

Feeding the
Extremes



Almost all the guidelines on feeding and caring for horses are aimed at the middleweight or light horse population, those that weigh in at about 1,000 pounds or so, and little information is available regarding the equine extremes – ponies and draft horses. Generally speaking, horses are horses regardless of their size, but there are some differences in the nutritional requirements and management of these equids. In the last century, research centering around the nutritional requirements of horses has focused on light horses. Some investigations into the energy requirements of draft horses have been undertaken but requirements for other nutrients have not been explored. Little work has been done to ascertain the nutrient requirements of ponies.

Shamefully, the data used today to establish requirements of these equine extremes are often just simple mathematical extrapolations of what was found to be true for light horses. Half the amount for ponies, double the amount for drafts, right? So far these numbers do not appear to be out of range because signs of deficiency are rarely reported when the calculated requirements are met. As nutritionists become more aware of certain feed-related problems that are prominent in both ponies and drafts, however, the true differences in the equine extremes become apparent and adjustments to their feeding programs are necessary.

Similarities and Differences Between Ponies and Drafts

Despite the obvious differences in ponies and drafts, there are some similarities. Both ponies and drafts appear to have a lower energy requirement than light horses, which is probably due to a slower metabolism. Further, these equines tend to have less spontaneous movement than their light horse counterparts, thus burning fewer calories at maintenance. The energy requirements of ponies, for example, have been measured and were found to be 10% lower than light horses. Owners and veterinarians that work with draft horses will attest to the fact that they too have at least a 10% lower energy requirement



Ponies ridden and shown on a regular basis may need more energy than what is supplied in forage.

than light horses that perform the same amount of work.

Ponies and drafts have comparable ease in maintaining and increasing body condition, depositing fat in similar places including the neck, over the back, and in the hindquarters, particularly around the tailhead.

Of course, there are distinct differences between ponies and drafts, with physical stature being the most



Ponies and drafts have more similarities than one might imagine. Many, for example, are easy keepers.

obvious. Ponies range from about 330 to 900 pounds while draft horses range from 1,320 to over 2,000 pounds (600-900 kilograms). Size alone explains the differences in the quantity of feed necessary to maintain the two equine extremes.

In terms of conformation, the two are often built differently because draft horses have historically been bred to pull heavy loads and ponies have been selected primarily for riding, especially of late. Exceptions include the Shetland, Haflinger, and a few other pony breeds revered for their pulling capacity.

Draft horses tend to have calmer temperaments and be more reliable than ponies. In fact, ponies are notorious for their intelligence and trouble-making ability. If draft horses, with their sheer bulk, acted like some ponies, horsemen would surely be in trouble.

Dietary Issues in Ponies and Drafts

Perhaps the most common nutritional problem encountered in drafts and ponies is undersupplementation of key nutrients. The classic diet of hay and oats lacks appropriate levels of vitamins and minerals. Problems with this diet may include imbalance of calcium and phosphorus if high amounts of oats are fed, and

insufficient intake of zinc, copper, selenium, vitamin A, vitamin E, and other key nutrients.

The purpose of feeding a commercial concentrate is to balance the vitamins and minerals in the diet and provide nutrients that may be low in the forage fraction of a ration. In order to formulate a commercial feed with the proper balance and content of nutrients, a certain target feeding range must be designated. Recommended feeding rates are included on the bag or feed tag. If less than the minimum amount is fed, insufficient amounts of essential nutrients will be consumed. The most significant problem with both ponies and drafts is that minimum recommended feeding rates for most commercial feeds will supply too many calories, resulting in obesity. Many drafts and ponies receive small amounts of concentrate, if any at all, and therefore inadequate quantities of vitamins, minerals, and possibly protein.

For instance, if a particular feed is designed to supply 2 mg of selenium when fed at four pounds per day and only one pound per day is actually fed then the animal will consume only 0.5 mg of selenium. Many ponies receive significantly less than one pound so imagine what the selenium status of the animal could be. The same holds true for all of the vitamins and minerals added to pre-mixed feeds. Most commercial feeds are not designed with low-calorie needs in mind. Therefore, the average commercial feed is not a good fit for easy keepers such as ponies and draft horses.

Nutritionists have figured out several options to overcome these feeding challenges.

- Low-intake feeds are one option. The recommended allowances of low-intake feeds are far smaller than those for average concentrates. These feeds are formulated without high-calorie ingredients, yet supply all of the protein, vitamins, and minerals needed to compensate for nutritional inadequacies of the forage. Low-intake feeds are excellent options if protein content of the diet is questionable and a few additional calories are needed.
- Feeding a well-fortified, balanced vitamin and mineral supplement like Micro-Phase (Kentucky Performance Products, 1-800-772-1988) is an alternative. This is only useful if the horse or pony has enough protein in its diet. If the animal is fed low-quality forage and has no access to pasture, protein deficiency may be an issue.

