

Horse Express



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Winter Horse Feeding

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Most horse owners think of feeding hay and grain in winter. The horse's unique digestive tract is designed to utilize large amounts of forage: pasture and hay. Pasture is the horse's major natural feed. Man added grains to the horse's diet. Owners should base winter feeding programs on forages, including pasture.

Winter Preparation. Horses should be prepared before winter. Idle pleasure horses and pregnant mares should have a BCS of 5.5-7.5. Moderate to intense performance horses should be 5-5.5. Weanlings, yearlings and two-year-olds should be 5.5-6.5 and grow naturally without getting fat. Large, fat young horses have more feet and leg problems.

Horses should be dewormed from September 1 to March 1 in the Southeast. Properly dewormed horses are healthier, and the winter feeding program will be more effective.

Check and float teeth, if needed, before winter feeding in older horses or any horse showing a tooth problem. Sharp edges develop on the outside of the upper and inside of the lower jaw teeth, cutting the cheeks and tongue. Floating the teeth improves a horse's ability to chew.

Winter Pasture. Even when brown, winter pasture provides a level of energy, protein, minerals and vitamins. If several horses graze a small pasture in winter, its nutritional value will be limited. Nutrient intake will be considerable if one or a few horses graze several acres of winter pasture. Do not graze winter pastures below 2-3 inches' height.

In winter feeding 2 percent of body weight as a good-quality grass hay meets most of a mature, idle horse's nutritional needs. The quality and quantity of winter pasture will determine the amount of hay to feed. Winter pasture may be equivalent to feeding 0.5-1.25 percent of

body weight as hay. With adequate winter pasture, one needs to feed only 0.75-1.5 pounds of good-quality grass hay per 100 pounds of body weight. Virginia Polytechnic Institute (VPI) data showed that horses consumed 9-16 pounds of dry matter grazing winter fescue pasture, which is the same as feeding 10-18 pounds of fescue hay daily. A 1,200-pound horse needs 24 pounds of grass hay. If the pasture provides the equivalent of 0.83-1.5 pounds of hay per 100 pounds of body weight, the horse needs 0.5-1.2 pounds of hay per 100 pounds of body weight or 6-14 pounds of hay daily.

Owners can increase available winter pasture. One management practice is to stockpile fescue and reduce the amount of hay fed in winter. Stockpiled fescue grazed in January was superior to late spring and summer fescue. Around Labor Day, apply 50-60 pounds of nitrogen per acre. After fertilization, keep horses off the pasture until after a good rain and until Thanksgiving. Horses can graze stockpiled fescue from Thanksgiving to mid-January or maybe even later. One must have adequate pasture to stockpile.

Horses can limit-graze stockpiled fescue pastures for short periods of time before Thanksgiving if the fescue is 6 inches tall. Horses stalled at night can graze stockpiled fescue for a couple of hours before or after grazing non-stockpiled pasture or being in a dry lot.

Endophyte-infected fescue pasture or hay causes reproductive problems in late-pregnant mares. Pregnant broodmares should not graze endophyte infected fescue pastures or be fed endophyte infected fescue hay from 300 days of pregnancy until they are 40 days pregnant after being rebred.

Winter annuals can be used as horse pasture. Horses preferred annual ryegrass, oats and wheat over rye and

triticale (rye-wheat). Their growing season is November to December and February to April/May. Three-year-olds gained 2.2 pounds per day on winter wheat pasture. Yearlings and two-year-olds gained 1.1 and 1.3 pounds, respectively, while making good wither and hip height growth. Winter legumes can also be used in winter pastures. Yearlings readily ate crimson, berseem and subterranean clovers but did not like arrowleaf clovers.

Winter annuals can be established as a pure stand in a seedbed or overseeded in permanent pastures. Overseeding will not produce as much winter pasture. Owners with several horses and several acres of pasture can maximize winter pasture using both stockpiled fescue pasture and winter annuals.

VPI has shown that horse pastures in Virginia were marginal or deficient in copper, zinc and selenium throughout the year and in phosphorus and vitamin A in the winter. If pastures have these deficiencies, hay grown in the area would also be deficient.

Weanlings, but not mares, fed an all-forage diet of pasture and hay were phosphorus depleted based on blood serum analysis. Weanlings on pasture that were fed a concentrate with phosphorus had adequate serum phosphorus levels.

