

News Release

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BASF introduces Natupulse[®] TS – an innovative feed enzyme to unlock valuable nutrients

- **The new mannanase Natupulse[®] TS improves nutrient digestion and makes feed more cost-effective and sustainable**
- **Additional positive effect in combination with Natuphos[®] E and Natugrain[®] TS**

BASF has launched the new enzyme product Natupulse[®] TS for animal feed. Natupulse[®] TS is a non-starch polysaccharide (NSP) enzyme. As an endo-1,4- β -D-mannanase, it hydrolyzes β -mannans into smaller components, e.g. manno-oligosaccharides (MOS). The addition of β -mannanase to the feed decreases digesta viscosity, increases the digestibility of the feed and ensures a more sustainable production.

A significant amount of nutrients in poultry diets of up to 30% remains undigested. The presence of NSP's is one of the key reasons for this. NSP's are considered anti-nutritional factors in broiler feed since broilers lack the endogenous enzymes to digest NSP's. One of the most common NSP's in soybean meal, the main protein source in commercial broiler diets, is the β -mannan galactomannan. Through the action of mannanase, Natupulse[®] TS cleaves these β -mannans, leading to improved digestion of feed nutrients. In addition, MOS produced by the hydrolysis of β -mannan can have a prebiotic effect.

“We build on a wealth of expertise and more than 30 years of experience in the development of enzymes for animal nutrition. Based on studies we can confirm that our new β -mannanase Natupulse[®] TS increases the digestibility of feed”, says Daniela Calleri, Vice President Business Management BASF Animal Nutrition.

Most commercial broiler diets already contain phytase and xylanase alone or in combination with glucanase. “Even, when Natupulse[®] TS was used on top of

Natuphos® E and Natugrain® TS, feeding trials showed an additional positive effect with regard to nutrient digestibility” explains Stefan Ruedenauer, Director of Development and Technical Marketing.

Manufactured by BASF in Germany, Natupulse® TS is available in powder and liquid form. Both formulations deliver very good overall stability – during storage, in premix and under challenging conditions in the pelleting process. BASF is committed to providing high-quality products and efficient solutions to the challenges of the feed industry. Natupulse® TS increases the digestibility of nutrients, making feed more cost-effective and supporting a more sustainable production of animal protein.

About BASF

At BASF, we create chemistry for a sustainable future. We combine economic success with environmental protection and social responsibility. More than 110,000 employees in the BASF Group contribute to the success of our customers in nearly all sectors and almost every country in the world. Our portfolio is organized into six segments: Chemicals, Materials, Industrial Solutions, Surface Technologies, Nutrition & Care and Agricultural Solutions. BASF generated sales of €59 billion in 2020. BASF shares are traded on the stock exchange in Frankfurt (BAS) and as American Depositary Receipts (BASFY) in the U.S. Further information at www.basf.com

About BASF Animal Nutrition

BASF Animal Nutrition is one of the leading suppliers of feed additives to the animal protein value chain. With our long-term experience in the feed ingredients business and our proven, high-performing products and solutions, we want to help shape the future of the industry. We call it the science of sustainable feed that succeeds. Our product portfolio of vitamins and carotenoids, enzymes, organic acids, trace elements and other feed additives is well positioned to tackle pressing sustainability challenges. We offer our customers solutions that reduce greenhouse gas emissions and improve resource efficiency as well as animal wellbeing. Our continuous investment in new technologies and R&D, our global research network and market presence and our close collaboration with our customers enable us to understand the needs of the animal feed industry and provide the right solutions. Digital technologies increasingly expand our portfolio. With Cloudfarms, BASF offers a livestock farm management solution since 2020. Our sustainability metrics software Opteinics helps to improve the carbon footprint of animal protein and can be integrated in feed formulation software. This also makes BASF Animal Nutrition a leading provider when it comes to future-oriented digital solutions. Further information is available at www.animal-nutrition.basf.com

Media contact:

Dr. Joachim Hueter

Phone: +49 (0) 621-60-47735

Mobile +49 (0) 172 7470917

Email: joachim.hueter@basf.com

Website: www.animal-nutrition.basf.com