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Feeding Horses in the Winter

Rebecca Bott, Extension equine specialist

HOW MUCH SHOULD I FEED MY HORSE?

On average, a mature horse will need to consume between 1.5 and 2% of dry feed based on their total body weight each day. For a 1,200-pound horse, this means that they would be eating roughly 24 pounds (1,200 pounds x .02) of dry feed daily. Let's assume that properly handled hays and grains are 90% dry material; this means that 10% is in the form of water, rather than dry nutrients. We would need to add 10% to the total amount fed to our horse, meaning the average 1,200-pound horse will eat approximately 26–27 pounds of feed each day. The majority of this feed should be high-quality grass hay or alfalfa/grass mix. High-quality hay should typically be green in color, contain many of leaves, and should not smell musty. However, these characteristics are simply guidelines. To accurately assess the quality of your hay, the hay must be analyzed in a laboratory. Contact your local county Extension office for assistance submitting a hay sample for analysis.

The 26–27 pounds of feed should be comprised primarily of high-quality forage. Unlimited access to fresh, clean water is essential. Salt and mineral blocks may be offered to your horses as well. Check the labels on mineral blocks to ensure they are safe to be consumed by horses. Grain and other concentrates may be added to the horse's diet for extra sources of energy as needed. It is important to remember that a horse should consume more pounds of forage than grain each day.

This calculation is an estimate or a starting point to providing proper nutrition for your horses. Several factors may contribute to your horse needing more or less food. Young, growing horses; mares that are preg-

nant or lactating; stallions; or horses that are working and performing will likely need additional feed added to this base diet to meet their nutritional requirements. Another factor that will increase the amount of feed a horse requires is cold climates. As the temperature decreases, the horse will lose energy in the form of heat. This energy will need to be made up in the form of extra feed.

FEEDING IN THE WINTER

The energy requirements of a horse start to increase once the temperature decreases below the horse's lower critical temperature (LCT). Just like people, each horse is individual and will vary in their ability to handle cold weather. The LCT for a horse can range from 5 to 41 degrees F, depending on age, health, and condition. To make matters simple, let's assume that most horses will begin to be affected by the temperature when it drops below 32 degrees F, including adjustments for the wind chill factor.

So what does this mean when feeding a horse? For every 10 degrees F the temperature drops below 32 degrees F, you will need to feed your horse an additional 2.75 pounds of high-quality hay or .66 pounds grain concentrate. This doesn't mean that you will be adjusting the ration each day. Horses do not respond well to rapid changes in the diet. In order to prevent digestive upset, think of this as long-term changes in feeding practices to adapt to the cold over time. This will help to prevent digestive problems in your horse, while slowly increasing the amount of feed to help them weather the cold. Calculate the average expected temperatures for the next week or two and target a feeding regime for that temperature.

Forages are more fibrous than grains and therefore produce more heat when digested, and the horse is heated from the inside out. In order to maintain this internal “furnace” optimally, it is best to provide your horse access to forage throughout the day. Alternatively, grains may be added to the diet. While corn has more energy than oats, oats has more fiber that can be used by bacteria living in the horse’s digestive tract to produce heat internally.

Example 1: Feeding an All-forage Diet. Let’s say the temperature including wind chill is 2 degrees F. Our same 1,200-pound horse that was consuming 26–27 pounds of feed during the summer and fall will need to eat 34–35 (original 26–27 pounds plus 2.75 pounds extra hay for every 10 degrees F below 32 degrees F) pounds each day. If the temperature decreases further to -18 degrees F, the horse will need to consume the original 26–27 pounds of feed each day, plus 2.75×5 , for a total of 39–40 pounds of forage each day. Alternatively, rather than weigh the extra pounds, you could maintain sufficient quantities of hay in the bunk to allow your horses to consume as much as they want.

Example 2: Feeding Forage and Concentrates. Consider the same 1,200-pound horse that was consuming 26–27 pounds of hay during the summer and fall. If the temperature including wind chill is 2 degrees F, then you could substitute .66 pounds of grain for every 10 degrees below 32, or approximately 2 pounds of grain each day. Grains such as oats or sweet feed commonly fed to horses contain a lot of energy that will help the horse tolerate the cold. You always want the majority of a horse diet to be comprised of quality roughage or forage, using grain as a supplement to meet nutrient requirements. As always, it is important to adjust a horse to a new feed slowly over a period of 2 weeks. Give them a smaller portion of the feed for the first few days and slowly increase the amount fed so that you have achieved your goal by the end of 2 weeks. When grain feeding horses, you should ideally split the grain meals into more than one feeding each day. In this example you can feed half, or 1 pound, of grain in the morning meal and 1

pound with the evening meal. This will prevent digestive upset due to grain overload in one feeding. Feeding 2 pounds of grain to a 1,200-pound horse probably doesn’t warrant such meticulous feeding practices; however, it is best to adapt these ideal feeding practices as habit in any situation.

If the forecast reveals an expected drop in temperature to -28 degrees F, you don’t necessarily need to recalculate the amount of grain to feed. It may be easier, and likely more affordable, to adjust for the upcoming decrease in temperature by supplementing with additional hay to help your horse survive the cold.

These calculations are a starting point to help you estimate the groceries required to keep your horse in good condition throughout the winter. Every horse is different, needing a little more or a little less feed than the next. Don’t let the fuzzy winter coats allow you to think your horse is maintaining a good body condition. Under that winter coat, one horse might be maintaining good body condition from the added feed, while the next may be losing weight. It is important to check regularly for changes in body condition and to adjust accordingly. When it comes to maintaining weight in the winter, it is very difficult to play catch-up if the horses are losing weight. Check them often, increasing feed as needed to maintain good body condition.

If the horses are wet due to rain or snow during the cold, heat loss will increase and they will need to consume more feed. Young and old horses, and other “hard keepers,” may need further feed supplementation or protection from the elements. Fat is a good source of energy that can provide heat for a horse. Older horses and horses with poor dentition may not be able to eat high volumes or large quantities of forages and can be fed complete feeds or fats to meet their energy demands.

THE IMPORTANCE OF WATER

It is critical to remember the importance of water consumption, even during the winter months. As a horse increases the amount of feed they eat in a given day, they need to drink ample water (10 gallons minimum each day) to help them digest the food. If water sources are frozen over, or if they are cold enough to

deter a horse from drinking, the food can impact in the digestive tract, causing serious potentials problems such as colic. Routinely breaking ice from the tops of water sources, or heating water to temperatures from 36–50 degrees F, will encourage horses to continue drinking.

ADDITIONAL IDEAS FOR WEATHERING THE WINTER

There are several methods in addition to adjusting the diet of a horse to keep them comfortable during the cold winter months. Shelters and windbreaks provide protection from at least some of the elements and can go a long way in helping your horse cope with the cold. Blanketing is another option to help provide warmth. When blanketing, it is important both to chose a blanket that is waterproof and fits correctly and to ensure that rain and snow are not getting underneath.

SUMMARY

Proper feeding management and nutrition are as important as ever during the winter months. Remember that your horse's needs will increase in order to maintain body condition through the cold. It is easier to maintain body condition than to try to catch up if horses loses weight, so check them regularly to make sure they are maintaining proper weight. Always provide your horses with high-quality hay and fresh water and supplement with extra hay, grain, or salt and minerals as necessary.

For more information, contact Extension Equine Specialist Rebecca Bott at rebecca.bott@sdstate.edu.



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