

Importance of Maintaining a Stable and Healthy Gut **by Dr. Ron Rompala, Blue Seal Feeds, Inc., The Kent Group™**

The organs and tissues that make up the gut are very important to any animal. The gut is a barrier between the animal and the environment. It functions similarly to the walls of a castle as it allows desirable substances into the body and keeps out those that are toxic. The gut is designed to digest food and selectively absorb nutrients. It accomplishes this task by using specialized organs and tissues, having a very developed immune system and possessing an extensive communication network with the neural and hormonal systems of the animal.

Maintaining a healthy animal mandates having a healthy gut. Problems directly associated with a gut not working properly include enteritis, colic related problems, irregular bowel movements, ulcers, laminitis, allergies and hypersensitivities. Problems indirectly associated with a gut not functioning properly are malnutrition from poor nutrient absorption, autoimmune problems such as arthritis and diabetes, increased infections and dehydration.

One characteristic of the gut involves the colonies of nonpathogenic microbial organisms. These friendly organisms have a symbiotic relationship with the gut. These microbial organisms play an important role in suppressing the growth of pathogenic organisms. Disturbing the colonies of friendly microbes can cause the development of pathogenic colonies that can harm the animal.

There are several keys to maintaining a healthy gut.

Proper Nutrition

The gut is very metabolically active and has a high demand for nutrients. The diet needs to provide all the necessary nutrients at the right levels in an available form. Balance of nutrients is just as important as quantity.

Clean Drinking Water

Animals will not eat properly without good drinking water. Water keeps the contents of the gut moving and becoming impacted. Water should be free from contaminants and should not have any off-flavors. The water should be located in an easily accessible area. The temperature of the water should not inhibit drinking.

Adapt to New Feeds

Adapt animals to new feeds that differ in protein, starches, fat and fiber from the current feed. When feeds change, the gut adapts to the new feeds by changing the type and profile of digestive enzymes and nutrient transporters. In addition the microbial population needs to adjust to the new feed.

Avoid Fluctuations in Feed Intake

Ideally, more meals at low intakes provide an even flow of nutrients to the tissues and to the microbes. However, one must be practical. Keep intakes steady to avoid irregular bowels movements, upset microbial population and prevent tissue damage. Herbivores are more vulnerable to problems with meal size than carnivores.

Parasite Control

Parasites damage tissues that result in poor nutrient utilization and limit the ability of the gut to prevent the absorption of unwanted substances. Maintain a good worming program.

Keep Contaminants Out of the Feed

Molds generally are the most common contaminants that cause problems. Mycotoxins can damage tissues, interfere with enzymes, alter metabolism and suppress the immune system. Alone, molds can cause the feed to have an off-flavor that reduces palatability. In addition, some animals can react adversely to mold spores.

Keep the Immune System Healthy

A healthy immune system is essential for a healthy gut and ultimately a healthy animal. Proper nutrition is a must for a healthy immune system. A good vaccination program and avoiding allergens and toxins aid the immune system in keeping animals healthy.

Probiotics

Probiotics are preparations of live microorganisms (Lactobacillus), cultures from microorganisms (yeast culture) or substrates (mannan oligosaccharides) that improve the properties of host microbes. These substances have been shown to provide some benefits to the animal.

Keeping an animal healthy necessitates maintaining a healthy gut. Nutrition and management play important roles in preventing problems associated with gut disorders. All nutrients play a vital role in maintaining a healthy gut. Lacking any nutrient can lead to problems in the function of the gut. In general:

Protein

The gut utilizes a lot of protein for building tissues, transporters, enzymes and for energy.

Carbohydrates

The gut needs structural fiber to maintain tissue integrity. Certain types of fiber are beneficial to the host microbial population. Carelessly feeding diets high in starch and

sugars can cause problems. A large slug of sugar or starch into the gut can cause a rapid increase in the population of undesirable microbes.

Balanced Fatty Acids

A balance of essential fatty acids is essential to minimize inflammation that can develop from infections, allergies or toxins.

Vitamins and Minerals

These nutrients are necessary for tissues to utilize nutrients for energy, growth, functional and antioxidant processes. A balance of minerals is as critical as quantity.

The gut is vital in providing the animal with nutrients and at the same time keeping undesirable and toxic substances from entering the body. The gut needs to be functioning properly in order to maintain a healthy animal.

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