



ECOMOS *Prebiotic*

Mannan Oligosaccharides (MOS)

What is Ecomos?

Ecomos is a prebiotic composed of natural sugar complexes (a class of carbohydrates) which cannot be metabolized by digestive enzymes. They serve as substrates for the growth of specific beneficial bacteria in the gut and help prevent the establishment of pathogens on the intestinal mucosa. **Ecomos** is a mannan-based complex sugar produced from fermentation components and is superior based on its stability and its specific availability to selected beneficial microorganisms. An auxiliary benefit of using this product is the presence of an environment rich in immune stimulants.

How does Ecomos work?

For years, livestock producers have been searching for a way to control intestinal pathogens in their animals. They have used acidifiers, probiotics, antibiotics and simple sugars. Today, complex carbohydrates such as mannan oligosaccharides are used to modulate gut microbiology in an effort to reduce the impact of pathogenic challenges in the young animal. Although the mode of action is not entirely understood, the efficacy of **Ecomos** has been suggested to include two possible scenarios:

Stimulation of Immune Response

Recent research in aquaculture and human nutrition has shown that the addition of complex sugars to feed has an effective impact in stimulating some immune response both at the cellular and humoral levels.

Decreasing Colonization by Pathogens

Experimental results indicate that mannan oligosaccharides may occupy bacterial binding sites, thus preventing attachment of pathogens to the intestinal mucosal wall. Furthermore, since **Ecomos** can only be degraded by enzymes secreted by certain beneficial microorganisms, the product promotes the proliferation of the latter, excluding other types such as which are unable to break down these particular sugars.

What are the benefits of using ECOMOS?

- All-natural GRAS product, no withdrawal period.
- Provides an effective, safe alternative to costly antibiotics.
- Improves the overall performance of young animals.
- Helps improve feed conversion.
- Promotes positive stimulation of the immune system.
- Helps control the proliferation of gram-negative bacteria.
- Retards colonization by pathogens.
- Promotes growth of beneficial lactic acid-producing bacteria.
- A heat stable, non-hygroscopic product.