

**Brooks
Performance
Horse Feeds**

**1570 Highway 7A,
Port Perry, Ontario
L9L 1B5**

**May
2022**



www.brooksfeeds.com | 905.985.7992

At the barn door with Brooks

Inside This Issue >>>

1/ New Brooks dealer

2/ NSC guidelines

3/ Building a strong immune system in mares and foals!



Product Description

Natural vitamin E supplementation of broodmares during late gestation and early lactation can give foals a leg up in building a strong immune system. Researchers have recently investigated the value of vitamin E in mares.





The Brooks family continues to grow. We're happy and proud to welcome Camlachie Feeds to our family of Brooks retailers in Ontario. Camlachie Feed is owned and operated by Doug and Beth Burnley. Longtime community members and active local dairy farmers, Doug and Beth have raised or owned most types of farm animals and pets. Doug and Beth raise corn, wheat, beans, oats, hay, and look after a purebred Holstein Dairy Cow herd under the Hillsett Farms name. They currently own 2 horses for pleasure and Beth has many years experience in the dressage, jumping and cross-country arena. Beth was also a camp counselor at Horse Camp for years and has an Award of Merit in Agricultural Business Management.

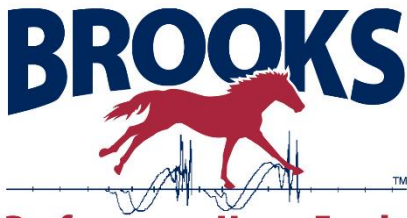
For your Brooks Feed requirements contact Camlachie Feeds.

**912 Egremont Rd
Camlachie, Ontario
N0N 1E0**

Phone: 519-899-2285

www.camlachiefeed.ca

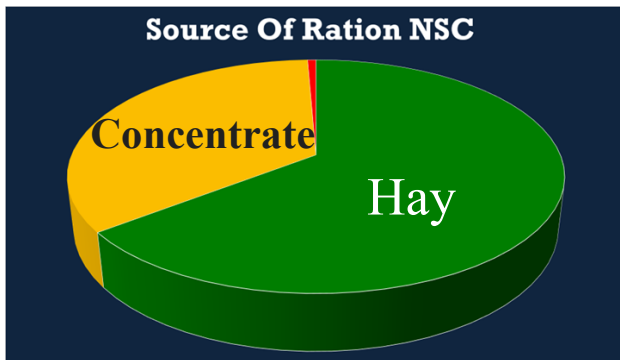
Some Guidelines for NSC in feeds



Performance Horse Feeds

Over the past number of years researchers have concluded that horses with conditions such as insulin Resistance, equine metabolic syndrome (EMS) and polysaccharide storage myopathy do best when consuming diets low in starch and sugar.

However, because something is true for some doesn't mean it's true for all. Low and ultra-low NSC complete feeds have a place but not for every horse. Some horse owners may be shopping for the lowest NSC feeds available when it isn't necessary or most appropriate. Most horses tolerate a moderate amount of NSC very well. What they don't tolerate well is obesity or a poorly balanced ration.



When determining the best product to meet the daily requirements of a horse, NSC is just one factor to consider. Of equal and probably more importance is calorie density (energy level) and a proper mineral/vitamin balance. Of course, the primary factor is always the forage. The forage is supplying essential fibre and often most of the dietary NSC, even on a high "grain" diet. For example, a diet that includes 6 pounds of Brooks Leading Edge (25% NSC) and 20

pounds of hay derives 60% of the dietary sugar and starch from the hay.

Sugar and starch content are measured in forages and feed products as WSC (water soluble carbohydrates) and ESC (Ethanol soluble carbohydrate) and starch. NSC is properly calculated by adding the starch and water-soluble carbohydrate (WSC) fractions of a feed together.

"However not all WSCs contribute to a blood glucose spike, because not all of it's absorbed into the blood stream from the small intestine. Some WSCs require microbial fermentation in the horse's hindgut, so they don't impact blood glucose in the same way. Ethanol soluble carbohydrate (ESC) captures monosaccharides and disaccharides that can raise blood glucose but far less than the microbial requiring sugars. Some argue that ESC combined with starch is what should be considered when feeding horses with metabolic conditions."

<https://thehorse.com/158171/low-nsc-horse-feeds-what-kind-does-my-horse-need/>

Some organizations and nutritionists refer to NSC as starch plus ESC instead of starch plus WSC. Since starch plus ESC is generally a lower number it can be confusing for a consumer looking for a low NSC product. When making a feed choice, consumers should ask industry professionals to be specific as to how they are measuring NSC.

Brooks nutrition advisors do not assume that the lowest NSC feed is always the most appropriate. Instead, we take a more holistic approach taking into consideration the NSC but in the context of the horse's lifestyle, calorie requirements, mineral requirements, weight maintenance and other inputs such as hay or pasture. For example, an overweight horse does not need a couple pounds of ultra-low NSC feed that does not provide a balanced ration when one pound of a balancer pellet supplies the minerals and vitamins needed and less NSC. Conversely a horse badly in need of calories for weight maintenance will not do well on an ultra-low NSC feed that has a very low-calorie density. In simple terms "calorie density" is a feed products ability to support

muscle activity during exercise as well as the maintenance of normal body functions. The more intense the activity the more calories are generally needed. “Easy keepers” generally require fewer calories daily compared to “hard keepers.” A high calorie formula like Fibre O Plus has nearly 40% more calories compared to some ultra-low NSC products.

Amount vs. percentage. What really matters?

