



# Pro and Prebiotics for Horses

by Chris Huppe, DAEP

When talking with horse owners, it seems that many are unclear about pre- and pro-biotics. Understanding that they are helpful, many folks don't know why, how, or what to give. Those that give one or the other to their horses consider it "covered," often without even knowing which they are giving, why, or how it affects their horse.

Probiotics and prebiotics are different, and in my experience, offering the correct one can be extremely beneficial to the horse. This paper is a culmination of internet research combined with expert and personal experience, offering an easy to read summary that will save you time and help your horse. It is not a substitute for veterinary advice. Should you consider a change in diet or supplementation for your horse, always check with a veterinarian.

I have said many times that the two most important systems in your horse are the gut and the feet. And that these two systems are connected. The 'gut' has become a somewhat generic term meaning different things to different people. In this writing 'gut' refers to the hind gut of the horse, which is the large intestine. While the horse's 'gut' is a complex structure, a typical horse owner will not fully understand, there are some basic facts that we have a responsibility to know. In my experience, gut health is at the core of many concerns and cannot be overlooked if you want to have a healthy horse with healthy feet. The hind gut is located behind the small intestine in the path of food digestion. Digestion performed in the hind gut is primarily done by tiny organisms, rather than enzymes.

There are thousands of species, and billions of individually naturally occurring organisms living in your horse's hind gut. This is true for every horse at every moment. This is normal. These gut organisms may be referred to as microorganisms, bacteria or flora. Generally speaking, each of these tiny organisms fall into one of two categories; good organisms (=beneficial) and bad organisms (=harmful). Your goal is not a total obliteration of one category (i.e. the bad organisms), but rather a healthy balance between them. Unfortunately, this balance between good and evil is very delicate and almost everything we do in our keeping of domestic horses today, plays havoc on that balance.

If you offer a 'biotic', which do you give? Is there a difference and if so, which does your horse need? How and when do you give it?

Generally speaking, both probiotics and prebiotics are given to alter the balance between good flora and bad flora. And most commonly, a probiotic is given. But probiotics and prebiotics work entirely differently. In a nutshell:

- Probiotics are good, live organisms. They are just like the ones already in your horse's system.
- Prebiotics are food or nourishment for the good organisms.

**DOES IT MATTER WHICH APPROACH YOU TAKE TO CREATING THE DESIRED BALANCE?** I believe it does. Offering a probiotic and increasing the number of good organisms is a good step and likely you have seen good effects when giving it. Often once off the probiotic the symptoms return and you give it again. There are many different probiotics on the market and these differ by the specific kind and number of organisms they contain. Probiotics are live organisms (very small so you can't see them but nevertheless, very much alive) and there are some logistical issues when offering probiotics to be sure they are effective (offering dead organisms is not helpful). Most probiotics are used in the stomach and early parts of the intestine (small intestine). Probiotics are good and they will help but they have limitations.

To me, a better approach is offering the building blocks for the naturally occurring organisms in your horse's gut. This means offering a PREbiotic. Prebiotics are the nutrition for the organisms. Building, or flourishing, or developing the "good" flora (by giving a prebiotic) allows the gut to manage itself more effectively on its own, minute by minute and day by day as the needs change. In addition, prebiotics traveling through the digestive system often make it all the way to the hind gut, which is where the microbial digestion primarily takes place, and the nourishment for the microbes is needed.

I look at it this way. Let's say you have a large army of tiny soldiers at war in your gut continuously maintaining the delicate balance between good and evil. The good soldiers are weak and tired for lack of food. Because of their weakened condition they are barely holding their own against the bad guys and there is a constant fight at the front lines. Some days the good guys prevail, some days the bad guys prevail but overall, both sides teeter around the line. All of a sudden, there is a horrible assault.



## Pro and Prebiotics for Horses (cont.) by Chris Huppe, DAEP

Some examples include trailering, vaccinations, excessive parasites, chemical wormer use, disagreeable weed in hay, new horse in the paddock, partner horse taken away, processed grain, processed grain in bulk, a change in the weather, confinement in a stall, etc. Your good guys simply don't have the extra strength to fight harder. That is a day the bad guys win. For the next several days there are more assaults to the front lines (a multiple-day show or event, the wormers and vaccinations you initially gave still actively doing their "work", another change in weather and another and another, more processed grain, more stall rest....). Eventually your hard fighting good guys just can't hold the line any longer, and the bad guys gradually gain a little ground. Several days of a little ground eventually turns into going deeper and deeper into enemy territory. Your bad guys have gotten slowly but surely "over the line." In the end, the good guys are outnumbered and your horse gets an upset stomach, is "cinchy" around the girth, has weight loss, looks lethargic, has a dull coat, seems slightly "off", has a poor "attitude" in training, refuses to bend, has poor quality hoof). The assaults continue (more wormers, vaccinations, stall rest, trailering, weather, etc, etc). And the cycle continues. Too many assaults, too many bad guys, weak and ineffective good guys, too many lost battles and you end up with a ton of problems.

**SO WHAT CAN YOU DO?** You have two choices. You can:

A) Send in more soldiers (probiotic) who before long will also be weak and tired and unable to stand up to the ongoing assaults.

B) Get the soldiers you have up to snuff (prebiotic) and let them start fighting back!

PROBIOTIC	PREBIOTIC
A live organism	Food for the live organism
Die due to temperature, acidity, time	Not affected by temperature, acidity, time
"Used up" in the stomach and small intestine	Reaches the hind gut

### RECOMMENDATIONS:

Begin a daily regimen of a high quality **prebiotic** (take better care of the soldiers you have). Adding a prebiotic daily will nourish the good organisms so they can flourish! If you suspect you have an acute imbalance in your horse's gut flora, you may want to also add a high quality probiotic for 30 days (put more soldiers on the front line). A healthy amount of healthy organisms in the hind gut, will keep the hind gut healthier!

Lastly, if possible, consider helping the 'biotics' by eliminating or reducing the daily assaults! Eliminate grain or if you cant eliminate it (which I don't buy), reduce the bulk of the grain in each feeding; feed less grain and more fiber. Consider the effects of vaccinations and chemical wormers and if you must use these, increase the prebiotic before, during and for 3 days after their administration (the assault!). Be mindful of the affects of trailering, showing, work schedules, other stressors going on in the barn and set up the hind gut for success!

The health of the hind gut is paramount in the health of the horses's feet. Adding a prebiotic to your horses's feed will, in virtually every case, benefit the horse.

## Additional Information From Dynamite

Dyna Pro®, Dynamite's prebiotic supplement, is one of Dynamite's foundational products recommended for ALL animals. Dyna Pro has become a "must-have" product for all horse owners but it is also a building block in every animals foundational program.

Health depends on a thriving population of beneficial gut microbes. Factors such as stress, diet changes, chemical wormers, vaccinations, and antibiotics, as mentioned in Chris's article, will cause an animal's gut to become an unfriendly environment and will force microbes to go dormant. Dyna Pro is designed to create the ideal conditions for good microbes to come out of dormancy, multiply, and thrive so your animal gets optimal utilization of food and supplements, resulting in a vibrant animal!

For more information about Dyna Pro, check out our blog at [DynamitesBlog.com](http://DynamitesBlog.com) and our YouTube channel listed under [DynamiteSpecialty](http://DynamiteSpecialty).

