How you feed your horse matters

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After a recent trip to a very large equine expo, I was reminded of the influx of information available regarding the feeding and management of horses. That combined with the mere presence of the spring grass growing threatening to founder my old mare yet again, I have sought out better ways to manage the feeding of my diverse group of horses that not only meets their nutritional and health requirements but also maintains some quality of life.

Horses have evolved as grazing animals and thus their digestive systems have developed to accommodate a forage-based diet, typically grasses, that they continually graze all day. They have a relatively quick passage rate allowing feed to pass from one end to the other much quicker than say a ruminant, such a cow. In addition these wild ancestors would graze the lush grass in the summer, put on body condition and then lose condition over the winter as they paw and travel for food and water. Currently there are very few horses that live this life. Many have limited to no grazing or too much access to very rich pasture, minimal exercise or extensive exercise, and either full access to feed or restricted to one to two meals per day, and many are housed in stalls, dirt pens or small fields. The old fashioned life of moderation is past. As a result we have seen a number of issues develop along with the domestication of horses, Equine Metabolic Syndrome, chronic laminitis, parasites, sand colic, gastric ulcers, behaviour issues (weaving, cribbing, fence chewing etc) only to mention a few. The challenges of the domestic horse are extensive, only a few ideas will be discussed here as they relate to feeding.

In the last few years there has been extensive research on laminitis in the horse and what is now known as Equine Metabolic Syndrome. These horses typically require a restricted diet limiting the amount of feed they ingest and often eliminating carbohydrates, particularly non-structural carbohydrates. Hence these horses are housed in dirt pen without access to grass and are fed "meals". Horses housed in small pens or stalls are typically managed in a similar fashion. When fed small amounts during limited periods each day, the horses inherent need to graze is not met which can lead to fence/tree chewing, ingestion of bedding or other material on the

ground. The goal should be to increase the number of meals with increasing the amount fed, difficult in many situations. Feeding more of a less nutrient dense feed is one option. Offering a hay net with very small openings simulates the art of grazing by limiting the amount of feed the horse can gather in each mouthful. This extends the time that the feed is available to the horse each day.

Horses housed in a limited area, particularly when grouped with a number of others are at increased risk of parasitism. The majority of parasites commonly affecting horses have a fecal-oral transmission, meaning horses ingest the eggs in the feces during feeding/grazing on the ground and the worms develop inside the horse. These worms then develop eggs, which are shed in the feces, and the cycle continues. The closer the horses are housed the greater the chance a horse eating on the ground will be in contact with parasite eggs. In addition, horses housed in areas with sandy soil are at increased risk for sand colic, which can be quite serious, as they ingest sand while eating, the sand builds up in the digestive tract and fails to pass through, thus causing colic. It is thus recommended that horses not be fed on the ground if possible. Feed boxes are one option but need to be safe, maintained and ideally high enough that a horse can't climb in. And if feeding a restricted diet the competition between horses surrounding one feed box may preclude the less dominant horses from eating enough.

Offering free choice feed to horses in the form of a large round bale is common practice. However, there are a number of horses who struggle with obesity and laminitis who cannot feed this way. In the past, it was recommended that these horses be allowed to graze for a maximum of four hours per day and then housed in a dry pen. However, recent research has shown that these horses will consume the same amount of grass in four hours that a horse will full access to grazing will consume. Thus the "fat and foundered" must remain without grass or free choice hay. Also horses with allergies, heaves, or other respiratory issues will often have worse symptoms when fed this way as the horse's airway clearance mechanisms that eliminate irritants from the nasal passages function best when the horses head is in a grazing position, not buried in a round bale. For this group of horses, management, with respect to feeding, is key.

The above-mentioned issues are only a few that involve feeding the modern horse. To summarize the goals of feeding:

- Feed multiple small meals per day, grazing if possible for optimal gut health
- Feed up off the ground to reduce sand ingestion and parasite load
- Limit access to bales where horse's heads are buried to decrease irritants to the airways and lungs
- Provide a safe delivery method so that the chances of a horse becoming injured are reduced

So given all these challenges and diversity within herds, how can one manage to meet each individual's needs? Sadly there is no magic answer. With each feeding system there are pros and cons so do your research and find what works for your herd. There are new products available that are designed to accommodate these issues. If you have been feeding the same way for years and have recurring issues, maybe its time for a change. Happy feeding!