

Feeding the Immune System

by Dr. Ron Rompala, Blue Seal Feeds, Inc., The Kent Group™

The immune system plays an important role in keeping animals healthy. Without a healthy immune system, an animal could not keep bacteria, viruses and other organisms from growing in the body and causing harm. The immune system is very complex and involves a variety of cells and organs. Similar to a nation's army, the activity of the immune system is not the same at all times. The presence of any organisms that may pose a threat to the animal will increase the activity of the immune system. As the maintenance of an army during times of peace is a financial demand upon a nation, the immune system requires a good share of nutrients even under conditions that pose no threat to the animal. When the body is under attack by organisms, the immune system increases its activity by creating more cells and changing the metabolism of the body. These changes can include an increase in body temperature and water loss that in turn increases the need for nutrients. Another aspect of the immune system that involves nutrition is vaccination. Vaccines essentially mimic an attack by organisms that "trick" the immune system into a response. Afterward, the immune system leaves a residual presence that is known as a titer. Successful employment of a vaccine requires that the animal receive proper nutrition. Research has shown that animals with deficiencies in zinc and copper will not respond as favorably to vaccination in comparison to those properly fed. Successful vaccinations are directly related to proper nutrition.

Allergies are also related to the immune system. An allergy is the immune system perceiving that a harmless substance is dangerous to the body. The degree that the immune system reacts during an allergy can vary to very subtle signs to life-threatening reactions. Any allergy will cause the immune system to have a greater activity than normal that in turn increases the nutritional needs of the animal. Minimizing exposure to substances that cause allergies will allow the animal to better utilize its nutrients.

Stress can be detrimental to the immune system working properly. Stress causes changes in metabolism and nutrient usage that are not helpful to the immune system. Nutrient needs for animals under stress are greater and must be sustained to maintain a healthy immune system.

In summary, nutrition plays a major role in the proper function of the immune system. Keys to maintaining a healthy immune system through nutrition include:

1. Provide the animal with a good and balanced feed
2. Add supplements at proper levels and avoid causing nutrient imbalances
3. Minimize stress
4. Know if the animal has any allergies and avoid sources

5. Vaccination programs are most successful with animals given good nutritional programs and are not under stress
6. Follow good health and nutritional programs. Get advice from nutritionists and veterinarians.

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