Copper is important in proper cross-linking of collagen that is formed into bone. Low dietary copper levels have been associated with osteochondrosis (bone problems) in foals. Copper supplementation of pregnant mares may reduce the risk of skeletal abnormalities in foals. Some beef cattle pastures in Tennessee have been found to be copper deficient.

Weaning is stressful, affecting feed intake, metabolism and immune function. Serum zinc was lower in foals on pasture and hay compared to foals fed supplemental feed. Foals on pasture that were fed a creep feed coped better with weaning than foals not fed a creep feed.

Mares and foals fed only pasture and hay had low selenium levels, but they did not show clinical signs of selenium deficiency. Blood levels of selenium were maintained when a concentrate with selenium was fed. Weanlings not supplemented with selenium had more severe cases of equine herpes virus type 4 infections (Rhinopneumonitis, snotty noses).

Blood levels of carotene and vitamin A decrease in late winter and in late summer when cool season forages are not as productive. Supplementing vitamin A to depleted mares reduced the occurrence of retained placentas and leg deformities of foals and increased foal birth weights.

Feeding extra vitamin E has improved the immunoglobulins in mares' colostrum and aided foals in acquiring passive immunity.

Feeding a high-fiber, high-fat ration to horses on pasture produced better results than feeding a typical "sweet feed" or high-sugar, high-starch feed.

Body Weight and Body Condition Score. Owners must know a horse's weight to feed it properly. Feed recommendations are based on body weight — so many pounds of hay and/or grain per 100 pounds of body

weight. The most accurate method of determining a horse's weight is to weigh it. Weight tapes give a reasonable estimate. One can determine a horse's weight by measuring its heart girth and length from point of the shoulder to point of the buttock in inches and then using this formula:

$$\text{Body weight} = \frac{\text{heart girth} \times \text{heart girth} \times \text{length}}{330}$$

The formula gives results similar to a weight tape. Visual estimates are not as accurate. Horse owners, including veterinarians, visually underestimated weight by 186 pounds per horse.

Body condition score (BCS) can aid in determining the adequacy of a winter feeding program. BCS is a visual, hands-on method for measuring body fat. Horses are rated from 1-9 with 1 being emaciated and 9 obese. Pleasure horses should have a BCS of 5.5 to 7.5 in winter.

BCS should be checked every 30 days to monitor a winter feeding program. If a horse on pasture and fed hay had a BCS of 6 and a month later still is a BCS of 6, it is getting adequate energy from the winter pasture and hay. If the horse has a BCS of 5.5 after a month, the owner needs to increase the amount of hay or feed a small amount of grain. This system works best with several horses.

Feeding Hay. Horses with little or no pasture are usually fed good-quality grass hay equal to 2 percent of body weight or about 1.75 percent of body weight of legume hay (such as alfalfa). This amount of hay usually meets the mature, idle horse's energy, protein, mineral and vitamin needs. Legume hays have higher energy, protein, mineral and vitamin levels than grass hays of similar quality. Mature, idle pleasure horses do not need legume hays. Feed legume hays to young, growing horses, early lactating mares and late pregnant mares. Moderate to intense performance horses can also be fed legume hays.

If winter temperature drops below freezing, feed 10-15 percent more hay to help keep horses warm.

Hays vary in nutritional value depending upon the stage of maturity at harvest and handling after baling. Leaves are more nutritious than stems. Hay with lots of stems and few leaves is not as nutritious as hay with lots of leaves and fine stems.

Feed only good-quality hay that is free of mold and dust. Slightly dusty hay can be sprinkled with water before feeding. Remove any wet hay at the next feeding to reduce the risk of mold.

Feeding hay on the ground results in 18-20 percent wastage. Hay fed on the ground in pasture contributes to internal parasites. Feeding hay on stall floors, while wasteful, does not pose an internal parasite threat.

Horses ridden little or not at all have a lower nutritional need than young, growing horses, pregnant/lactating broodmares or horses ridden intensely or often. Owners should feed average-quality hay to mature, idle pleasure and light performance horses, reserving above average-quality hay for weanlings, yearlings, broodmares in late pregnancy and early lactating and high-intensity performance horses.

Feeding Grain. There is a misconception that owners are not good horse people unless they feed grain (“sweet feed”) in rather large amounts. There is no need to feed large amounts of grain to pleasure horses with a BCS of 5.5-7.5 in winter. Horses that maintain their BCS need no grain or only 1-2 pounds daily of a 10-11 percent crude protein grain mix. Horses with a BCS of 6.5-7.5 need little, if any, grain.

