Glycaemic Index of Horse Feed

David Nash, Head of Nutrition & Quality
BARASTOC (Ridley)

You've probably heard the term "glycaemic index" at some point. This buzz-phrase has been circulating among informed horse owners for several years, but what does it mean? More importantly, why is it important in equine nutrition?

Glycaemic index is a system used to rank carbohydrates based on their effect on blood glucose levels, providing a numerical index of the level of glucose in the blood after a meal.

Though originally developed for humans, the system has been modified for horses. Carbohydrates that break down quickly during digestion have the highest glycaemic indices. On the opposite end of the spectrum, carbohydrates that break down slowly, releasing glucose gradually into the bloodstream, have the lowest glycaemic indices.

Both cereal grains and forages are included in the table and the values shown are estimates and may differ according to individual studies

GLYCAEMIC INDEX (GI) OF EQUINE FEEDS AND FORAGES	
Steam Flaked Corn	144
Sweet Feed	129
Whole Oats	100
Cracked Corn	90
Beet pulp and molasses	94
Beet pulp (unrinsed)	72
Orchard grass hay	49
Rice bran (stabilised)	47
Ryegrass hay	47
Lucerne hay	46
Beet pulp (rinsed)	34
Mature grass hay	23

To use this knowledge in everyday feed management, remember that horses are healthiest when fed diets that can be digested and absorbed slowly.

Feed Management

Rations with a low glycaemic index may be suitable for horses diagnosed with conditions such as pituitary pars intermedia dysfunction (PPID; equine Cushing's disease), equine metabolic syndrome (EMS), recurrent exertional rhabdomyolysis (RER), polysaccharide

storage myopathy (PSSM), and osteochondritis dissecans (OCD). Remembering that the most appropriate form of energy supplementation depends on the disorder and the individual's energy requirement.

Calm Behaviour

Many horses have behavioural issues and research has found that 'at risk' horses fed lower glycaemic feeds showed calmer behaviour than those fed high GI concentrates. Most dry forage are good low GI feed and needs to be topped up with a low intake balancer pellet to supply missing minerals and vitamins. If extra energy is required, a low GI concentrate such as Barastoc Calm Performer, Barastoc Breed N Grow or KER Low GI cube works well.

Horses with PPID are insulin insensitive and need a ration with a low glycaemic index. Some may be relatively easy keepers and benefit from mostly forage rations or lower energy feeds with a low GI such as Barastoc Calm Performer, while others may need additional minerals and vitamins from products such as Barastoc Groom.

Those diagnosed with EMS tend to be obese and easy keepers, and should be fed mostly forage rations with an appropriate low-inclusion balancer products such as Barastoc Groom. Horses with PPID or EMS are prone to laminitis that can be triggered by access to lush pasture, so pasture intake should be carefully controlled

Horses with RER and PSSM also benefit from low-starch feeds. Fat and digestible fibre is an important supplement. RER horses need intakes from lower starch feeds such as Barastoc Phar Lap or Barastoc Competitor while PSSM horses typically require fewer calories and are best fed a balancer pellet with added fat if required.

The risk of OCD may be increased by use of high-glycaemic feeds, but there is no evidence that young growing horses need feeds with extremely low glycaemic indices. A certain amount of starch in the ration is desirable for young horses. Diets for young horses should have moderate glycaemic indices and be fortified to promote optimal muscular and skeletal development. Feeds like Barastoc Breed N Grow or KER Low GI cube are suitable feeds. Some breeds or individuals have lower growth rates and slower metabolisms and do best on low intake balancer pellets or concentrates such as Barastoc Legend or Barastoc KER Stud Balancer.

As more feeds are labelled with starch content it will be easier to determine low GI feeds. There are lots of factors to consider when designing a diet for your horse. Please consult your vet if you think your horse has any of the conditions mentioned in this article.

Visit ***barastochorse.com.au*** to find the right diet for your horse