- For the super easy keeper, a balanced mineral and salt blend designed to be fed free choice is a possible option, as long as the horses and ponies will eat it. If the animals refuse it, the recommended amount can be mixed in a small amount of concentrate and fed daily. The mineral mix should be designed specifically for horses. General livestock minerals are not properly balanced to meet the requirements of horses and ponies.

Another difficulty with feeding commercial feeds to drafts and ponies is that feeding rates may be given for the average 1,000-pound horse without any suggestions for what to feed larger or smaller animals. Feeds that give the feeding rate as a percent of body weight are easier to dish out appropriately. For instance, if the minimum recommendation is to feed 0.5% of body weight and the animal weighs 1,500 pounds, then he should be fed at least 7.5 pounds per day. It is important to know the weight of a feed and the weight of the animal to fine-tune the feeding program.

Nutritional Diseases Prominent in Ponies and Drafts

Drafts and ponies are not immune to nutrition-related diseases. Fortunately, ongoing research has identified many practical ways to manage these conditions.

- Equine polysaccharide storage myopathy (EPSM). EPSM is a heritable muscle disease in which muscle tissue



The nutritional requirements of draft horses depend largely on how much work is asked of them. An idle draft would need fewer calories than a horse worked regularly.

accumulates excessive amounts of an unusual form of carbohydrate called glycogen. The muscle cannot use this form of glycogen for energy. Signs of EPSM include frequent muscle soreness in mild cases and chronic tying up in severe cases. Shivers, a disease found in all types of drafts and draft crosses, may also be apparent. This disease is characterized by trembling and stomping of the hind legs, shaking of the tail, and quivering of the eyelids and ears.

- Cushing's disease. Cushing's is prevalent among ponies and occasionally found in drafts. This condition is caused by a tumor growing on or near the pituitary gland that interferes with hormone production and is common in older individuals. The incidence of Cushing's may be higher in ponies for the simple fact that many draft horses do not survive to the same ripe old age as many ponies.
- Laminitis. A devastating disorder of the hoof, laminitis is common in ponies and draft horses, although the cause of the disease may be different. Some ponies tend to be intolerant of starch or sugar in the diet, particularly the high sugar content found in young tender grasses. Exposure can set off an attack of laminitis, commonly called founder, in a matter of hours following ingestion of springtime pasture. Drafts can also founder for these reasons but more often it stems from excessive concussion on hard surfaces, a condition known as road founder. The most considerable difference in this disease between drafts and ponies is survivability. While ponies may suffer from chronic laminitis, they often recover. Draft horses, on the other hand, rarely survive a severe attack of laminitis. The damaged laminae often cannot support the bulk of the horse.
- Insulin resistance. This condition is characterized by the inability of glucose to gain entry into individual body cells. This results in chronically high levels of glucose and insulin in the bloodstream, which can have detrimental effects on the body. Often called pre-cushingoid syndrome, it is becoming more commonly recognized in both ponies and draft horses.

The dietary change most helpful in all these conditions is the replacement of starch and sugar calories with fiber and fat calories. Maintaining a high-forage diet is also pivotal. Fat and alternative fiber sources (like beet pulp and soy hulls) can be fed if additional calories are needed.

Several options for ridding starch from the diet have been tried in horses, some with more success than others. Multiple diets were tested extensively on horses with EPSM. Not only did these diets allay the symptoms of EPSM, some are also appropriate for horses and ponies prone to laminitis, insulin resistance, and Cushing's disease. The following dietary recommendation were elicited from various studies:



Ponies with nervous dispositions will often require more calories to thrive than their calmer, more sedentary counterparts.

- Commercial concentrates specifically designed to be high in digestible fiber and fat have been formulated. One such product is Re-Leve (Kentucky Performance Products, 1-800-772-1988). Specialized high-fiber, high-fat feeds will usually have guaranteed analyses that include 10-12% protein, 10-12% fat, and 15-25% fiber.
- Commercial complete feeds with added vegetable oil and vitamin and mineral supplementation is a possibility if specialized feeds are not available. Complete feeds are designed to meet part of the forage requirement, so they are higher in fiber than average concentrates. These feeds typically have high recommended feeding rates. When less substantial amounts are fed, additional vitamins and minerals will be necessary. Some senior feeds with high fiber content (greater than 15%) could be used in the same way. Additional fat is essential in this diet.
- Alfalfa pellets with added vegetable oil and a vitamin and mineral supplement is often the most readily available method of increasing fat and fiber. The limitation to this diet is the lower caloric content and the inability to supply adequate calories for the intensely worked horse or pony.
- Soaked beet pulp, rice bran and/or oil, and a vitamin and mineral supplement. Beet pulp is the by-product of sugar beet production; it is the fibrous root left after the sugar has been extracted. If there is concern over residual sugar, rinsing the beet pulp before soaking will eliminate it.

The challenges of feeding pint-sized ponies and gentle giants are many but may easily be overcome with careful attention to the needs of the animal and awareness of the many possibilities that exist for tailoring feeding programs to those needs. ☺☺