

FORTIFEED® — Supporting the wellbeing of the animal you love



About FORTIFEED®

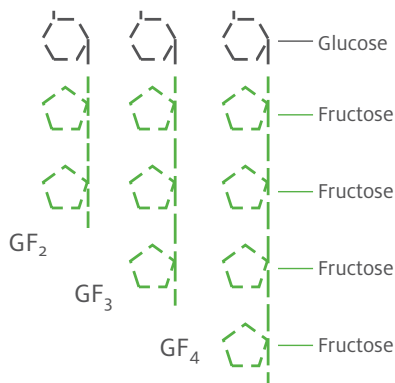
FORTIFEED® prebiotic soluble fiber is derived from pure sugar cane utilizing a bio-fermentation proprietary process and non-GMO ingredients. The result: the purest form of short-chain fructooligosaccharides (scFOS®) available on the market.

Prebiotic fibers are non-digestible food ingredients, that when consumed, provide a beneficial physiological effect on the host by selectively stimulating the favorable growth and/or activity of a limited number of beneficial indigenous bacteria found naturally in the intestines.

The relationship between consumers and their pets is an enduring one. According to the American Pet Products Association's (APPA) 2011-2012 National Pet Owners Survey, the number of U.S. households that own a pet has increased by 2.1% to an all time high of 72.9 million. Pets are living longer and healthier lives thanks to pet owners' willingness to provide veterinary care, specialty foods, supplements and alternative treatment options.

Owners of companion animals should be aware that every companion animal's intestinal tract contains a complex microflora, which when well-nourished can assist with proper digestive system function. FORTIFEED works by acting as a food source for beneficial intestinal flora which in turn performs a number of beneficial functions addressing the needs of pets and their owners.

FORTIFEED consists of β 2-1 linked linear chains of fructose bound to a terminal glucose. The chain length, or degree of polymerization (DP), varies from three to five. ScFOS is a natural compound found in a variety of fruits, vegetables and gains at low levels. FORTIFEED's consistent, simple molecular structure and 95% scFOS concentration ensure the **most effective prebiotic effect available**.



FORTIFEED is not digested in the upper gastrointestinal tract. Because of its special beta-linked structure, FORTIFEED is not affected by digestive enzymes and arrives intact in the intestines where it selectively promotes the growth and activity of beneficial intestinal bacteria, such as *Bifidobacteria* and *Lactobacilli*. The digestive and immune health benefits associated with FORTIFEED are linked to the increase in beneficial bacterial activity and from the production of metabolites such as short-chain fatty acids which are known to promote healthy colonic tissue and function.

Health Benefits and Claims

FORTIFEED prebiotic fiber has been scientifically shown to support digestive, immune and reduced fecal odor claims. It adds value to your nutritional program for your companion animal. These impressive health benefits are demonstrated by over twenty years of research and numerous scientific publications that validate its ability to improve the health of companion or consumption animals in several key areas. These health benefits are easily obtained even at very small quantities of FORTIFEED, providing a cost effective way to add consumer-friendly label claims on companion animal products.

These claims include:

- Prebiotic
- Improved microflora balance
- Encourages healthy digestive function
- Helps support the immune system
- Helps reduce odors

Depending on the animal species, the age, and weight the inclusion rates of FORTIFEED® vary:

Canine

- 0.15% to 1.5% of diet

Feline

- 0.50% to 1.1% of diet

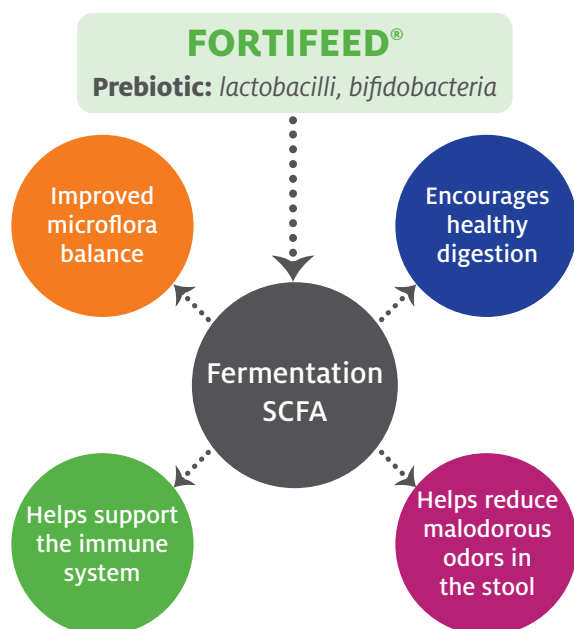
Equine

- 5-30 grams/day (depending on pleasure or work horse activities)
- .035% to 1% of diet

