

NUTRITION AND HEALTH OF THE MODERN HORSE

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The dietary and metabolic issues concerning the horse of today are not necessarily the same as those of yesteryear, as a result of our change in lifestyle, and greater reliance on mechanical means for industry and transport. Horses are now fed either an improved pasture which; contains genetically selected, digestible plant species designed for cattle and sheep, or they are stall fed, and given a range of fiber and concentrates (that are selected by humans). Horses are designed to eat pasture at least 18 hours per day, i.e. they are “slow feeders”. Pasture alone does not generally provide enough nutrients, and so the modern horse is supplemented with roughage and concentrate. The roughage can be slow fed; however in general, most horses are under worked and overfed, resulting in a range of horse health issues, which are a major economic loss to the horse owners and the industry. Put simply...are you killing your horse with kindness?

These metabolic disorders include excited or hot behavior, obesity, laminitis, colic, tying up, insulin resistance, Cushing’s, equine metabolic syndrome, developmental orthopedic disease to name a few, which cause economic loss to the equine industry.. Some of these disorders have been linked to the high levels of sugar and starch (nonstructural carbohydrate, NSC) in the diet. Is it therefore possible to reduce veterinary expenses, by correct feeding?

Feeding horses has become over complicated, with the large number of feeds and supplements being promoted to the horse owner, often leading to information overload, and fad feeding.

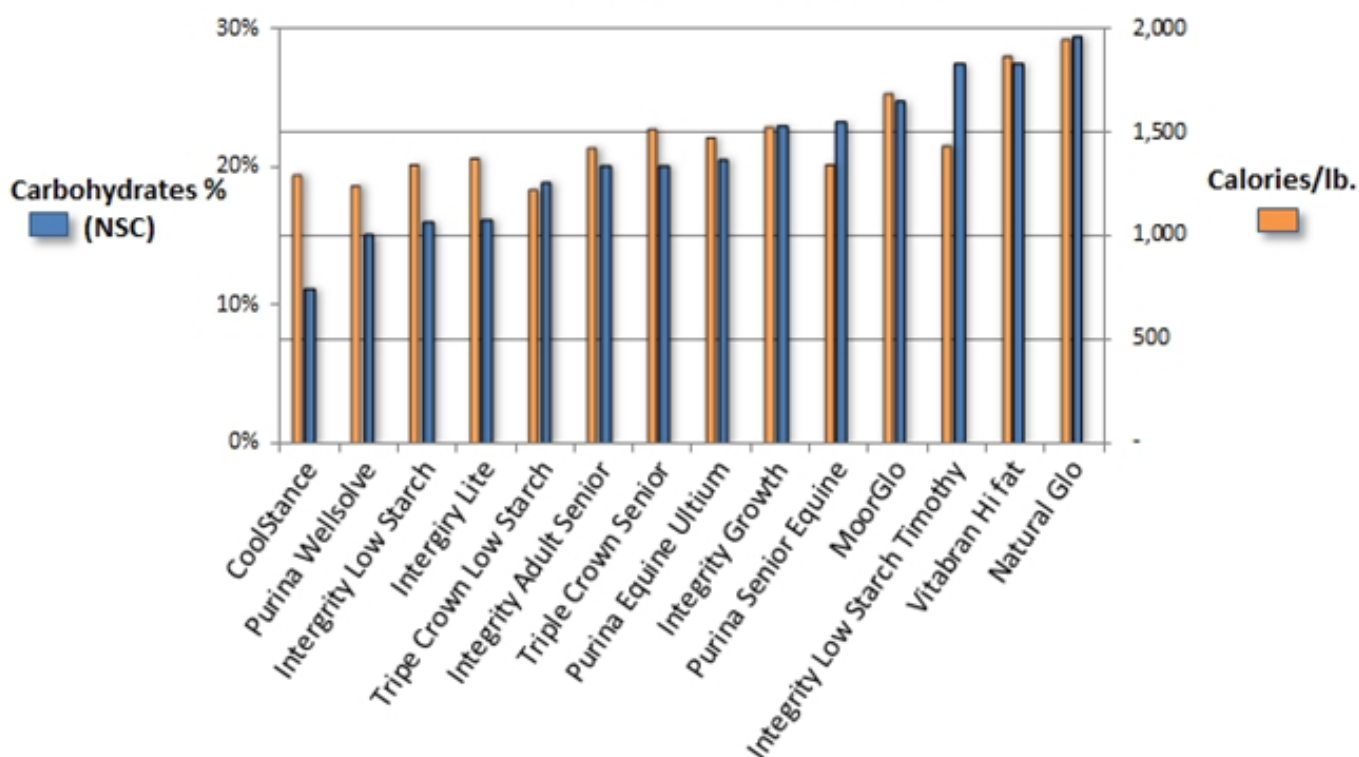
The horse evolved as an herbivore designed to graze predominately prairie pastures, and small shrubs and foliage. These prairie grasses typically produced grains with small seed heads, which contained low levels of starch. In a quest to improve animal production, these old prairie grasses have been replaced with genetically selected plant species that contain high levels of sugars and starch (NSC) both in the leaves, and in the seed heads. Most modern horse pastures are based on plant species that were developed for intensive production of beef, dairy cattle and sheep. These plants are known to cause disorders such as laminitis. For further information see www.safergrass.org.

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Basically, horses need

- Both digestible, and slowly digestible fiber for energy and gut motility
- Balanced minerals and vitamins
- Fresh water
- Digestible protein (and amino acids)
- Digestible energy

Carbohydrates and Calories in Popular Horse Feeds



- Oils/Fats.

The quantity of each ingredient is determined by bodyweight, and the physiological condition of the horse (is it growing, exercising, pregnant or lactating). The key is to keep these ingredients in balance, and not to over-feed any one component.

Horse feeds vary from hay to provide fiber, through to concentrates, to provide digestible energy, protein, minerals and oil. Most concentrates contain a grain or grain byproducts, which in turn contain digestible sugars and starch, i.e. NSC. The level of NSC in a feed can be

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determined in a laboratory (e.g. Dairy One), and helps to rank feeds. Stance Equine have developed series of articles discusses some of the metabolic disorders in horses that could be influenced by high levels of NSC in the feed. It should be stressed that not all horses react the same to high NSC feeds; however the discerning horse owner should be aware of the potential effects of high NSC feeds, and select lower NSC feeds if you are concerned about dietary related disorders (bad behavior, laminitis, colic, etc.).

As a result of recent information from university studies, and observations from practical horse owners, new feeds have been developed which have a low NSC content, and yet provide energy in a NSC form to support peak performance.

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