Young, growing horses, lactating mares, moderate or intense performance horses and mares in late pregnancy (9th, 10th and 11th months) require more grain in winter.

Horses should be fed a balanced ration that has the proper nutrients in a palatable form based on feeding a high-quality forage (pasture and hay) with minimum grain and supplements. If fed a balanced ration, there is usually no need for mineral/vitamin supplements.

It is often stated, incorrectly, that corn is a winter feed and oats a summer feed. Oats, which are a high-fiber feed with hulls that are indigestible, are a better winter feed than corn. High-fiber feeds produce more body heat to help keep a horse warm in winter. Mature horses can be fed whole oats. Weanlings should be fed crimped oats. Crimping oats is a costly process that adds little nutritional value.

Minerals and Water. All horses need trace mineralized salt (red or blue salt) and clean, fresh water at all times except when hot from performance. Some pastures may be deficient in the trace minerals: copper, zinc and selenium. Trace mineralized salt should be available free-choice as loose salt, but a salt block is better than no salt.

When the temperature drops below freezing, horses tend to drink less water, and impaction colic occurs more frequently. Horses drink more warm water than cold water in winter. Giving your horse water out of the hot water facet (warm water) should keep it drinking in cold weather.

Winter Feeding Programs. Based on the need of the horse’s digestive tract for a high-fiber diet and the possible deficiencies of pasture and hay, the winter feeding program should be based on winter pasture and good-quality hay supplemented with the lowest level of a balanced grain mix.

In winter, idle pleasure horses with adequate pasture need 1.15-1.25 pounds of good-quality grass hay per 100 pounds of body weight, trace mineralized salt free-choice and a small amount of grain (1-2 pounds) to supplement possible pasture deficiencies. Horses with a BCS of 4 need 3-5 pounds of a 10-11 percent crude protein grain mix containing added phosphorus and vitamin A. With a BCS below 4, more grain should be fed. Horses with a BCS of over 5 need be fed only 1 pound of a pasture supplement with proper level of minerals and vitamins. If such a feed is not available, one can feed a mineral/vitamin supplement containing calcium and phosphorus in a ratio of 1:1 or 2:1, vitamin A and added copper, zinc and selenium. Since minerals are not palatable, such supplements probably should be mixed with a pound of whole oats to encourage horses to it daily.

Idle pleasure horses without pasture should be fed 2 percent of body weight as good-quality grass hay. The

amount of grain fed should be based on their BCS and properly supplemented with hay.

Most horses ridden in winter are in a light performance category. If kept on winter pasture, they should be fed 1-1.5 percent of body weight as good-quality grass hay and 3-6 pounds of a 10-11 percent crude protein grain mix with added levels of minerals and vitamins as noted. As performance increases to moderate or intense levels, horses are fed less hay and more grain.

Pregnant mares on pasture in winter should be fed adequate hay as noted and 0.25-0.75 pounds of grain per 100 pounds of body weight. A 1,200-pound pregnant mare would be fed 3-9 pounds of grain, depending on BCS and the quality and quantity of pasture and hay. Pregnant mares should have a BCS of 5.5-7.5. Feed a 10-12 percent crude protein feed with legume hay and a 14-16 percent with grass hay. The feed should contain added levels of copper, zinc, selenium, phosphorus and vitamin A.

Early lactation can start in winter, and mares should be on good-quality pasture and/or fed good-quality hay and 3-9 pounds of grain. Feed a grain mix of 10-12 percent crude protein with legume hay and a 14-16 percent protein feed with grass hay. The grain mix should contain added copper, zinc, selenium, phosphorus and vitamin A.

Weanlings and yearlings may be fed hay free-choice or 1.75 pounds of hay and 1.25 pounds of a 16 percent crude protein grain mix per 100 pounds of body weight. Yearlings, if on good quality pasture, are fed 2 percent of good-quality hay and 0.75 percent of a 14 percent crude protein grain mix. With poorer quality pasture, feed 1.5 percent of hay and 1.25 percent of a 14 percent protein grain mix.

It is advisable to feed weanlings and yearlings a legume hay such as alfalfa. If a legume hay is fed, the protein level of the grain can be reduced. Weanlings and yearlings grow better on pasture than in stalls.

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