



# EQUIFACTS

## Guidelines for Feeding Horses

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Horses are individuals and should be fed and managed to complement their age, stage of production and work level. There is a definite scientific basis to feeding horses; however, feeding horses is not only a science but an art.

Good managers learn normal eating habits for a given horse and, with daily observation, quickly detect abnormalities in feeding behavior. Feeding problems can be determined and adjustments made to prevent reduced performance or productivity. Proper feeding management is a comprehensive program that involves understanding the horse's digestive system, knowing the nutrient requirements for horses and the feeds available to meet those nutrient demands, combined with common sense feeding principles.

The following feeding management practices are generally employed in successful horse operations.

**Allow pastures to supply most of the nutrients for horses.** Pastures provide horses with an excellent source of energy, protein, vitamins and minerals and with a good place for exercise. Heavily-grazed or low-quality pastures do not supply adequate roughage or nutrients and should not be relied upon to meet all the nutritional needs of horses.

**Feed and hay must be stored properly to maintain quality.** Grain and grain mixtures should be stored in feed bins, boxes, large drums or trash cans with lids to ensure quality and freshness. These storing methods will keep moisture, birds, rodents and other contaminants out of the grain. In many cases,

a tight-fitting lid over the feed box has kept a loose horse from getting to a large amount of feed and prevented a colic.

Always rotate the feed to prevent it from becoming stale and unpalatable. Never dump fresh feed on top of old feed. Completely remove feed from containers before filling with recently purchased feed.

Hay and bagged feed can be stored on pallets off damp floors. A layer of hay, wood shavings and even extra thick cardboard can prevent the bottom layer of a hay stack from molding. Hay fed to horses should be stored in hay barns or covered so that direct weather conditions such as sunlight and rain cannot penetrate the hay.

**Provide roughages in all horse rations.** Horses are non-ruminant herbivores. They require hay or pasture in the diet to prevent digestive problems and maintain the integrity of the digestive system. Without roughage in the diet, horses have a tendency to chew things — especially wood — and are more susceptible to colic and founder.

Stalled or "dry lot" horses should be provided a source of roughage. Stalled or penned horses should receive at least one pound of hay per 100 pounds of body weight. For example, a 1,000-pound horse should receive about 10 pounds of high quality hay per day. Horses grouped in pens without sufficient hay may chew other horses' manes and tails and may also practice coprophagy (eating of feces). Some of the roughage requirements can be met in

complete pelleted feeds; however, some hay or pasture is always necessary in the diet.

**Feed horses based on production and class.** Horses require different types of rations and quantities of feed to meet nutritional requirements at certain ages, stages of growth, production or work. These classes of horses are idle mature horses, working mature horses, young growing horses, gestating mares (last 90 days of gestation) and lactating mares. When practical, horses should be divided into classes, penned or grouped according to the classes and all fed at the same time.

**Feed by weight, not volume.** Coffee cans and buckets are popular feed-measuring containers. However, horses do not require a certain volume of nutrients but do require a certain weight of feed proportional to their body weight and status. Feeding solely by volume is risky, because feed weights vary per unit volume. A bucket that contained five pounds of oats may very easily weigh 8-10 pounds when filled with equal volumes of corn or a pelleted diet.

Remember, hay weights also vary according to type of forage. Typically legume hay (alfalfa, clover) may weigh twice as much as the same volume of grass hay (Bermuda, fescue). Always weigh new feed and hay so proper adjustments in volume can be made.

**Feed on a regular basis.** Relatively equal time intervals between daily feedings are important. Pick a feeding time—including weekends and holidays—and stick to it. For instance, feed at 6:30 a.m. and 6:30 p.m. when feeding twice a day. Horses are less likely to go off feed or develop colic if fed on a regular schedule. This is especially important in young, growing horses where large amounts of high energy feed are consumed. Regular feeding intervals are an excellent deterrent to colic. Mature, idle horses or horses used infrequently can be fed once a day. The “thumb rule” is that horses can be fed one time per day if total grain intake is less than .5 percent of body weight. Growth, lactation, performance and work require high feed intakes, and these horses should be fed at least twice daily. Feeding more than twice a day is practiced under some management regimens to encourage horses (race horses, halter horses, etc.) to eat more feed. These feeding intervals should still be done at equal time increments.

