperatures drop below 5°F, or the wind chill is below 5°F
- There is a chance the horse will become wet (not usually a problem with snow, but much more of a problem with rain, ice, and/or freezing rain)
- The horse has had its winter coat clipped
- The horse is very young or very old
- The horse has not been acclimated to the cold (i.e. recently relocated from a southern climate)
- The horse has a body condition score of 3 or less

It is equally important that the blanket fits the horse. Horses can develop rub marks or sores where the straps secure the blanket if it fits improperly. If the horse is



blanketed continuously, the blanket should be removed daily, inspected for damages, and repositioned. Make sure blankets are kept dry and do not put a blanket on a wet horse; wait until the horse is dry before blanketing. Keep in mind a horse will continue to develop a natural winter coat until December 22, while days are becoming shorter. Horses begin to lose their winter coat, and start forming their summer coat, as the days begin to get longer on December 23. Blanketing before December 22 will decrease a horse's natural winter coat.

Hoof care

Horse hooves generally grow more slowly in the winter. However, horses should still be trimmed every six to twelve weeks. The trimming or shoeing interval depends on each horse and the amount of hoof they grow. Horse hooves are very susceptible to developing "ice or snowballs" in their hooves during the winter. These balls are compacted ice or snow that make it difficult for the horse to walk, increase the chance of slipping and falls, and may put increased pressure on tendons and joints. Hooves should be picked clean daily, especially after a heavy snow.

Horses have better traction on snow and ice when left bare foot compared to being shod. If the horse must be shod, care should be taken to avoid slipping and compaction of snow and ice in the hoof. Snow pads and studs that are attached to shoes can be used to help offset the effects of slipping and snow compaction in the hoof. Sole bruising can also be a problem in the winter, especially when working on uneven or frozen ground.



Conclusions

During winter months, horses should be given warmed water (45 to 65°F), fed additional hay during extreme cold, given access to shelter, receive regular hoof care, and have their body condition assessed regularly. Facility stability and ventilation should also be evaluated frequently. Horses, given the opportunity to acclimate to cold temperature, often prefer and are better off outdoors.