

Basics of Horse Feed Management

FORAGE. By nature, the horse is a grazer, designed to eat small amounts of grass more or less continuously. **Forage (grass, hay, or another fiber source) is absolutely essential to the horse's digestive health,** and all equine feed management should be built around this dietary element.

Many horses stay in good condition when they are kept out on **pasture** full-time. Besides access to a variety of grasses and other pasture plants, being turned out gives horses a chance to exercise and interact with their pasture buddies, and horses at pasture develop far fewer stress-related habits (weaving, cribbing, and stall-kicking) than their barn-kept peers.

When grazing is limited by space or season, horses can be given hay to meet their fiber requirement. **Hay is divided broadly into two categories: grass and legume.** Grass hays may be made of bluegrass, orchard grass, coastal bermuda grass, timothy, or combinations of these and other grasses. Legume hay is usually alfalfa or clover. Mixed hay, such as alfalfa/timothy, contains a blend of the two major types. **Legume hay delivers somewhat more nutrients and calories than grass hay,** but lightly-worked horses get along very well on grass hay. In either case, good hay should be green, sweet-smelling, free of weeds, and leafy rather than stemmy. Mowing when plants are overmature leads to hay with a high proportion of stems, which are harder to digest and less nutritious than the leaves or blades. **Hay must be properly dried before baling, and should be stored in an area where it can be kept dry and protected from sun and dust.** Hay that is dusty or moldy is unsuitable for horses. Owners should open bales and check several flakes before feeding.

The amount of hay to feed each horse will vary depending on the animal's size, metabolism, and workload. At a minimum, start with **the basic guideline of feeding enough hay to equal about 1.5 % to 2% of the horse's body weight** (around 15 to 20 pounds a day for a horse weighing 1000 pounds).

Fermentation of hay in the hindgut is a major source of heat to keep the horse warm during winter months, so **the amount of hay necessary for comfort will increase when the temperature drops.** For each one-degree drop in air temperature below a horse's lower critical temperature (LCT), the horse requires a one-percent energy increase to maintain body temperature. This means roughly two more pounds of hay for every ten degrees below the LCT, a figure that is not the same for every horse. Heavy-coated horses in good condition may stay warm even when the temperature drops significantly, while old, thin horses on a rainy, windy day may become chilled at 50° F. Likewise, middle-aged horses in moderate condition may also have an LCT of around 50° if they have a short, thin hair coat or are not adapted to cold. Most horses with long, thick hair coats that have adapted to cold temperatures over a period of 10 to 21 days will have an LCT as low as 5° F. With young growing horses, the LCT is around 32° F.

Ideally, the horse should receive the **same type of hay every day,** but often this is not possible. If it's necessary to change the type of hay, or when beginning a new load of the same type of hay, make the change gradually, mixing some of the new hay into the old for several days before feeding exclusively from the new bales.

CONCENTRATES. Equine diets usually include concentrates for two reasons: **nutrients and energy.** While many horses thrive on pasture or hay alone, horses that are training, working, showing, or reproducing will probably need some type of grain or commercial feed. Concentrates (sweet feed or pellets) pack a lot more energy than grass or hay, and hard-working horses that are eating plenty of good-quality hay or pasture and are still not maintaining their weight may need additional calories.

Straight grains (corn, oats) are traditional horse feeds and are very palatable, but research has shown these grains **do not contain all the essential amino acids, vitamins, and minerals** necessary to support pregnancy, growth, and maintenance of mature tissue. **Commercially prepared concentrates (sweet feed or pellets)** have been formulated to contain these nutrients, and most feed dealers offer a variety of choices to meet the needs of young, mature, old, working, or breeding horses. These products offer guidelines as to the amount to feed each day, and a horse fed according to the suggested schedule will get optimum nutrition for its age, stage of growth, and level of work.

Even though broad guidelines exist for feeding concentrates, **each horse is an individual as to taste, temperament, and metabolism.** A perfect diet for one horse may not suit his stablemate. Horses that tend to stay on the thin side of normal may need more or different feed to keep them in good condition. Feeds containing beet pulp or soy hulls, so-called super fibers, include highly digestible fiber along with more traditional sources of energy. Corn oil, rice bran, and other fat products boost the caloric density of a horse's ration.

Easy keepers (horses that tend to gain weight easily) probably don't need the calories in concentrated feeds, but they still require the vitamins and minerals that are not supplied by pasture alone. For these horses, many feed companies offer a **low-calorie supplement** that provides only these nutrients.

Feed should be stored in a cool, dry place. Metal or plastic garbage cans are ideal for storing a few bags at a time, while bulk storage should be in a room designed to exclude insects and rodents. Wherever feed is stored, great care should be taken to be sure horses cannot find a way to reach it. Overeating of concentrated feed almost always leads to colic and laminitis, either of which can be fatal.

Owners need to remember a few basic rules when feeding concentrates.

- **Feed no more than about five pounds** of pellets or sweet feed at one time, breaking larger feedings into several small meals spaced throughout the day.
- **Feed by weight, not by volume.** A scoop or coffee can holds a greater weight of pellets than of sweet feed, so the horse getting "three scoops" of feed may be getting more or less than the optimum amount. Check feeding guidelines on the feed bag and use a scale to figure the right amount.
- As much as possible, **feed on the same schedule every day.**
- **Any change to the type or amount of feed should be done gradually** over a period of 5 to 10 days. Start by mixing a small portion of new feed into the old ration, gradually increasing the new feed and decreasing the old until the change is complete. This practice allows the horse's sensitive gut to adapt to the new feed, minimizing the chance of colic or other digestive upsets.
- Sweet feed and pellets are **formulated to meet a scientifically-derived balance of nutrients for the age and stage of growth** of the animal for which the feed is designed. For example, the critical ratio of calcium to phosphorus is different in a feed designed for weanlings than for retired horses. Cutting a feed by adding a scoop of corn or oats is not advised because this practice almost always skews these critical ratios, leading to nutrient imbalances.

OTHER CONSIDERATIONS. Even when owners follow the basic feeding guidelines, attention to these additional points can help assure proper nutrition.

- **Determine the horse's present condition.** For a horse carrying the correct weight, ribs can be felt with moderate finger pressure, but can't be easily seen. On overweight horses, ribs can't be felt; on thin horses, ribs are easily visible.
- **Determine what, if any, weight adjustment is needed,** and increase or decrease grass, hay, and grain to achieve gradual change. Even if weight is correct, it's a good idea to use a weight tape several times a month, keeping a record for every horse. This practice helps owners track weight changes before they become extreme.
- Be sure the horse has access to **fresh, clean water** at all times, except immediately after exercise when the horse is hot.
- Schedule periodic **dental exams and dewormings** to ensure the horse can get maximum benefit from any feed program.