**Divide total daily feed into equal proportions offered at each of the feeding times.** When hay and concentrates are fed, include daily proportions of each equally at each feeding rather than feeding grain in the morning and hay at night. Hard-working horses may need to be fed the majority of their hay at night or whenever there is ample eating time. There is no advantage to feeding hay followed by grain or vice-versa.

**Avoid sudden changes in rations.** Changes in a ration's physical characteristics (pelleted-to-processed; cubes-to-roughage, etc.) or in ingredients (whole oats to sorghum or corn) or from one commercial feed to another can cause horses to go off feed, have diarrhea, colic or other digestive disturbances. Take several days, preferably a week, to introduce horses to a new ration. Start by introducing about 10 percent of the new feed and gradually replace all the old diet with the new.

**Do not overfeed horses.** Some horses suffer from “obesity malnutrition,” others from “deficiency malnutrition.” Generally, horses are overfed because owners do not understand nutrient requirements and overfeed as a safeguard to underfeeding. Some people feed horses as they like to eat themselves. The extremely fat horse that is not receiving adequate exercise is predisposed to colic or founder, which could render the horse useless for the remainder of its life. An old Arabian proverb states that the two greatest enemies of the horse are too much feed and too little exercise.

**Check the feed box and hay rack for refusals.** Refusal of feed or hay suggests the horse (1) was overfed; (2) fed the correct amount but something was wrong with the feed or hay; or (3) is sick. Refusal of hay and overeating of concentrates for a period of time can lead to serious digestive disturbances.

**Feed horses individually for maximum growth and performance.** Individual feeding is ideal for young horses being prepared for show or performance. Performance horses in training usually are stalled and fed individually. Individual feeding would be ideal for all horses; however, it is generally not practical when group feeding a herd of mares or yearlings.

**Consider “dominance hierarchies” when group feeding.** Horses in a group establish a pecking order just like other animals. This

suggests the more aggressive horses consume larger quantities of feed at the expense of the more timid horses. Younger or new horses in a group will generally be at the bottom of the social order.

Management systems should encourage individual eating within the group. Here are some suggestions: (1) provide individual feed tubs that cannot be overturned, (2) space feed tubs far enough apart for every horse to eat at the same time, (3) use run-in sheds with adequate room where there is no direct competition for feed or space, (4) provide ample space at the feeder when using large feed bunks or troughs.

Group feeding foals will work if properly done. Foals should be started on a creep ration as soon as they will eat, generally less than one month old. The ration should contain adequate protein and energy and should be fortified with vitamins and minerals. The creep rations should be available to the foals any time they want to eat.

Pelleted creep rations are preferred because every bite is a balanced mouthful. Fresh feed should be placed in the creep every day to assure that no foal eats spoiled feed. The creep should be roomy and located where the broodmares frequently gather, such as feeding, watering and loafing areas. Weaning is much less stressful to foals who have learned to eat creep feed.

**“Letting down” and “feeding up” should be done gradually.** Horses brought from sales or returning from shows and racing circuits are accustomed to large quantities of feed and strenuous exercise. These horse should have their daily feed intake and exercise reduced gradually — “let down” slowly. Reduce feed intake 10 percent per day until desired feed level is achieved. Conversely, horses in the rough, going into a fitting program for show or racing, may not be accustomed to large amounts of feed and exercise. Extremely thin horses on small amounts of feed are prime candidates for colic when feed levels are increased quickly. It could very easily take a month before large amounts of grain can be fed to horses. Increase or decrease feed quantity and exercise slowly to prevent not only physical digestive problems but also psychological problems. Gradually let horses down and gradually build horses up.

**Do not feed horses on the ground.** Because horses in the wild always ate from the

ground, horse owners used to feel this was the logical place to feed hay. Ingestion of dirt, sand, parasite eggs and waste can cause digestive problems. Hay racks, nets or mangers are also popular among many horse owners. Mangers should not be mounted so high that the horse must eat in an unnatural position. Virtually any method that keeps the horse from eating hay off the ground is acceptable. Uneaten and possibly spoiled feed or hay should be removed from feed boxes and hay mangers.

