EQUINE

Six Ways to Slow Horse Feed Intake

Krishona Martinson, University of Minnesota

There has been a recent trend to manage horses in a more "natural" manner, especially when it comes to feeding. Extended forage time has been linked to health improvements and well-being, including reductions in unwanted behaviors, ulcers, and choke, insulin, and glucose responses after a meal. Slowing feed intake is also important for horses on restricted diets, those meal-fed a few times a day, and those tending to aggressively and quickly feed. Owners can slow feed intake rates by altering feed delivery.

- 1. Slow-Feed Hay Nets. University of Minnesota researchers recently evaluated different hay nets to determine effect on horse intake rates. Horses were fed hay (1% body weight twice daily) off the boxstall floor (control), or from one of three hay nets: large net (6[°] openings), medium net (1.75[°] openings), and small net (1[°] openings). The study revealed horses feeding from medium nets took just over 5 hours to consume the meal, while horses eating from small nets took 6.5 hours. Both the control and large net resulted in consumption times of 3.2 and 3.4 hours, respectively. If small or medium hay nets (Hay Chix hay nets) were used for twice daily feedings, the anticipated amount of time horses would spend foraging would be 10-13 hours each day, more closely mimicking a horse's natural grazing behavior.
- 2. Grazing Muzzles. Recent University of Minnesota research has shown grazing muzzles can help slow horse intake of both pasture and grain. It was determined the use of a grazing muzzle (Weaver) reduced a horse's pasture intake by ~30%. Illinois researchers recently evaluated two grazing muzzles (Tough 1 Nylon; Easy Breathe) to feed grain and determined the muzzle slowed grain intake but tended to spill more. However, horses were able to acclimate to the muzzle and increased their intake rate over time.



Hay nets.



Grazing muzzle.

- **3. Specialized Grain Feeders.** Texas A&M researchers tested a newly designed feed bucket (Pre-Vent Feeder) and determined it slowed grain consumption and reduced spillage. Horses spent 21-60 additional minutes eating grain from the feeder compared to a bucket or tub. However, most could not fully consume all grain, resulting in the need for frequent washing. In a separate study, North Carolina researchers developed a waffle structure inserted into a feed bucket. It increased grain consumption time by nearly 50% compared to a bucket without the waffle insert.
- 4. Obstacles. North Carolina researchers tested grain feeding time using a bucket with four movable bocce-style balls (4" diameter) in it and found the balls were effective at extending (by 4 minutes) and maintaining the time it took horses to consume feed after multiple days of use. They found the ball use produced the lowest glucose and insulin responses compared to other feeding methods tested.
- 5. Forage Quality. Fiber content in hays can be used to slow horse consumption. Neutral detergent fiber (NDF) is a measurement of insoluble fiber and provides plants with structural rigidity. The higher the NDF, the less a horse will consume. NDF levels between 40-50% are considered ideal and promote hay intake, while NDF levels above 65% tend to result in a reduction in intake by most horses. Hays high in NDF tend to be classified as "busy hay" and are especially useful when managing aggressive and quick eaters or horses on restricted diets. However, only a small proportion of a horse's diet should be comprised of "busy hay" high in NDF.
- 6. Feeding Order. Many people believe feeding hay before grain slows feed intake. Purina Animal Nutrition researchers confirmed this belief and determined horses consumed grain slower when hay was fed 20 minutes before the grain meal. When hay was fed before grain, grain consumption was 0.3 lbs/min compared to 0.4 lbs/min when hay and grain were fed simultaneously.

Slow-feed hay nets, muzzles, specialized grain feeders, obstacles, NDF high forages, and feeding order are effective management strategies for slowing horse feed intake and represent simple and affordable management options horse owners can implement.