## **Putting it into Practice**

- For optimal health and cost-effectiveness, feed a highquality hay or pasture diet.
- To correct fatty acid imbalances, avoid feeds with a high ratio of omega-6 to omega-3 fatty acids.
- In order to not overload the hind-gut with carbohydrates, avoid feeding high amounts of grain and other sweet feeds.
- To maximize nutrient utilization from feeds, supplement with omega-3 fatty acids, antioxidants, vitamins, minerals and other intestinal protectants, such as that provided by Platinum Performance™ Equine Wellness and Performance Formula.
- During times of intestinal inflammation and/or diarrhea, supplement your horse with therapeutic levels of an intestinal protectant, such as Platinum Performance's Bio-Sponge<sup>™</sup>.

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# Improve Digestive Health and Get the Most From Your Feeding Program

Tara Hembrooke, PhD, MS

The feeds and supplements you give your horses can affect their ability to digest and utilize the energy and nutrients in their diet either positively or negatively. Therefore, it is important for you to get the most out of what you feed by feeding to optimize efficiency.

### Feeding Too Much Concentrate

Feeding cereal grains and high starch concentrates can overload the ability of your horse's small intestine to digest and absorb carbohydrates. As a result, the excess starch reaches the hindgut where microbial digestion and the release of volatile fatty acids and lactate occur. This results in acidosis, which can lead to colic.<sup>1,2</sup> Furthermore, overgrowth of enteric bacteria can increase endotoxin release<sup>3,4</sup> and damage the lining of the intestines, which impairs the horse's ability to digest the feed and may be life-threatening. Grains and sweet feeds also have high levels of omega-6 fatty acids, which increase the production of strong inflammatory mediators that aggravate chronic disorders and decrease the intestine's ability to absorb nutrients.<sup>5,6</sup>

## Nutrients That Can Increase Feed Efficiency

Certain nutrients, such as those in Platinum
Performance,™ can increase feed efficiency in horses.
For example, the addition of healthy fats, such as omega-3 essential fatty acids (EFA), to the diet has been shown to decrease inflammation in the intestine,7 which improves its ability to absorb nutrients.6

Micronutrient supplementation also can improve feed efficiency. Prebiotics are commonly employed to improve digestive health. The Platinum Performance<sup>™</sup> Equine formula contains nutrients, such as soluble fiber like mucilage, that act as a prebiotic to facilitate the growth and activity of beneficial bacteria in the gut. Mucilage is also an important peristaltic agent and is commonly relied on to treat or prevent sand colic. The vitamin and mineral components of Platinum Performance<sup>™</sup> can also improve the uptake and metabolism of various macro- and micronutrients. For example, improvements in growth and feed efficiency have been reported in animals supplemented with chromium, zinc, and selenium.<sup>8-11</sup> Other compounds in Platinum Performance<sup>™</sup> Equine have been shown to improve feed efficiency by as much as 25% in animal studies. The antioxidants in Platinum Performance<sup>™</sup>



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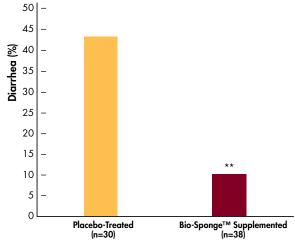


Equine, such as vitamin E, ascorbic acid, selenium, and l-carnitine, can also improve feed efficiency and growth parameters, particularly when animals are under stress.<sup>11-13</sup>

Platinum Performance<sup>™</sup> Equine also contains Bio-Sponge<sup>™</sup>, a proven intestinal protectant that absorbs toxins in the gut before they cause harm to your horse or diminish intestinal function. Both in vitro and in vivo trials with Bio-Sponge<sup>™</sup> have yielded positive results. One example comes from researchers at the University of California, Davis who reported a significant decrease in the incidence of diarrhea in horses supplemented with Bio-Sponge<sup>™</sup> after colic surgery when compared with horses receiving a placebo (Figure 1).¹⁴ Bio-Sponge™ supplementation may be beneficial in horses with colitis, as evidenced by the maintenance of normal gastrointestinal function in horses with antibioticinduced colitis supplemented with Bio-Sponge™.15 Various in vitro studies have demonstrated that Bio-Sponge<sup>™</sup> effectively adsorbs *Clostridium* perfringens and difficile toxins<sup>16,17</sup> and is significantly more effective than bismuth subsalicylate (Figure 2), 16 another product commonly used to treat diarrhea.

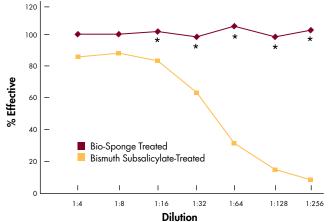
The following are tips for ensuring that your feed dollars are going as far as possible, while improving the health and performance of your horses and preventing costly illnesses, injuries and loss of use.

Figure 1. Occurence Rate of Diarrhea in Horses After Colic Surgery



\*\*Significantly lower than Placebo-Treated value (p<0.05)

Figure 2. C Perfringens Beta Toxin Adsorption



Bio-Sponge significantly more effective than Bismuth Subsalicylate (p<0.0.0 Adapted from Lawler et al (2008)<sup>16</sup>

#### 1. Refine your horse's ration

The old adage, "an ounce of prevention is worth a pound of cure," is very true when you develop a feeding program for your horses. Your horses rely on a high-quality, balanced diet, so they can remain healthy and perform at their peak level. Just as you need to continue to vaccinate your horses, you need to ensure that they are eating a balanced diet, consisting of hay or pasture, and a comprehensive supplement like Platinum Performance™ Equine.

Because hay comprises the biggest part of your feed budget, it seems like a great place to reduce your costs. However, poor quality hay with a low digestibility may not provide adequate nutrition. As a result, you may find that you need to feed more hay to enable your horses to get enough calories, protein, and other essential nutrients. Horses also may refuse to eat low quality hay, which results in hay wastage. Discarding uneaten hay may be even more costly than purchasing good quality hay. If your horse has had problems with colic, it is even more important to ensure that you feed high quality forage.

## 2. Eliminate Unnecessary Feeds

Does your horse really need all of those extra commercial feeds? Many owners like to add grain or sweet feeds to their horse's ration to provide calories and to give their horses a treat. Unfortunately, adding unnecessary feeds to the ration can cause unwanted weight gain and lead to chronic health problems.

If your horse requires extra calories, adding fat to the ration instead of grain can improve the total energy digestibility of the ration.¹8 Platinum Performance Healthy Weight™ provides a healthy source of fat that is high in omega-3 EFA and antioxidants and is an excellent supplement to safely increase calories in your horse's diet.

#### 3. Optimize Your Supplement Program

Make sure that your horse's supplement program is designed with a comprehensive nutritional foundation that addresses common nutrient deficiencies and provides anti-inflammatory and antioxidant support. Additional therapeutic and sports nutrition supplements should then be added based on your horse's individual health or performance needs. Many traditional supplement programs are comprised of individual supplements from various manufacturers that are not formulated to be fed together. These programs often miss many important areas of equine health that can be improved with proper supplementation.

The Platinum Advisors at Platinum Performance<sup>™</sup> and your veterinarian can guide you to select the correct supplements for your horse, eliminating unnecessary supplements and improving the health and performance of your horse.