

Feeding Beet Pulp To Horses

Horse owners are continually bombarded with suggestions and recommendations about what to feed their horses. An often overlooked feed material is beet pulp, a byproduct of sugar beet processing. Beet pulp is the fibrous material left over after the sugars have been extracted from sugar beets. This extraction process is very efficient. So much so that the remaining pulp contains very little sugar and is an excellent source of digestible fiber for horses.

Horses are designed to be able to extract sugar and proteins in their upper GI tract much like humans are but they are adapted to diets that normally do not contain large amounts of these nutrients. Because of this they have evolved as 'hind gut fermentors' and get the majority of their energy by absorbing volatile fatty acids produced by the fermentation of fiber in their colon and cecum. It just so happens that beet pulp is an almost perfect fuel for this fermentation system. Most fiber in grass hay is high in lignin, which gives the grass leaves more structural integrity but makes the fiber much less digestible. Beet pulp has almost no lignin and is almost completely available as a fuel for fermentation.

Because beet pulp is relatively digestible, it can have about the same energy density as grain. This means there is as much energy in a pound of beet pulp as there is in a pound of oats, yet beet pulp is a much safer feed in many ways. It has much less sugar and is much less likely to cause digestive upset than cereal grains. Having less sugar gives it a much lower 'glycemic index', a measure of a feed's ability to raise blood glucose and insulin levels after feeding. This makes it an excellent feed for horses needing to be on a low carbohydrate diet.

Beet pulp is sold as dried shredded flakes and as pellets. Sometimes molasses is added to improve palatability for picky eaters. This is not a problem unless the horse should be on a low carbohydrate diet. In that case, beet pulp with added molasses should be avoided.

Beet pulp is an excellent feed, but it does have one disadvantage that actually can be a selling point in some cases. The moisture content of beet pulp is extremely low. Because of the risk of 'choke' (esophageal obstruction) if beet pulp is fed in its dry form, it is commonly recommended to feed it as a soaked mash. Soaking beet pulp pellets may take time, but it is an excellent way to increase a horse's water consumption. Research has shown that horses eating beet pulp will drink more water than horses on a lower fiber diet, and the water used to soak the pellets will add to the water taken in. This is especially helpful with older horses in cold weather, when it is difficult to get them to drink an adequate amount of water. Beet pulp has a high 'water holding capacity' and much of this water will be held in the large intestine.

Beet pulp can be an excellent addition to the diet of hard keepers, old horses that lack the

ability to chew hay well, and horses prone to colic. Because heat is a byproduct of the fermentation process, it is also an excellent feed during the winter months. Feeding beet pulp will help keep your horse warm much more than feeding grain.

How much you feed depends on the situation, but a rule of thumb is that it normally should not exceed 25% of the horse's total diet by weight. For example, a horse eating a total of 20 pounds of feed per day can have up to five pounds of beet pulp (before soaking) per day.

To make the mash, add at least four parts water to one part beet pulp on a volume basis. The beet pulp will expand and soften as it soaks up the water. A good method is to let it soak overnight, and feed it in divided feedings the next day. Except in very hot weather, the mixture will not ferment in that time frame. The consistency of the mash should resemble cooked oatmeal. For picky eaters, mixing a little oats or red wheat bran into the mash will usually get them to eat it. For a few horses, beet pulp is an acquired taste that takes some time to appreciate. For them, starting with a small amount in their normal grain ration and gradually decreasing the grain and increasing the beet pulp may be necessary.