On the rise:

Phytogenics as natural performance enhancers for antibiotic-free feeding programs

Known for broad-spectrum efficacy, phytogenics are a promising solution for the livestock industry

Since the ban on antibiotic growth promoters in the EU in 2006, phytogenic feed additives have been on the rise in global animal production. In the United States, sub-therapeutic use of antibiotics for growth performance will no longer be allowed in 2017. As antibiotic-free feeding programs receive increased attention among scientists, nutritionists, feed manufacturers and farmers, phytogenics are moving further into the spotlight due to their holistic and broad-spectrum efficacy.

In particular, phytogenics show enormous promise for their proven impact on performance, sustainability, feed and food safety, says Markus Dedl, CEO of Delacon, the Austrian family business that pioneered the category.

Powerful plants with vast potential

Phytogenics, commonly defined as plant-based feed additives or botanicals, represent a group of natural substances used in animal nutrition, Mr Dedl explains. These substances are derived from herbs, spices and their extracts, such as essential oils. The term phytogenics was coined more than 25 years ago by Delacon, which even then recognised the potential of plants to meet challenges in animal nutrition.

Mr Dedl explains that phytogenic feed additives can consist of many different active ingredient groups, such as pungent substances, bitter substances, essential oils, saponins, flavonoids, mucilages and tannins.

"Owing to this wide range, phytogenics offer much more than flavouring properties," he says.

"The effects are many, mostly targeting the enhancement of livestock performance."

Impacts can include sensorial stimulation and palatability, increased enzymatic activity in the intestinal tract, improved nutrient utilisation, antioxidant effects, enhanced quorum sensing inhibition, effects in intestinal mucosa and improved reproductive performance.

Pure plant-based phytogenics also show a wider range of modes of action in animal nutrition compared to synthetic nature-identical substances, he notes.

"This advantage is based on the synergistic effects of all agents within a plant, which have not been reduced to the effects to a single lead substance. This natural synergy, combined with sustainability and safety, makes phytogenics a top solution platform in multispecies animal nutrition."

Green light for food safety, sustainability and profitability

Phytogenics are a natural alternative for livestock producers and companies developing antibiotic-free feeding programs, Mr Dedl says. Additives applied in livestock production should not only contribute to profitability and superior quality of animal-derived products but also satisfy food safety and environmental regulations, he says.

"Phytogenic products used as natural growth promoters in animal nutrition have been proven to provide a return on investment. They also have been proven to reduce ammonia, methane and greenhouse gas emissions. The botanical compounds are proven safe for consumers, and can help improve profitability and sustainability in animal production."

In January 2016, Delacon began an exclusive collaboration with PMI Nutritional Additives to expand research and development of phytogenic feed additives for all animal types in the United States.

From niche products to the scientific gold standard in the feed industry

"Our deep experience in phytogenic feed additives is key to their reliable, efficient and safe application in animal nutrition in the United States," Mr Dedl continues.

"We are the first and currently only company that has received a zootechnical EU registration for a fully natural phytogenic feed additive - Fresta® F for piglets; our poultry product will follow soon."

The registration, considered the scientific gold standard in the feed industry, is a confirmation of safety and efficacy as a natural growth promoter by the European Food Safety Authority following a rigorous approval process.

"We look forward to providing the US market with the very best products for their antibiotic-free feeding programs and other challenges, as well."