**Force aggressive eaters to eat slower.**

Some horses are aggressive eaters and bolt their feed. To slow down overly aggressive eaters, (1) feed them in a large, shallow box where feed cannot build up, and (2) place rocks, bricks, salt blocks or other objects (that the horse cannot swallow) in the trough. This will force the horse to eat more slowly. Slowing down the eating pattern of the aggressive eater will enhance digestion and help reduce digestive disturbances. Some horses “root” their feed out of troughs. Rings mounted on the top of troughs and lipped troughs prevent rooting and feed wastage.

**Provide atmosphere to encourage timid horses to eat.** Little can be done to force timid horses to eat; however, they should be fed where they are not bothered or afraid to eat. Solid partitions or partially solid partitions at the feed box between stalls are effective in preventing a horse from intimidating another horse across the fence at the feeding time. This is particularly true if horses are fed at different times. Some horses also exhibit anxiety when noise and activity from humans or other horses are present at feeding time. Therefore, barn activity at feeding times should be minimized, and all horses should be fed at the same time. Furthermore, this type horse should be fed in a deep, narrow trough to encourage consumption.

**Provide horses access to salt and minerals.** Virtually all commercially prepared feeds contain additional salt. This level of salt generally will meet the salt requirements of all horses.

Salt needs vary among horses, particularly in periods of increased sweating; therefore, supplemental salt may be offered in block or loose form to horses consuming commercial rations. Excessive salt consumption, which leads to excessive water intakes and frequent urination,

is occasionally noticed in stalled horses due to boredom.

Horses on pasture, receiving no commercially prepared feed, should always have access to free choice, loose trace mineral salt. It is difficult for horses to lick their requirement of salt from a block; however, in humid areas, blocks crumble easily and salt can be consumed more quickly. Salt in the pasture should be fed in a clean container, preferably protected from wind and weather.

**Routinely and frequently check the horse's manure.** The characteristics of manure vary from horse to horse; however, any unusual change in quantity, consistency, odor, color or composition indicates a possible disorder. Stoppage or limited fecal production could indicate digestive problems.

**Clean, fresh water should be available to horses at all times.** Sources of water in order of preference are purified water from commercial water plants, good wells, running streams, and tanks or ponds. Many horse owners use automatic waterers for stalled horses; however, some horse owners water in buckets or other containers so they know if, for some reason, a horse is not drinking. Very cold or very hot water discourages water intake; a range of 45 to 65 F is best. Water consumption is highly correlated with dry matter intake.

The normal, idle, mature horse should drink five to 10 gallons of water a day. Milking mares and horses in training require more water due to milk production, increased feed intake and/or additional work. The water trough should be routinely scrubbed.

**Working horses or any hot horse should be watered with care.** Do not water a hot horse immediately following hard work. While cooling out, horses may be given a few drinks of water, but they should be cool and their respiration rate back to normal before they are given any large amount of water. When horses are completely cooled and relaxed, they may

have full access to water. Feed also may then be offered.

**Provide adequate feed and water for horses during extreme temperatures.** Many horses will reduce feed intake during extremely hot weather but may double their normal water intake. During the cold winter months, the horse owner should provide free-choice hay and plenty of water to horses that are not housed. Adequate water intake in the winter is just as important as water intake in the summer. Horses can withstand extreme weather conditions as long as proper feed and water intakes are maintained.

### Summary

Properly feeding horses requires not only adequate nutrition but also an observant manager. Horses are much more sensitive than other livestock to dietary changes and therefore require a higher level of feeding management. Horse breeding farm managers or pleasure horse owners can more adequately provide a sound feeding management program by following the simple management tips outlined in this fact sheet. Feed companies and hay producers can provide quality feed for horses, but it is up to the horse owner or manager to provide proper feeding management. Managers or pleasure horse owners can more adequately provide a sound feeding management program by following the simple management tips outlined in this fact sheet. Feed companies and hay producers can provide quality feed for horses, but it is up to the horse owner or manager to provide proper feeding management.

Additional information on horse nutrition is available from the county Extension office. Information available would include PB 798 **Horses Need High Quality Pasture**, TNH-0003 **Feeds for Horses**, TNH-0001 **The Digestive System of the Horse** and TNH-0004 **Nutritional Needs of Horses**.

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