

Evonik shares research findings to help understanding, and clarify true cost, of livestock production. Improvement of 18.3 bn EUR annually in two key markets alone.

- Evonik teams up with KPMG to measure the economic, social and environmental impacts of livestock production
- Innovative feed can reduce negative impacts by up to one third
- · Evonik hopes to drive positive and sustainable change

A new publication from Evonik and KPMG examines the impacts of poultry and swine production and outlines the potential societal benefits of using feed additives which reduce protein intake.

Current livestock farming practices contribute to serious global challenges, including climate change, land degradation, and pollution. Therefore, more sustainable methods are urgently required to meet the increasing demand for meat, fish, milk and eggs.

To build the case for using innovative animal feed practices on a large scale, Evonik partnered with finance and sustainability professionals at KPMG member firms to measure and evaluate the impacts of livestock production.

The analysis, using the KPMG True Value methodology, compared the societal impacts of using innovative animal feed versus conventional feed. It covered the economic, environmental and social impacts of meat production across the value chain, from the cultivation of crops for animal feed through to animal husbandry.

The analysis was based on 2018 market shares of innovative feed in chicken production in Brazil and pork production in China, and on the most advanced innovative feed composition available at the 23. January 2020

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time. The team quantified the impacts in financial terms using valuation data selected from a wide variety of sources.

The Evonik/KPMG True Value approach assigns a financial value for each impact. Once this was established for each impact, the total value of impacts² could be calculated for production using innovative animal feed and conventional feed. The two calculations revealed significant differences between the two types of feed in terms of their social and environmental impacts.

The analysis valued the environmental and social impacts of poultry production in Brazil at €1,345 per ton of live weight (t/lw) when conventional animal feed is used. The most significant impacts are land use to produce crops for animal feed and air pollution from the chickens' waste.

However, when innovative animal feed is used, the negative environmental and social impacts of chicken production are reduced by one third. The biggest reductions are in land use and its effect on biodiversity, air pollution and the potential for soil acidification and pollution of waterways.

If innovative animal feed replaced conventional feed, the industry would create a net benefit of €85 per t/lw for Brazilian society compared to a net cost of €180 per t/lw when using conventional feed. "The results clearly show a huge potential to positively influence societal value creation when using innovative animal feed and calls for transparency on the overall societal value creation of products", said Martin G. Viehöver, Senior Manager Sustainability Services, KPMG in Germany.

The KPMG True Value analysis of pig farming in China showed similar results. Using innovative feed for pigs could have significant effects on the industry's social and environmental

¹ Sources included the US Environmental Protection Agency (EPA), the Organization for Economic Co-operation and Development (OECD) and The Economics of Ecosystems and Biodiversity (TEEB)

² Referred to in the analysis as 'societal value'



impacts, potentially reducing the 'true' price of pork by almost 12%.

The analysis estimated the potential to protect societal value of another 5.5 bn. Euro in the chicken market in Central and South America and another 12.3 bn. Euro in the pig market in North Asia - together 18.3 bn. Euro annually for these two key markets if conventional feed is replaced by innovative animal feed.

"The results of this analysis could change perceptions within the livestock production industry. They could trigger meaningful dialogue across the value chain and help to shift farming towards more sustainable practices", said Dr. Emmanuel Auer, Head of Animal Nutrition, Evonik.

"We are sharing the results of this study widely with suppliers, customers, regulators, policy makers, academics and others to help drive positive sustainable change in the global livestock industry. Our goal is to generate engagement and debate around how the livestock industry can work together to address its social and environmental challenges."

Conventional animal feed is high in protein, which leads to high levels of nitrogen in animal waste. Evonik has developed amino acids for animal feed that help to reduce animals' protein intake. This, in turn, decreases the level of nitrogen excreted. The innovative animal feed also improves the efficiency of the animals' digestion, reducing the amount of food and water consumed and the amount of waste produced.

"We see this analysis as a tool to guide decision-making in innovation and product portfolio management to develop new products and services with a positive effect on society," said Dr. Auer.

With the livestock industry under increasing scrutiny for its environmental and social impacts, Evonik believes that changing the composition of animal feed can help farmers to engage in fact-based discussions about the societal value they create – potentially helping strengthen their social license to operate.

Press release



Evonik therefore plans to expand the scope of its research to measure the impacts of its feed in other major poultry and swine producing regions, as well as in the dairy and aquaculture sectors.

Download the publication at: evonik.com/building-the-case-for-innovative-animal-feed

Company information

Evonik is one of the world leaders in specialty chemicals. The focus on more specialty businesses, customer-oriented innovative prowess and a trustful and performance-oriented corporate culture form the heart of Evonik's corporate strategy. They are the lever for profitable growth and a sustained increase in the value of the company. Evonik benefits specifically from its customer proximity and leading market positions. Evonik is active in over 100 countries around the world. In fiscal 2018, the enterprise with more than 32,000 employees generated sales of €13.3 billion and an operating profit (adjusted EBITDA) of €2.15 billion from continuing operations.

About Nutrition & Care

The Nutrition & Care segment is led by Evonik Nutrition & Care GmbH and contributes to fulfilling basic human needs. That includes applications for everyday consumer goods as well as animal nutrition and health care. This segment employed about 8,200 employees, and generated sales of around €4.6 billion in 2018.

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