Summary of clinical health effects

Companion animals benefit from the inclusion of FORTIFEED® in the diet as it is uniquely capable of naturally supporting their well-being. FORTIFEED works in the terminal-ileum and colon of animals, which is home to both beneficial and pathogenic bacteria. Using FORTIFEED to achieve and maintain a proper balance in the bacterial populations is essential in maintaining the animals optimal well-being.

FORTIFEED prebiotic fiber offers many unique advantages to companion animals, as it feeds only the beneficial bacteria. When these bacteria are properly nourished they inhibit pathogenic bacteria, support nutrient utilization, maintain a strong immune system and encourage healthy digestive function.



FORTIFEED is one of the most well-research prebiotic fibers available on the market for companion animal health. Ingredient can support FORTIFEED’s claims for companion animals with sound scientific information and research results — which means our customer’s will be able to do so as well.

Technical attributes and superior functionality

As an ingredient in consumption animal food, FORTIFEED prebiotic fiber offers several processing, quality and regulatory advantages when compared to other competitive ingredients.

FORTIFEED offers superior stability and is stable in most processing conditions, which makes it ideal for an extensive array of applications. It is highly soluble and dispersible, ideal for liquid and dry formulations. It does not participate in the Maillard browning and will not react with protein during processing, ensuring protein quality and availability.

FORTIFEED is easy to incorporate and use. It does not require refrigeration, has a long shelf life. It can be added directly to dry ingredients or mixed with liquids requiring virtually no processing modifications.

FORTIFEED has a clean, mildly sweet taste and enhances palatability. It can successfully mask the off-notes of a variety of feed inputs, which positively impacts the companion animal’s acceptability and consumption.

FORTIFEED is ideal for reduced calorie formulations. It enhances the characteristics of special dietary feeds, adds fiber and contributes to overall calorie reduction in any formulation (1.5 kcal/gram)

FORTIFEED prebiotic fiber is produced under extremely stringent quality controls. These controls ensure that the product our customers receive and feed to their animals is the same product that has undergone decades of clinical testing. Through our unique manufacturing process, the consistent molecular composition of FORTIFEED is guaranteed from lot to lot. FORTIFEED is commercially produced in Ingredion’s ISO 9002 certified facility. It’s regulatory and quality features include:

- scFOS® (short-chain Fructooligosaccharides) are GRAS

- On the USDA list of products suitable for organic applications
- Kosher
- Non-GMO
- Allergen free
- BSE free

Rely on Ingredion for product success

Ingredion has the experience, the expertise and resources to develop appealing consumer products. Our work has taken us into virtually every facet of formulation and production in almost every application. What's more, we apply our marketing intelligence and

consumer trend insights to develop innovative solutions that address emerging consumer demands.

Consumers are increasingly interested in healthier alternatives for their pets, ones that incorporate scientifically proven nutritional ingredients. There is an ever present need for ingredient innovation to include new technologies and process improvements to positively affect product development and ultimately deliver better tasting, better-for-you products.

Look to us to partner with you to produce products that deliver on-trend products with the same tastes and textures consumers have come to expect from traditional offerings.

Get started today

Ingredion is a leading global provider of ingredient solutions with a broad portfolio of ingredients. Our company has the experience, the expertise, and the resources to help you develop products which address today's needs for the animal feed market. Ingredion's unique ability to solve the nutritional benefit/quality/processing equation inspires consumption animal feed formulators to create innovative, healthy and nutritionally beneficial feeds for the industry.

Ingredion's staffs of one-on-one account managers, technical staff and customer service professionals are available to answer your questions. Contact us today at salesupport@ingredion.com, call or visit us online.

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