

News Release

March 13, 2019

BASF introduces new phytase Natuphos E to unlock vital nutrients for feed industry in Indonesia

- **Natuphos E helps animals better utilize important nutrients – making livestock feed more cost effective and environmentally friendly**
- **Unprecedented overall enzyme stability sets new benchmark for feed phytase technology**

Jakarta, Indonesia – March 13, 2019 – BASF has launched the next generation phytase, Natuphos[®] E, for the feed industry in Indonesia. As the first company to market a phytase for feed more than 27 years ago, BASF has once again set a new standard in feed phytase technology with a novel hybrid bacterial 6-phytase. Manufactured by BASF in Germany, Natuphos E delivers superior overall stability – in premix and during the harsh pelleting process, up to 95°C pelleting temperature, in addition to an 18-month shelf life stability.

With Natuphos E, poultry can better utilize nutrients such as phosphorous, calcium, amino acids and energy. The new enzyme not only promotes healthy growth in animals but also reduces phosphorus emissions from livestock.

“BASF is committed to providing high-quality products and efficient solutions to help address the challenges the feed industry is facing. With Natuphos E, feed manufacturers and farmers in Indonesia will benefit from considerable cost savings through a more balanced and efficient diet,” said Daniel Wussow, Regional Sales Head, BASF Animal Nutrition Asia Pacific. “Indonesia is an important and fast-

growing animal feed market in Asia Pacific, and we are excited to offer our high-quality products in partnership with local champions to support this growth.”

Indonesia has the largest economy in Southeast Asia and agriculture is one of the country’s key economic pillars, with the feed industry growing at 6-8% every year.

The majority of phosphorus in grains and oilseeds is bound to phytic acid, an anti-nutrient found in feed. It is difficult for phytate-bound phosphorus to be used by animals such as poultry, and it is therefore lost as a potential nutrient and excreted and spread into the environment. Feed manufacturers are increasingly replacing inorganic phosphorus with efficient phytase products, as phytase is able to unlock phytate-phosphorus from the raw material.

Additionally, during the digestion process Natuphos E releases other valuable nutrients bound to phytate. This leads to less excretion of phosphate and nitrogen, which helps reduce water and land pollution.

“For more than twenty years, we have been working very closely with BASF to introduce innovative solutions to the feed manufacturers in Indonesia. With Natuphos E, farmers will benefit from substantial cost savings through a more nutritive diet,” said Antonius Agung Wiono, Product Manager Feed Additive, PT SHS International, BASF’s distribution partner for animal nutrition products in Indonesia.

BASF will be showcasing Natuphos E as well as its comprehensive portfolio of products including vitamins, carotenoids, organic acids, glycinates and mycotoxin binder from March 13-15, 2019 at VIV Asia, Hall 103 - Booth 1600, in Bangkok, Thailand.

About BASF’s Nutrition & Health division

BASF Nutrition & Health provides a comprehensive product and service portfolio for the human and animal nutrition, pharmaceutical, ethanol and flavor & fragrance industries. With innovative solutions and modern technologies, we help our customers improve their business efficiency and the sustainability of their products. Our human nutrition solutions include vitamins and carotenoids, plant sterols, emulsifiers and omega-3 fatty acids. Vitamins and carotenoids also form an important part of our animal nutrition portfolio, as do other feed additives such as trace elements, enzymes and organic acids. We provide the pharmaceutical industry with a broad range of excipients and selected large-volume active pharmaceutical ingredients such as ibuprofen and omega-3 fatty acids. Leveraging our advanced technology, we create high performance industrial enzymes for different markets, such as ethanol production. Furthermore, we offer aroma ingredients such as citral, geraniol

and L-menthol. BASF Nutrition & Health operates sites in Europe, North America, South America and in Asia-Pacific. For more information, go to www.basf.com.

About BASF

At BASF, we create chemistry for a sustainable future. We combine economic success with environmental protection and social responsibility. The approximately 122,000 employees in the BASF Group work on contributing 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 around €63 billion in 2018. BASF shares are traded on the stock exchanges in Frankfurt (BAS), London (BFA) and Zurich (BAS). Further information at www.basf.com.