Kemin Leads Conversation on Safety Across the Feed Chain

Conference brings experts together to discuss new insights in feed safety and feed processing

HERENTALS, Belgium (September 20, 2018) – Kemin Industries, a global nutritional ingredient company that uses science to touch more than 3.8 billion people every day with its products and services, recently hosted a conference on improving the safety, efficiency and profitability of feed mill operations.

A panel of five safety and processing experts led the event with feed mill operators in attendance from more than 25 countries representing Africa, North America, South America, Asia and Europe.

“Few symposiums provide in-depth discussion on feed safety, yet it’s a critical topic for our industry. Feed manufacturers across the world are becoming increasingly more attentive to feed safety,” said Dr. Chris Nelson, President and CEO, Kemin Industries. “To secure production of safe food, all parties involved in the feed-to-food chain need to be responsive. This conference equipped attendees with tools they can use to improve feed safety in a profitable way.”

The panellists provided educational, practical and business-focused insights that can be put in place to ensure the production of safe feed.

Highlights from the series of experts included:

- **Dr. Adam Fahrenholz** from North Carolina State University kicked off the technical programme, setting the scene of food safety in relation to raw materials. Food safety issues can originate from a physical, chemical or biological hazard. A complete raw material quality programme should encompass these three hazard risks.

  Biological hazards from bacterial contamination, such as *Salmonella*, are worthy of receiving significant attention from the industry during a hazard analysis. Feed mills cannot take poor-quality ingredients and make them better. A small variation in raw material quality can have a significant impact on the bottom line of an integration or feed supplier.

  Feed mills should have a strong quality programme in place with well-documented specifications. Feed mills should rigorously follow the inspection programme when checking the quality of all arriving raw materials. All employees involved need to receive training on the quality assurance programme and understand the implications.

- **Ir. Juan Acedo-Rico González** of Acedo-Rico & Asociados SL in Spain discussed quality, efficiency and feed safety as the main targets for obtaining competitive advantages for efficient manufacturing processes. He conducted an analysis of these three main challenges involved in feed manufacturing and presented tools to improve feed operation efficiency while maximising quality, hygiene and feed safety.

  González stressed the importance of process cost control, losses recovery, operator training, feed safety and feed formulation adjustment during feed production. He said that overall management and safe manufacturing is key to managing feed safety. González explained that quality, efficiency and feed safety always move in the same direction.

- **Dr. Luis Conchello** of Kemin Animal Nutrition and Health – Europe shared how efficient feed processing can result in profitable and safe feed. He explained the fundamentals of the Kemin millSMART™ Feed Processing & Feed Safety Programme and its role in risk management and process control.

  The millSMART programme uses the antimicrobial Sal CURB® and the Opti CURB® dispersing solutions, which have powerful surface-active agents to provide uniform dispersion and penetration of the antimicrobials. To further optimize feed processing for feed safety, Kemin has developed a proprietary nozzle technology to increase application homogeneity and online control technology to decrease process variability.

  Dr. Conchello described how pelleting under these optimized conditions has a positive impact on feed hygiene, press performance and pellet quality. He provided an overview of “Optimum Safety Matrix” and “Press Biosecurity Unit” and reviewed field experiences on effective cooling for feed safety, productivity and quality. Dr. Conchello explained that advancements in product development, equipment manufacturing and engineering technology at Kemin help improve the profitability of feed manufacturing and feed safety for its customers.

- **Prof. dr. ir. Mieke Uyttendaele** from Ghent University approached the *Salmonella* topic from the food

microbiologist perspective. Surveys have indicated that “food poisoning from bacteria” is top of mind when customers are asked about their food safety concerns.

Campylobacter and *Salmonella* are the most reported foodborne diseases, and *Salmonella* is the bacteria most often linked to severe infections that may lead to hospitalization and even death. Eggs, meat and bakery products are the most common sources of *Salmonella* contamination.

Salmonella is a versatile organism that can easily survive in dry conditions as well as in the lipid fraction of feed and food. Despite control measures producers have in place to eliminate the presence of *Salmonella*, it is important to note that an absolute absence does not exist. Every operation should evaluate the needed control measures to ensure safety is reached.

- **Mr. Raf Snoekx** of Kemin Animal Nutrition and Health – Europe shared the engineering systems Kemin offers to its customers to manage feed safety in combination with profitable production. Kemin offers a wide array of application systems. The traditional systems apply fixed amounts of antimicrobials per quantity of feed. Today, there is a huge trend towards sensor technology.

  The state-of-the-art online technology combines a unique set of software and hardware, which combines feed safety with process variability management in the feed mill. The online sensor technology allows the application of an amount of antimicrobial based on the level of risk while the system reduces the moisture variability of raw materials, improving the efficiency of feed processing conditions.

  Mr. Snoekx explained how feed mill operators using the millSMART programme can leverage the online monitoring technology to achieve a more consistent process while securing feed hygiene. For oilseed crushing facilities, Kemin also offers a solution through its specSMART™ programme.

  Mr. Snoekx also talked about the Kemin Product Application Department (PAD), offering a total solution for customers, including customized surveying, installation, system setup, maintenance plans and operational training support.

- **Dr. Erwin Witters**, Worldwide Customer Laboratory Services (CLS) Coordinator for Kemin Animal Nutrition and Health – Europe, spoke about the prevalence of *Salmonella*. He opened the talk on the limitations of microbiological tests.

  Salmonella is not homogeneously present in feed and raw materials, which makes sample taking challenging. In addition, the level of contamination determines the numbers of samples to be taken from a lot. If a lot is highly contaminated, the probability of identifying the contamination is high. If the contamination is very low, more samples are needed to secure pickup of the contamination.

  It all comes down to the necessary sensitivity. Dr. Witters explained how Kemin is conducting numerous microbiological analyses in its Customer Laboratory Services around the world. *Salmonella* is a ubiquitous micro-organism and can be found during all months of the year and in all regions, showing no association with climate conditions.

  Laboratory analyses confirm that feed raw materials and mash feed have the highest *Salmonella* prevalence. In pelleted feed, the *Salmonella* prevalence is generally reduced, but recontamination can occur. Dr. Witters reiterated that Kemin will keep supporting its customers with best practices on sampling and analysis to secure the production of safe feed across the globe.

For more information on the feed processing solutions Kemin offers, click here.

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About Kemin Industries

Kemin Industries (www.kemin.com) is a global ingredient manufacturer with a focus on improving the quality of life for over 3.8 billion people each day with more than 500 specialty ingredients made for the human and animal health, pet food, nutraceutical, food technology, crop technologies and textile industries.

For over half a century, Kemin has been dedicated to using applied science to address industry challenges and offers product solutions to customers in more than 120 countries. Kemin provides ingredients to feed a growing population with its commitment to the quality, safety and efficacy of food, feed and health-related products.

Established in 1961, Kemin is a privately-held, family-owned and operated company with more than 2,500 employees globally and operations in 90 countries, including manufacturing facilities in Belgium, Brazil, China, India, Italy, Russia, Singapore, South Africa and the United States.

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