



L-MAX[®] FACTS

- MOS for effective pathogen binding in the GI tract to reduce gut challenges.
- Beta glucan to improve immune response.
- Sarsaponin to disrupt rumen protozoa and improve nutrient digestibility.
- *Bacillus subtilis* specifically targets *Clostridia* to reduce gut health challenges.

► Product Description:

L-MAX is an all-natural, highly concentrated blend of natural bioactive compounds. This unique blend of complex carbohydrates, glycosides and microbial fermentation products helps improve rumen efficiency, nutrient digestibility and immune function, while increasing nitrogen retention, reducing methane production and gut pathogens.

► Modes of Action:

MOS – The MOS components of L-MAX provide effective pathogen binding in the GI tract. Tested against dozens of *E. coli* and *Salmonella* strains, L-MAX is proven to bind 95% to 100% of the different strains evaluated (Figure 1). In the animal, this prevents the pathogens from attaching to the gut lining and establishing an infection.

Beta Glucan – Algal 1,3 beta glucan is unique and highly effective at modulating immunity to improve responsiveness in both the innate and adaptive branches of the immune system. This leads to rapid elimination of health challenges and the longer-term benefits of improved response to vaccination or disease exposure.

Sarsaponin – Derived from the Yucca cactus, sarsaponin disrupts protozoa cell membranes, killing them. Rumen protozoa consume millions of rumen bacteria, reducing the microbial

protein available to the cow. Rumen methanogens also use protozoa to generate methane, robbing the cow of volatile fatty acids and increasing the overall methane output. Including sarsaponin in the diet decreases rumen protozoa while improving nitrogen retention (Figure 2).

Yeast Culture – L-MAX contains a highly concentrated dose of yeast culture. With no carrier or media, the yeast and its media provide a concentrated source of nucleotides, peptides, growth factors and enzymes for more efficient rumen function.

Bacillus subtilis – A single strain developed to mitigate the risk of *Clostridia* species and in particular *Clostridium perfringens* in livestock. It is also proven to be a strong producer of bacterial amylase, protease and lipase to improve animal health during stressful situations.

Figure 1. Binding Effectiveness Against Pathogens

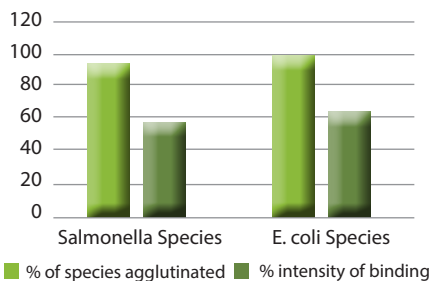
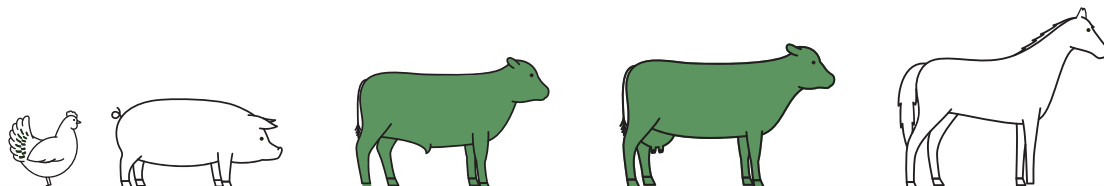
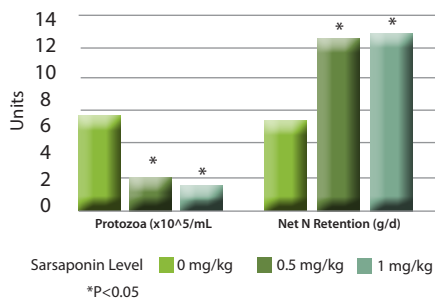


Figure 2. Effects of Sarsaponin in the Rumen





natural
biologics®
solutions by nature

L-MAX®



► **Product Description:**

L-MAX® is an all-natural, highly concentrated product derived from *Saccharomyces cerevisiae*, *Yucca schidigera* extract, algal beta glucan, *Bacillus subtilis* and yeast culture. The biologically active compounds from these natural sources have well-established benefits for animal health and productivity.

► **Ingredient Composition:** Yeast Culture, Yeast Extract, Dried *Bacillus subtilis* Fermentation Extract, *Bacillus subtilis* Spores, plant protein product, *Yucca schidigera* extract and mineral oil

► **Purpose:** L-MAX is to be used as a supplement to complete diets for dairy and beef cattle.

► **Feeding Directions:**

To be included in complete diets according to the general guidelines at right, or as recommended by a qualified nutritionist.

Typical Analysis: request from manufacturer

Density: 31 - 34 lb/cu Ft

Appearance: Light brown, free-flowing powder

Packaging: 55.1 lb (25 kg) bags or 2000 lb totes

Shelf Life: Two years from date of manufacture when stored in a cool, dry place in the original package.

Precautions: Use only as directed. Avoid inhalation of dust.

► **Dairy Cattle**

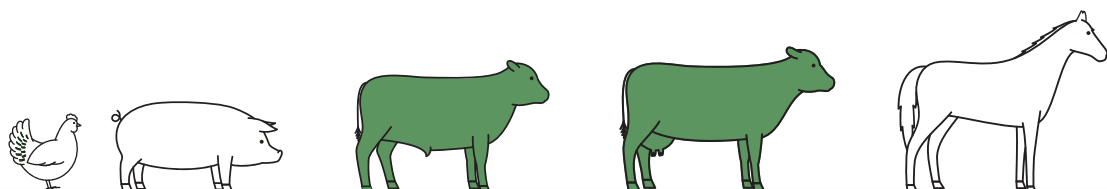
Growing Heifers	3 -4 g/hd/d
Pregnant Heifers	3 -4 g/hd/d
Dry/Prefresh Cows	8 g/hd/d
Lactating Cows	6 g/hd/d

► **Beef Cattle**

Growers/Finishers	2-3 g/hd/d
Finishers heat/cold stress	4 g/hd/d
Brood Cows	3-4 g/hd/d

Guaranteed Analysis:		
Crude protein	not less than	30.0%
Crude fat	not less than	0.5%
Crude fiber	not more than	2.0%
Moisture	not more than	10.0%
Ash	not more than	6.0%

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