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Built with Purpose.
Delivered with Care.



XYLOBREAK

Thermostable Xylanase enzyme

Breaking Fibre Barriers for Superior Poultry Performance

Key Performance Benefits

- ✓ Unlocks trapped nutrients
- ✓ Improves feed efficiency & FCR
- ✓ Reduces gut viscosity for healthier intestinal function
- ✓ Withstands high pelleting temperatures



Nutrient Lock-Up in Poultry Feed

The digestibility of poultry diets is strongly influenced by fibre content, which limits nutrient absorption. Non-starch polysaccharides (NSPs), particularly arabinoxylans, act as anti-nutritional components that reduce feed efficiency.

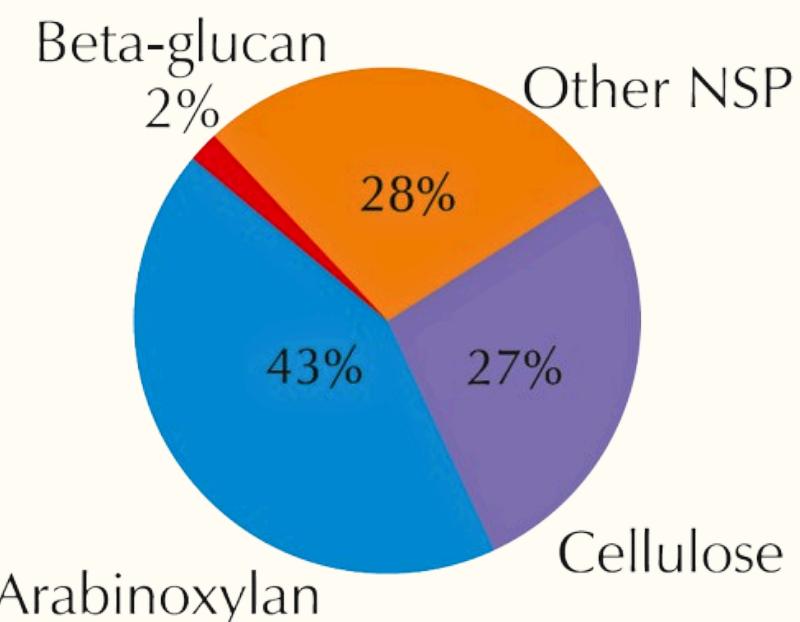
Arabinoxylans form a physical barrier around nutrients, making them less accessible to digestive enzymes.

Negative effects of NSPs in feed include:

- Increased digesta viscosity, resulting in slower digestion and reduced nutrient uptake.
- Lower availability of energy and protein, negatively impacting growth performance.
- Wet droppings that deteriorate litter quality and raise health concerns.

Xylobreak efficiently breaks down arabinoxylans, releasing bound nutrients and improving feed utilization, leading to better poultry performance and reduced feeding costs.

NSP Breakdown in a Typical Corn-SBM Broiler Diet



Overview

Xylobreak is a high-efficiency, thermostable xylanase enzyme designed to enhance nutrient utilization in poultry diets. Modern feeds based on corn-soybean meal contain significant levels of non-starch polysaccharides (NSPs), particularly arabinoxylans, which act as anti-nutritional factors by encapsulating nutrients and increasing intestinal viscosity. Xylobreak effectively breaks down arabinoxylan fibre, releasing trapped nutrients and improving their accessibility to the bird's digestive enzymes. By reducing the negative effects of NSPs, Xylobreak improves feed efficiency, supports gut health, and enhances overall growth performance.

Its advanced formulation ensures consistent enzymatic activity even after high-temperature pelleting, making Xylobreak a dependable solution for commercial feed manufacturing.

Composition

Xylobreak contains a standardized concentration of endo-1,4- β -xylanase, produced through controlled fermentation. The enzyme specifically targets arabinoxylans present in plant-based feed ingredients such as corn, wheat, soybean meal, and other cereals.

Mode of Action

Xylobreak acts by hydrolysing the β -1,4 glycosidic bonds within arabinoxylan polymers, the primary NSP fraction in poultry feeds. These polymers form a rigid cell wall structure that traps starch, protein, fats, and minerals, limiting their digestion.

Through enzymatic breakdown of arabinoxylans, Xylobreak:

- Disrupts plant cell wall structures
- Reduces digesta viscosity
- Releases encapsulated nutrients

This results in improved nutrient digestion, better absorption, and enhanced energy utilization.

Benefits

Superior Thermostability and Digestive Stability

Xylobreak is a highly thermostable xylanase enzyme developed to maximize feed efficiency and nutrient utilization. It demonstrates excellent heat resistance, maintaining enzymatic activity at pelleting temperatures of up to 90°C, ensuring consistent performance during feed manufacture.

Xylobreak remains stable and active throughout the gastrointestinal tract, effectively resisting degradation by pepsin and other gastric enzymes, thereby delivering reliable performance from feed processing to digestion.

Effect on Digesta Viscosity

High digesta viscosity reduces nutrient absorption and compromises gut function in poultry. Xylobreak lowers intestinal viscosity by degrading soluble NSPs, improving digesta flow and allowing better interaction between nutrients and digestive enzymes. This supports improved feed efficiency and bird performance.

Prebiotic Effect

In addition to fibre degradation, Xylobreak generates soluble arabinoxylan oligosaccharides during NSP breakdown. These compounds act as prebiotics, selectively promoting beneficial gut microflora. Improved microbial balance enhances volatile fatty acid (VFA) production, supports intestinal integrity, and contributes additional energy to intestinal cells.

MATRIX VALUE		
Nutrient	Contribution / kg Feed	Matrix Values
Energy (ME, kcal/kg feed)	up to 100	up to 1,000,000
Crude Protein (%)	0.37	3750
Lysine (%)	0.015	150
Methionine (%)	0.008	80
Cysteine (%)	0.012	120
Arginine (%)	0.024	240
Isoleucine (%)	0.014	140
Threonine (%)	0.017	170
Tryptophan (%)	0.005	50

Dosage

- Standard inclusion: 100 g per metric tonne of finished feed
- Dosage may be adjusted based on formulation and nutritionist recommendation

Xylobreak can contribute up to 100 kcal ME/kg in corn-based diets and up to 120 kcal ME/kg in wheat or bajra-based diets.

Top-Up Application

Xylobreak can be used as a top-up enzyme in existing feed formulations to improve feed conversion ratio by 5–6 points, depending on diet composition and bird age.

Presentation

25 Kg Drums



At Rigel Global Pvt. Ltd., we are committed to enhancing animal health, productivity, and overall well-being through advanced nutritional and healthcare solutions. Our Animal Health & Nutrition Division partners closely with farmers, veterinarians, and feed manufacturers across India and international markets, delivering scientifically validated products that support performance optimization, immune strength, and sustainable production in poultry, livestock, and aquaculture. Backed by a robust research-driven approach and global collaborations, we integrate internationally proven formulations with region-specific technologies to address the dynamic needs of the poultry, dairy, and aquaculture industries. Our diverse portfolio spans feed additives, probiotics, veterinary formulations, and biosecurity solutions –each developed with a strong focus on quality, efficacy, and safety.

Guided by our core principles of Integrity, Innovation, and Impact, Rigel Global Pvt. Ltd. strives to strengthen the food value chain while empowering partners with dependable products and expert technical support. We believe that healthy animals are the foundation of a healthy world, and every solution we deliver reflects this enduring commitment.



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