FOOD FOR THOUGHT

Barastoc Nutritional Advantages for Performance Horses

The art of feeding performance horses comes from matching the best dietary energy sources to fuel your horse. The energy demand in performance and sports horses is very high, so getting extra calories is a priority. This extra digestible energy must be provided to maximise performance while helping maintain digestive health and function. When your horse is competing, its nutritional needs are higher, and during recovery, it needs particular nutrients and different sources of energy to keep up its outstanding performance.

Some of the unique attributes and merits of Barastoc Competitors: Prebiotic and Postbiotic (Diamond V® XPC)

Diamond V[®] XPC is a yeast culture that promotes excellent digestive health and rapidly improves your horse's immune system. Diamond V[®] XPC also assists in recovery from hard work and reduces stress and inflammation by suppressing lactic acids and free radicals. Being an all-natural, fermentation-based prebiotic produced using a proprietary anaerobic fermentation technology of Saccharomyces cerevisiae-producing metabolites. By promoting robust, healthy digestion, these nutritional metabolites include organic acids, phenols, peptides, nucleotides, phytosterols, mannans and beta-glucans that support the growth of intestinal bacteria as they are used as a food source.



Metabolites support better digestion efficiency of feed nutrients by balancing gut microbiota and the immune system while optimising gut morphology. Prebiotic activity helps nurture hindgut microbial populations, while antioxidant activity improves immune function.

Improved immune function through improved gut morphology.

- Feed digestibility and efficiency
- Performance and recovery
- Health and wellness
- Immune function by reducing systemic inflammation and antioxidant status
- Digestive health by promoting a healthy balance of microbiome in the lower gastrointestinal tract

Horses are designed to be hindgut fermenters and eat diets high in fibre; this supports a hindgut microbiome including billions of bacteria, fungi and protozoa, which aid in the fermentation of cellulose and other fibrous feed elements. Maintaining a healthy hindgut microbiome is essential for healthy digestion by promoting an optimal balance of bacteria in the hindgut, reducing systemic inflammation function, improved immune function and gut morphology.



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Natural Equine Antacid (Equine Gastrolize™)

Barastoc Competitor now has the added benefit of containing a natural equine antacid, 'Equine Gastrolize[™]. Gastrolize[™] is a slow-release buffering agent that helps prevent gastric ulcers and supports the increased uptake of nutrients and minerals vital for peak performance. With increased levels of bioavailable sources of calcium, magnesium and trace minerals being derived from natural marine sources. Because of its highly porous honeycomb structure with a high surface area to volume ratio, it results in a highly digestible source of calcium and magnesium. Highly bioactive and with superior absorption compared to other traditional sources of calcium, increased levels of highly absorbable calcium increases bone strength. Gastrolize[™] has a solid and persistent buffering capacity that may assist with maintaining a higher pH over a prolonged period.



Amino Acids

Amino acids are the primary building blocks of protein tissue and assist in top-line development and muscular integrity. The metabolic pathways (energy and protein synthesis) are the key elements: Exercise increases amino acid metabolism; for example, alanine can be released from muscle and used for gluconeogenesis in the liver. BCAA and β-Alanine play critical roles in lactate catabolism to pyruvate (recovery procedure) and extra nitrogen catabolism by-products load from the liver and muscular tissue.

This occurs from nitrogen being transported from muscle following a transamination reaction in which the amino group is removed from one amino acid and attached to pyruvate, forming alanine. The alanine is transported in the blood to the liver, where the nitrogen can be used to form urea, and the pyruvate is used for gluconeogenesis. Horses may lose 1 to 1.5 g N/kg of sweat; therefore, a horse sweating heavily during intense exercise may lose 5-7 g of nitrogen. Alanine and leucine concentrations increased only after exercise compared to rest. Barastoc Competitor has been formulated with increased essential amino acids such as lysine, methionine and threonine.

Antioxidants

Antioxidants include vitamins E, C and A, selenium, glutathione, lipoic acid, coenzyme Q10 and isoflavones. The body typically uses oxidation to process nutrients such as carbohydrates, fats and proteins into energy. During this oxidation process, vitamin E is the first point of defence and helps to maintain the body's cells by protecting the membrane from free radicals. With the increased demands of exercise and high performance, antioxidants are the first point of defence against free radicals in muscle cells and in stopping oxidative stress. In addition, vitamin E has specific immunomodulatory properties that influence cytokine response to intense exercise. Fresh pasture has higher amounts of vitamins A and E; performance horses that are stabled or have limited access to fresh pasture will benefit from added vitamin E in their diets; due to the higher workload, performance horses are more susceptible to oxidative stress.

Vitamin C reduces oxidative stress when the balance between antioxidants and oxidants becomes unbalanced, and oxidants become more prominent. Oxidants are oxygen-containing molecules containing free radicals and other reactive compounds. Antioxidant stress occurs when free radicals have increased beyond the protective ability of the antioxidants' defence systems.

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Energy Tunning Compounds

Barastoc Competitor is a fully fortified performance pellet that contains fast and slow-release energy sources for anaerobic and aerobic activity, so all the physiological fuel systems are in play. Energy participation describes the relative contribution of different nutrients such as fat, non-structural carbohydrates (NSC), protein and fibres, and soluble fibre sources such as the 'Barastoc Suprefibres' into the various energy generation pathways at different stages of exercise and during different types of performance. The omega-enriched canola oil in Barastoc Competitor supports diverse and balanced sources of slow-release and fast-release energy pools, which helps riders and trainers to feed the best combination of dietary energy sources to meet an individual horse's fuel requirements for their desired performance and recovery as well as satisfying your horse's specific metabolic needs.

Barastoc Competitor is a scientific approach to saving muscle glycogen by adding more fat and using fibre sources such as beet pulp and 'Barastoc Superfibres'. Added fat from omega-3-rich vegetable oil will give your horse more fuel during periods of heavy aerobic exercise; therefore, stored carbohydrates are not used for energy. Fatty acids are an extremely useful energy source and are well digested by horses (>90%); the omega-3 to omega-6 ratio also plays an essential role in reducing muscle inflammation and decreasing healing time in high-performance horses.

Barastoc Superfibres

Super fibres are soluble fibre sources such as beet pulp and soyhulls and have digestible energy levels higher than typical forages and are lower in starch. Super fibres have energy levels similar to cereal grains such as oats and barley, but due to the fibrous nature of Superfibres, the likelihood of a grain overload is reduced when compared to cereal grains while providing a cool, slow-release energy. The digestibility of Superfibres is higher, beet pulp 80% and soyhulls 75%, compared to hay which is 40-60% digestible.

The Role of Chromium in Performance Horses

Chromium plays a vital role in the communication between insulin and insulin receptors. It also plays various roles in lipid metabolism and immune function, affects the metabolism of carbohydrates and proteins, and

is essential for increasing insulin sensitivity and glucose uptake. The organic chromium in Barastoc Competitor helps to mobilise more blood glucose into muscle tissue, thus allowing for improved performance. This maximises cell fuel (glucose) utilisation and improves health and performance.

In Conclusion

Barastoc Competitor uses a wide range of fast and slowrelease energy sources, including fat and super fibres, beet pulp and soy hulls. With the wealth of years of technical knowledge of Barastoc nutritionists and relying on our state-of-the-art equine feed production infrastructures, Barastoc Competitor is formulated and produced for all classes of performance horses and keeps your horse healthy and fuelled for any situation.





horses come first