

Increasing the Value of Feed

Kerry AlphaGal™ Enzymes



Enzyme Technology Expertise

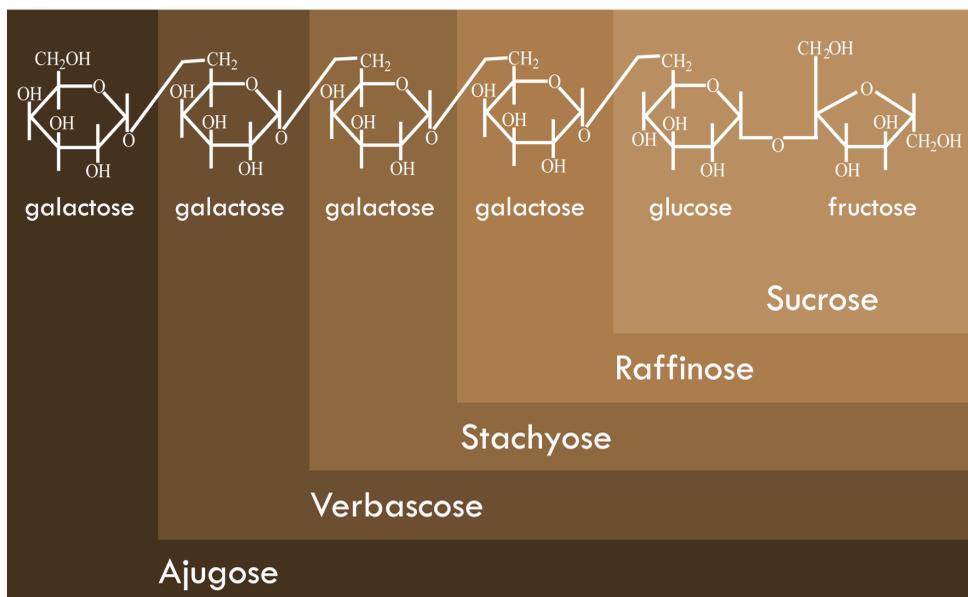
Kerry Ingredients & Flavours is a leader in the food and beverage industry, providing ingredient and flavor solutions for some of the world's largest and best-known food and beverage manufacturers. Kerry has an extensive technology portfolio to serve its food and beverage customers and has leveraged its enzyme technology expertise into the animal nutrition market. Kerry's AlphaGal™ enzyme enhances the value of animal feed by improving digestibility and effectively lowering the overall cost of feed through less expensive raw materials.

Specific Problems with Soya Bean Meal and Other Legume Seeds

Legume seeds and meals contain considerable amounts of oligosaccharides. Although certain oligosaccharides are considered to have a positive effect on the gut flora, the quantity in which they are offered to the animal affects the digestion in a negative way. Oligosaccharides in legume seeds are molecules of raffinose, stachyose and verbascose and consist of a sucrose unit with one or more galactose residues as shown in **figure 1**.



Figure 1.



Breakdown of Galacto-Oligosaccharides

Animals such as pigs and poultry have no enzymes to break down oligosaccharides. The only way in which the products are degraded is through fermentation, and it is known that this process already takes place to a large extent in the small intestines. This means there is a considerable amount of microbial fermentation that uses up energy and amino acids and impairs the stability of the gut. The result is a loss of nutrients to the animal. AlphaGal contains the enzyme alpha galactosidase, which facilitates the specific degradation of these oligosaccharides into mono-sugars.

Added Nutrition Value of Corn

Although the digestibility of corn is generally good, research has shown that ileal starch digestibility has opportunity for improvement. Kerry offers a range of AlphaGal enzymes that assist in the breakdown of starch, leading to improved energy release from corn.

Availability

Enzymes in general are susceptible to degradation in the presence of moisture and high temperatures. AlphaGal is available in dry form and can be used up to a pelleting temperature of 87 °C (190 °F). Under more extreme pelleting conditions, liquid AlphaGal is the most effective enzyme and should be sprayed on post-pelleting. Under the appropriate conditions, the stability of the liquid product is guaranteed for 12 months. The dosage rate of both the granulated and liquid products may vary according to the composition of the diet.

Physical Form

AlphaGal enzymes are available in dry or liquid form. Since the efficacy of enzymes can be affected by pelleting temperatures higher than 87°C (190 °F), liquid application is advised at such temperatures.

Benefits

Kerry AlphaGal™ enzymes:

- Improve poultry and swine feed digestibility
- Permit increased usage of less expensive raw materials
- Reduce feed costs
- Reduce flatulence

Applications

AlphaGal enzymes can be included in premixes, mixed into feed before pelleting or sprayed on feed after pelleting.



Kerry Ingredients & Flavours
3400 Millington Road
Beloit, WI 53511

www.kerry.com