While there are no specific recommendations for the correct level of NSC in a diet, studies have offered some guidelines that Brooks Nutrition Advisors consider when balancing rations for different types of horses. By measuring the amount of sugar/starch consumed per meal we can recommend the minimum number of daily feedings to minimize the glycemic response and avoid potential problems. For example, a balancer pellet like Enhancer fed twice a day is well under the guidelines for a metabolically challenged horse. For a normal horse a high NSC formula like Phase III should be fed over at least three feedings to minimize glycemic response. These are guidelines that help to determine an “appropriate” choice of feed as well as how many meals should be offered daily. **The important point is that the amount of NSC consumed at each meal is as important as the percent NSC of the feed.**



To provide some informed guidance to our clients and staff, Brooks has segmented our feed products into five categories ranging from very low NSC formulas like Fibrelite to “Optimized” formulas like Phase III, Pacemaker, and 12%/14% Sweet feeds. At the same time, we have segmented the feed products according to their calorie density. If for example, a low NSC feed is required with a significantly high calorie density we can choose “reduced” NSC formulas like Fibre O Plus and Eeze that also have a high calorie density.

Conversely where obesity is a concern a balancer pellet like Enhancer, or All Phase 20 may be all that is required.

Brooks has a wide selection of products with varied NSC and “calorie density” values. A Brooks nutrition advisor can provide the expertise needed to find the right formula for your horse. The well-being of your horse is our focus and commitment.

www.brooksfeeds.com

Non-structural carbohydrate (NSC) explanation

- **Very low** – The NSC is +/- 10%. Consultation with a Brooks advisor and hay sampling are recommended when metabolic issues are present.
- **Reduced** –The positive effects of non NSC sources such as high quality fibres and fats are maximized.
- **Controlled** – Fibre & fat sources are emphasized while soluble carbohydrates augment athletic achievement and growth.
- **Measured** – Rapidly available carbohydrate energy is perfectly blended with high quality fibre and fat to provide power, speed, stamina & energy for growth.
- **Optimized** – Rapidly available carbohydrates are emphasized to support maximum speed and power.

Building a Strong Immune System in Mares and Foals

Natural vitamin E supplementation of broodmares during late gestation and early lactation can give foals a leg up in building a strong immune system. Researchers have recently investigated the value of vitamin E in mares. When supplemented with vitamin E, mares show increased passive transfer of antibodies to foals, which ensures the strength of the neonatal immune system. Foals that do not consume enough colostrum or receive only poor-quality colostrum often have failure of passive transfer (FPT), where an inadequate immunoglobulin intake can lead to illness and death.

In one study, pregnant mares were supplemented with 2,500 IU of water-soluble, [natural vitamin E](#) from the last month of pregnancy into the first few days of lactation. Bondo and Jensen (2010) reported mares supplemented with the water-soluble, natural vitamin E had higher levels of vitamin E, IgG and IgM in their colostrums and milk. Subsequently, higher blood levels of IgM and vitamin E were reported in the foals of the supplemented mares.

Providing natural vitamin E to pregnant mares will reduce the incidence of failure of passive transfer and will offer the foal an opportunity to receive more antibodies during the critical first moments of life, promoting a healthier immune system.

Source matters.

Natural vs. synthetic vitamin E



There are physiological differences in the absorption, utilization, and tissue retention between synthetic and natural vitamin E. In fact, the body preferentially transports and incorporates natural vitamin E into tissues. Current research in several species, including horses, shows that natural vitamin E is two to three times more potent than synthetic.

Many feeds and supplements contain synthetic vitamin E which is noted in the ingredient list as dl-alpha-tocopherol or “vitamin E supplement.” When supplementing with vitamin E, be sure you choose a natural vitamin. When reviewing the ingredient listing on your feed or supplement, look for the little “d” in front of the name: d-alpha-tocopherol. It may be written out as “natural vitamin E.”

Kentucky Performance Products, LLC offers two natural vitamin E products to choose from: [Elevate W.S.](#) and [Elevate Maintenance Powder](#).

Elevate W.S.’s unique formula is the most bioavailable source of natural vitamin E on the market today. Developed to increase circulating blood levels quickly, Elevate W.S. has become the product of choice for veterinarians managing horses and foals with neurological and muscular disorders, compromised immune response, or low fertility rate. Elevate W.S. begins raising blood vitamin E levels within 3 days. Choose [Elevate W.S.](#) when a quick response is required.

Recommended Use Rates of Elevate W.S.

- Maintenance: 1,000 IU/day
- Stalled horses or horses maintained on poor pasture: 1,000-2,000 IU/day
- Intense training: 3,000 IU/day
- Pregnant and lactating mares: 3,000 IU/day
- Foals: 3,000 IU/day



Elevate Maintenance Powder was developed to provide a highly bioavailable source of natural vitamin E in an easy-to-feed form for long-term supplementation. As with water soluble vitamin E, it supports a strong immune system in mare and foals. Elevate Maintenance Powder begins to raise vitamin E levels in the blood in a matter of weeks. Choose Elevate Maintenance Powder as a follow-up to Elevate W.S. or when a slow, steady increase in vitamin E levels is appropriate.

Recommended Use Rates of Elevate Maintenance Powder

Maintenance: 1-2 scoops per day (1,000-2,000 IU vitamin E per day)

Intense training: 3-5 scoops per day (3,000-5,000 IU vitamin E per day)

Pregnant/lactating mares: 3 scoops per day (3,000 IU vitamin E per day)

Foals: 3 scoops per day (3,000 IU vitamin E per day)

Stallions: 3 scoops per day (3,000 IU vitamin E per day)

Neurological challenges: Consult your treating veterinarian

