

# The Season for Digestive Health Challenges by Doug Campbell

During the fall and winter months/ some horses experience an unwelcome problem – loose stools and even diarrhea. Some of these horses will exhibit behavioural issues/ mild abdominal discomfort/ are gassy and may dribble after passing manure. A few of them develop chronic gastrointestinal problems year-round.

The causes vary and serious illness or disease must be considered- and the veterinarian called- if the horse has a fever or is off his feed. Parasites are a common cause of loose stools and fecal counts, pasture management and wormer resistance should be considered. The horse's teeth should also be checked as poorly chewed food can adversely affect digestive function.

But, what if none of these seem to apply in your horse's situation?

A healthy pastured horse grazes 16-20 hours per day and is almost continuously foraging and chewing food. Because of this, the horse's stomach continually produces hydrochloric acid and pepsin which is used to break down the food and begin digestion. The constant chewing action when grazing produces saliva which buffers the stomach acid. In addition, the horse also ingests billions of bacteria, enzymes and other microorganisms (probiotics) from the grasses, weeds and dirt. This combination of acid buffering by the saliva and microbial ingestion ensures that microbial populations in the hind gut are continually replenished and kept at healthy levels. When the horse's hind gut (cecum and colon) is constantly supplied with adequate microbes, quality fibre and ample water, it is able to maintain proper pH levels. This allows the "good" bacteria to ferment fibre and produce volatile fatty acids (energy), B vitamins, amino acids as well as other nutrients such as electrolytes. A healthy hind gut's mucosal lining is able to facilitate the absorption of these nutrient-containing digestive fluids back into the horse's body. This continually nourishes and hydrates the horse. The horse is fine... but now comes the change of season.

During fall and winter, many horses have minimal access to natural bacteria and enzyme sources. Their hind gut struggles to maintain the healthy microbial population needed for good digestive function. Add to this other changes in the hind gut pH created by starch overload, lack of continual fibre to chew on, antibiotic or anti-inflammatory therapy, deworming, trailering and moulds in the feed. The result can be a drop in the pH levels which means an increase in hind gut acidity, commonly called Hind Gut Acidosis. This causes the good fermenting bacteria to die off, and harmful (pathogenic) microorganisms to increase. Digestive function becomes impaired, toxins are produced and absorbed into the horse's body, and the mucosal lining is compromised. It is unable to effectively absorb the nutrient-containing digestive fluids from the hind gut and they are lost - in loose, watery stools.

This problem can affect all ages. Foals, especially after weaning,

senior horses, rescue and race horses, as well as stressed show horses can be affected. Gastric ulcers may be identified, but the problem frequently involves the hind gut being overly acidic and having insufficient levels of good probiotic microorganisms.

Solutions to gastrointestinal problems are an inexact science at best, but the addition of broad spectrum prebiotics and probiotics can have beneficial effects on the digestive process. Prebiotic and probiotic products (if live and high quality), can provide the "good"

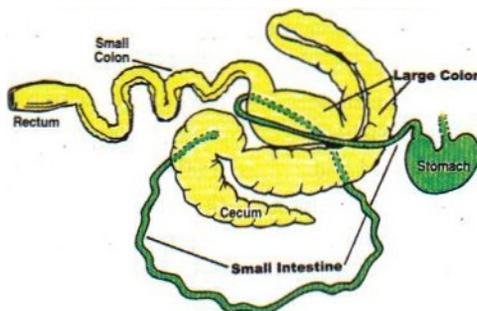
microorganisms needed to repopulate, nourish and re-balance the digestive tract. Of course, it is also important to evaluate the entire feed program for adequate quality and quantity of fibre, protein, carbohydrates, fat sources, minerals, vitamins and water quality.

The hind gut of the horse is the key to fibre digestion, appetite, immune function response, hydration, attitude, overall health and, ultimately, performance. The digestive system of the horse requires billions of microbes and enzymes to

function properly. The challenge is to maintain higher levels of good bacteria and enzymes and minimal levels of pathogens. It is a balancing act that probiotics and specific prebiotics can help with.

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## THE DIGESTIVE SYSTEM



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