Horse Nutrition

Horses are grazing animals. They were designed by nature to live on grass and water, moving freely and eating small amounts almost constantly. Their digestive systems are made to handle large amounts of grass, hay, and other plant material, a little at a time.

Like people and other animals, horses need all the basic types of nutrients: carbohydrates, proteins, fats, vitamins, minerals, and water.

Nutrients Needed by Horses

There are six types of essential nutrients. These are provided in water, sunlight, and different kinds of feed.

Nutrient	*Sources*	*Why Necessary*
Water	Water (12 gallons or more per day)	For life and for vital functions; an essential part of every cell
Carbohydrates	Grass, hay, grain. Plants make carbohydrates during a process called photosynthesis	Starches and sugars are used for energy. Cellulose (plant fiber) is necessary for digestion
Proteins	Oilseed meals, oats, barley, corn, alfalfa.	For growth, repair, and maintenance of body; the "building blocks" of cells.
Fatty Acids, Lipids	Corn oil, wheat-germ oil	Produce extra energy especially when carbohydrates are not enough. Small amounts are used in digestion, especially of vitamins.
Vitamins	Hay, grain, sunlight, vitamin supplements.	For vital body functions
Minerals	Hay, grain, salt, mineral supplements.	To build and maintain tissue, especially in bones. Also acts as triggers for body functions

Types of Hays and Grains

I. ***Hay***: Hay is a kind of roughage made of dried grass and plants. It is a substitute for the grass a horse would eat if he were in pasture. Good hay provides bulk as well as energy, protein, vitamins, and minerals, and plenty of fiber, which is necessary in good digestion. Hay is the cheapest source of energy, and hay (or good pasture grass if available) should make up the major portion of a horse's diet

A. Grass Hays: They have more fiber and are less concentrated than other hays. (Includes timothy, brome, orchard grass, ryegrass, prairie hay, Coastal Bermuda, and others.)

B. Legume Hays: They have more protein, calcium, and vitamins than grass hays. (Includes alfalfa, clover, and Lucerne)

C. Oat Hay: contains both oat stalks and some grain.

The higher the quality of hay, the better nutrition it offers. Look for green color, leafiness, and fine stems, which mean that the hay was cut early. If hay is cut too late, the stems become coarse and woody, there are fewer leaves, and much of the nutrition is lost. Good hay smells sweet, like a newly cut lawn. Moldy or musty hay can give a horse colic (stomach ache); dusty hay can cause a chronic cough and permanent lung damage. Check each bale as you open it and sniff the hay before you feed it. If the hay is good but only a little dusty, you can wet it down to get rid of the dust. ***Never feed hay that smells moldy or musty or that has gray or white patches. (*Barn day captains: do not throw this hay out. Please put aside and tell an NCMT staff member***. *Hay is expensive and we can return bad bales of hay in exchange for good ones during the next hay delivery.)*

II. ***Grains***: Grains are concentrates, which means they have more nutrients (especially energy) packed into a smaller amount than bulk foods like hay.

A. Oats

B. Corn

C. Barley

D. Bran: the ground up hulls of wheat. This bulky feed is sometimes mixed with other feeds and water to make bran mash.

E. Sweet Feed: Mixed grain with molasses added. Molasses makes the feed less dusty and more tasty.

F. Pelleted Feeds: Feed that is ground up and pressed into pellets. There are four types of pellets: those made of a single ingredient, mixed-grain pellets, feed supplements, and complete feed pellets (those containing both grain and hay). At NCMT, we use Nutrena feeds, including:

(*not shown: hay stretcher, bran, and Vitality Sweet Feed)

III. ***Beet Pulp***: Beet pulp is a by-product of processed sugar beets. It may be used as a form of roughage, especially for horses with heaves or allergies. Beet pulp is more digestible than hay but bulkier than grain. Beet pulp must always be fed wet; eating dry beet pulp may cause choking.

IV. ***Pasture Grass***: Good pasture is not only an open space where horses can exercise freely in fresh air but also their most natural food source. Pasture can be an inexpensive source of good nutrition, It is especially important for broodmares, foals, and growing horses.

V. ***Water***: Water is the most essential part of a horse's diet. Without enough water, he will become dehydrated and distressed, and could die. ***You must make sure your horse has plenty of fresh, clean water available at all times, except when he is hot and sweaty and has not yet been cooled out.***

Golden Rules of Feeding
Feed nature's way: little and often—the horse has a small stomach in relation to its size
Feed at the same times each day
Clean water and feed buckets regularly
Never leave uneaten feed in the feed bucket
Never feed (grain) directly before or after exercise
Never make sudden changes to a horse's diet—introduce new feed gradually over a period of at least a week
Always ensure that the horse has clean, fresh water available
Have the horse's teeth check regularly—sharp edges must be rasped down to enable him to chew his food efficiently
Worm the horse regularly
Keep feed in clean, dry, rodent-proof bins, and hay in a waterproof feed shed, protected from damp ground