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### Changing Seasons Mean Changing Diets for Horses

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Changing seasons can bring about potential problems for horses and horse owners. Pasture quality changes with every season, but the changes from summer to fall are especially significant. During the fall, there are often warm sunny days and cool nights. Grasses manufacture sugars (through photosynthesis) during these warm sunny days, but will not use the sugars to fuel growth during the night if the temperature is too cold. This leads to increased concentration of stored sugars in the plants, and may increase the risk of digestive upset or laminitis in some horses. Horses at most risk are those that are significantly overweight or those that have trouble managing normal blood sugar levels and are very sensitive to starch and sugar content in the diet.

As we move into fall and winter, hay replaces pasture as the primary forage for many horses, which represents a major change in diet. Horse owners are usually very careful about changing grains in their horse's diet but may not think about changing from pasture to hay or changing hay supplies as being a big change in the diet.

However, a change in hay is one of the largest risk factors for colic reported in one study from Texas A&M. This represented everything from changing type of hay to just getting a new supply of the same type of hay. Ideally, all major dietary changes should be made gradually to decrease the risk of digestive upset.

Changing seasons also bring drastic swings in weather conditions and temperature fluctuations. While not scientifically proven, many horse owners and veterinarians believe there is an association between changes in barometric pressure and incidence of colic episodes in horses. Also, a dramatic drop in ambient temperature often causes horses to drink less water, while at the same time horse owners may increase the amount of hay to help horses stay warm. More hay and less water consumption together may contribute to an increased risk of impaction colic.

Horses should be fed good quality hay to maximize nutrition and minimize potential digestive problems. To identify good quality hay, of any variety, look for high leaf to stem ratio, small diameter stems, few seed heads or blooms, fresh smell and appearance, cleanliness, and color (faded, yellow or brown color may indicate aged hay or poor storage conditions). The maturity of the plant at time of harvest determines the hay quality more than any other factor. Young, leafy, immature plants contain more protein, calories and minerals than overly mature plants. Also, as a plant matures it contains more indigestible fiber (lignin) and therefore is less digestible, which reduces nutrient availability. To ensure high quality hay, plants should be harvested at the proper stage of maturity.

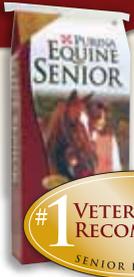
Hay or pasture represents 70% or more of the total ration for many horses, so quality of hay or pasture has a big impact on the nutritional status of the horse. Even high quality hay will be less digestible and have lower protein, vitamin and calorie content than the forage horses will graze in good quality pastures. When forage quality declines, the grain ration must make up the deficit. This may simply mean feeding a couple pounds more grain per day to maintain the same level of condition. But, in some cases, lower quality forage may create the need to choose a grain ration with a higher nutritional balance than was needed when the same horse was eating good green pasture grass. Horses with high nutritional requirements such as very young horses, very hard working horses or broodmares in late gestation or lactation will benefit the most from a higher quality grain ration when eating hay instead of pasture. Aged horses, especially those with dental or digestive problems may do fine grazing green pasture but often lose a significant amount of condition in the fall and winter when the diet changes to hay. Pasture forages are generally easier to chew and digest and horses will selectively graze the highest quality plants which provide a very different diet than hay. Purina Equine Senior is a great option for these situations, providing excellent quality hay and fiber, with proper nutritional balance, in an easy-to-chew pellet.

Fall is a season of transition and an important time to evaluate the quality of forage available for your horse and determine whether the grain ration is adequate to meet your horse's nutrient requirements. When winter arrives, horses must be in good condition to comfortably weather colder temperatures. Adjusting grain rations in the early fall will prevent weight loss due to the lower quality forage. Or, if horses need to gain weight, there is still time to safely put 50 – 60 lbs of weight on a thin horse before the cold weather really sets in.



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