The Correct Use Of Probiotics & Prebiotics Can Dramatically Enhance Equine Digestive Health

Adding prebiotics and probiotics to a daily equine feeding program is an inexpensive insurance policy that lowers the risk of colic and other metabolic issues. The life cycle of gut microbes is about 15 minutes so it’s easy to change the population very quickly, and that can be a recipe for disaster.

**Probiotics**

In the life of a domestic horse, something occurs almost daily that can shift the microbial population in the gut, increasing the number of “bad” microbes and reducing the number of “good” ones. The vet comes to vaccinate, the farrier digs out an abscess, a new load of hay arrives that is different from the last, a horse gets the wrong feed or has to travel to a show—all these events can cause digestive stress and disrupt the microbes in the hindgut. By adding the “good” microbes daily through supplementation, it minimizes the odds of the “bad” ones having much effect.

- Microbes in the equine hindgut (cecum and colon) are required to help break down and ferment the fibrous portion of hay and feed into products called volatile fatty acids—what horses use to produce energy and milk and perform other bodily functions.
- B vitamins and other nutrients essential to health and well-being are also formed through the actions of microbial populations. Because microbes play a major role in digesting feed, it is essential that hindgut microbes are healthy and their numbers and ratios are at appropriate levels.
- A healthy microbial population, or biomass, helps maintain a neutral pH in the hindgut. A neutral pH reduces the incidence of colonic ulcers (which often accompany stomach ulcers), and substantially reduces the potential for colic and laminitis (founder).

The most beneficial probiotic for horses is a live, equine-specific probiotic; one that contains organisms cultured from the equine digestive tract. Not all probiotics are created equal. They won’t work unless they complement what’s in the horse’s digestive tract (not a cow’s) and they are alive.

Many horse owners add a probiotic supplement daily or periodically. Because stress comes from many directions and isn’t always recognized, a daily probiotic is preferred, and including it in feed is the most efficient and cost conscious way to incorporate it. As a result, more feed companies are adding probiotics to their formulas.

Some owners are concerned that probiotics won’t have any benefit due to the acidity in the stomach or that they will be killed during feed manufacturing. Current encapsulation processes assure digestive tract effectiveness to make sure the probiotics survive the low pH of the stomach and are effective in the neutral pH balance of the digestive system. But be aware—just because a feed company adds probiotics to its formula, doesn’t mean the amounts are guaranteed. Simply claiming probiotics are added is not good enough. The FDA
does not test probiotic supplements and a recent university showed that 80% of probiotic products on the market do not meet guarantees. A few companies, like Triple Crown, guarantee probiotic inclusion rates on their tags, and that level must be present in the finished product susceptible to testing by state regulatory officials.

**Prebiotics**

Prebiotics are not microbes, but ingredients that help the microbial populations in the hindgut remain stable and healthy. A prebiotic is not actually part of the microbe population, but it enhances the quality of the microbe population that’s there.

- Prebiotics are non-digestible carbohydrates that make their way through the digestive tract and help the good bacteria grow and flourish, keeping the good bacteria healthy.
- Prebiotics that assist beneficial bacteria in the gut mostly come from carbohydrate fiber called oligosaccharides.
- They are not digested, so the oligosaccharides remain in the digestive tract and stimulate growth of beneficial bacteria.
- Sources of oligosaccharides can contain part of the carbohydrate that’s in the wall of a yeast cell. This section of the yeast cell wall is called a mannanoligosaccharide.

Yeast cultures are the most commonly recognized prebiotic. Triple Crown uses both a live yeast culture, considered a probiotic, and yeast metabolites, which are considered a prebiotic. No other feed company has this combination of both.

While the use of prebiotics and probiotics in horse feeds is relatively new in some formulations, Triple Crown has used this technology since its inception in 1990. Although there is little research on equines, prebiotics and probiotics have proven to be very effective on other herbivore species and are now becoming a health option for humans. The most recent NRC admits there needs to be more research on horses specifically, but does note there is enough research on yeast cultures to claim they offer digestive benefits.

It is no longer, “An apple a day keeps the doctor away.” It is now, “A probiotic a day keeps the vet away.”