

How Traditional Feeding Methods Contribute to Insulin Sensitivity in Horses

In the late 1800s and early 1900s, the principal foods fed to horses were hay, corn-fodder, oats and corn. Although these ingredients would vary depending on the area in which the horse lived, these four ingredients were the main staple of horse feed. Despite the lack of understanding of the equine digestive system, these early day horsemen were aware of several important rules in feeding horses:

1. The food should be of perfect quality and clean.
2. The horse's feedings should be harmonized with his condition as well as the severity of work he is subjected to, and
3. Horses should not be subjected to hard labor with bellies full of feed.

By following these three basic guidelines of feeding, several conditions could be prevented, most importantly, colic. However, what these early horsemen didn't know was that their traditional method of feeding horses, which were used mainly for work, would be passed down for generations to come and would eventually cause a variety of unique conditions in the horse. Another problem would be that feeds would be cooked and mixed with molasses to sweeten the oats and make them more palatable for horses. One of those conditions being insulin sensitivity due to the amount of starch and sugar that would later be utilized in making horse feed.

As the use of the horse changed over time, the animal became more of a recreation and hobby than as a mode of transportation and work. The problem is that, although the use of the horse changed, the methods used in feeding them did not. Horses are now overfed for the small amount of work that they do. In addition, supplements and medications have been introduced into the market and many owners believe that their horses need to receive a variety of supplements in addition to their three large meals a day.

The problem with this mode of thought is that the horse wasn't designed to be fed in this manner. The horse was a grazer and meant to slowly eat grass all day long out at pasture. This is why their stomachs are so small when compared to their body size. However, we have placed them in stalls and rationed out their meals to three large meals of grains and a ration of hay. This has been a major change in the horse's natural digestive process and has led to conditions such as colic, laminitis, founder, and obesity and insulin resistance is a major risk factor with these conditions.

In addition, the types of feeds horses have been eating over the past decades are also contributing to the problem. Horses have been fed "sweet feed" for decades and most of the foal and weanling feeds on the market are also high in sugar. Although the connection to these high sugar diets has not been made in horses scientifically as of yet, there is a strong

connection made in humans with high sugar diets and diabetes. One can only assume, that the same scenario is taking place in horses and leading to an increase in Cushing's Disease and insulin resistance. There is also a strong connection in horses between their feeds and their outward behavior. There have been drastic behavior changes made in horses simply by switching from sweet feed to a pelleted feed. Again, one can only assume that if such a drastic change is made in outward behavior, the same is occurring inwardly as well.

Low NSC Feeds – A New Way to Feed Horses

Due to a better understanding of the equine digestive system and the numerous medical studies that have been performed, we now have better feeds for our horses that take into consideration the type of lifestyles horses live today. These feeds are low non-structural carbohydrate (NSC) feeds and not only can they help to prevent insulin resistance in horses, but they can also help horse owners manage Cushing's Disease and insulin resistance in horses currently suffering from those conditions.

Low NSC feeds are feeds that are low in sugar and starch and have a balance of minerals. These new feeds are also designed with digestibility in mind. There are numerous mass feed manufacturers that create what they call a low NSC feed, but in actuality, they are simply diluting the feed with indigestible additives that have no true nutritional value. Horses with insulin resistance have nutritional requirements that are higher than normal horses. These horses need a low fiber and low carbohydrate feed and hays with lower protein, such as grass and prairie hay, should be fed free choice. Sweet feeds should be avoided.

When shopping for a low-NSC feed, you must first consider the NSC level. The accepted safe level is twelve percent. Feeds that are greater in NSC than twelve percent can cause a horse to become obese and insulin resistant. This condition is similar to a person becoming obese and developing Type II diabetes. If a horse is fed a higher NSC level feed then the amount of work that the horse performs must increase as well. It is a lack of exercise combined with feeds high in sugar and starches that result in a horse becoming overweight and developing associated conditions.

The Stance Equine Feeding System is a system designed to prevent the medical conditions horses are developing today. In addition, their feeds contain copra meal, which is naturally low in NSCs, as well as coconut oil and coconut meal. These ingredients provide high-quality nutrition, without excess starches and sugars. Each line of feed is designed with a specific type of horse in mind and designed to prevent obesity and insulin resistance from occurring.

For example, if a horse does perform hard work, such as ranch work, racing or high-performance events, the horse will need more digestible energy. In the past, feed manufacturers provided this additional energy by simply adding more grain to the feed, which meant a higher NSC level. By increasing the NSC level, the horse is predisposed to metabolic conditions. Go Stance, by Stance Equine, compensates for this by ensuring their formula includes a balanced supply of “fast” energy as well as “endurance” energy. Although the NSC percentage is higher, the feed is balanced to prevent metabolic conditions from occurring.

Factors to Consider when Feeding Horses

Prior to changing your current feeding schedule, it is important to assess the condition of your horse first. Everything from a horse’s teeth to their temperament dictates how well the horse utilizes the nutrients that you feed them.

There are several physical factors to consider in the horse to ensure that the body is receiving and using the nutrients properly. The first area to consider are the teeth. Horses that are missing teeth, have damaged teeth or have a deformity of the mouth do not grind their feed properly, which directly affects the digestibility of the feed. These horses also waste a lot of feed. Having your veterinarian check your horse’s teeth and having them rasped or “floated” on a regular basis can help to prevent these types of issues.

Age is another important factor. Horses that are old are not worked as frequently and therefore have different nutrition requirements. Older horses also tend to lose teeth and cannot eat feeds that are fibrous well. Their bodies are also not functioning as well as they used to and may have some digestive troubles. Senior horses do better on a low NSC feed designed for their age group, as these feeds have a higher concentration of nutrients to make up for those that do not make it into the system.

A horse’s physical body condition is important to consider as well. Horses that are thin have different requirements than horses that are well-conditioned or overweight. Body condition is also dependent on the age of a horse as well. Young and growing horses tend to be well-conditioned and toned if fed properly, while older horses that are overfed may be heavier and have more fat. Pregnant and lactating mares also have specific feeding requirements to compensate for the nutrients absorbed by their young, either in the womb or while nursing.

A horse’s level of work is very important to consider as previously mentioned. Horses that are more for recreation have different nutritional requirements than horses used for ranch work, jumping, show or racing.

Pecking order is important when feeding groups of horses together. When you have a herd of horses, you need to determine which horses are the most dominant and which are at the bottom of the pecking order and then set up a feeding system accordingly. A process that works well for many farms is to feed horses in a large circle and place extra feed pans in the pasture. When the most dominant horses finish eating and begin to bully their neighbor, the neighbor has a feed pan to move to. When the whole herd moves feed pans, the horses at the bottom of the pecking order are able to continue eating because extra pans have been provided. If horses are bullied badly by dominant horses, then it is best to feed them separately, as stressed horses eat less.

Parasites also play a large role in the digestion of the horse. Horses that are not dewormed on a regular basis carry a higher parasite load, which steals nutrients from the horse. Flies and other insects may also prevent horses from eating and grazing well.

Conclusion

The occurrence of conditions such as insulin resistance is largely due to the traditional methods that have been handed down from one generation of horsemen to the next, as well as the additives and ingredients that have been added to feeds to make the food taste better or to help thin horses gain more weight. Many of these additives are equivalent to a horse eating candy bars. They make them gain weight, but they're not healthy for them.

Horse people in general are hesitant to change the way that they do things, whether in training or feeding their animals. However, in this day and age of horse care, it's important that horse people learn more about the effects of traditional feeding methods and make the change toward healthier feeds for their horses to prevent conditions such as insulin resistance from occurring.