



In Denmark, work has been underway for years to reduce antibiotic consumption in pig production. At the same time, the industry is well prepared for the EU's zinc oxide ban, which comes into force in June 2022.

Nicolaj Pedersen/Danish Agriculture & Food Council

Setting a course for the future

The Danish agri-food industry continues to drive sustainable developments at full speed. In the pig sector, the zinc oxide ban is currently at the top of the agenda. The industry is also working intensively on the climate impact of feed and protein alternatives.

As of June 26, 2022, diarrheal diseases in weaned piglets may no longer be treated with zinc oxide in the European Union. This poses new challenges for the entire pig industry. The Danish pig sector has already prepared well for this ban in recent years, and pig farmers in the Kingdom have gained a lot of experience with alternatives to medicinal zinc. Scientists from SEGES Innovation have also launched various initiatives to provide agricultural producers with the appropriate tools.

The focus is on minimizing stress and disease risks through appropriate feeding strategies as well as clean, warm housing. As part of a feeding project, for example, SEGES scientists have tested so-called gentle feed mixtures with protein levels reduced to 13 percent. "To minimize production losses, we used feeds with extremely

low protein content during the very short critical phase when piglet diarrhea typically occurs," explains Tina Sørensen of SEGES Innovation. Less protein in the feed immediately after piglet weaning can reduce the number of days antibiotics are needed – without affecting weight gain. No difference could be detected, for example, between the experimental and control groups in piglets weighed regularly on day 35. SEGES Innovation has also been working on a vaccine against piglet diarrhea in collaboration with the University of Copenhagen for some time.

Researchers bring piglet diarrhea into focus

To further promote the exchange of experience in the field of piglet diarrhea at the scientific level, the so-

called "ZeroZincSummit" was launched in Denmark in 2019. The aim of this summit was to provide pig farms with effective and sustainable tools to combat piglet diarrhea. "The ZeroZincSummit has brought together scientists who have spent many hours working to find solutions to diarrheal disease in weaned piglets. In Denmark, we believe it is important to share the existing knowledge so that eliminating medicinal zinc does not impact antibiotic consumption, animal welfare or economic profitability," says Christian Fink Hansen, director of the pork sector at the Danish Professional Association of Agriculture & Food. At the "ZeroZincSummit 2022", held in Copenhagen at the end of June last year, the main topics included feed additives, immunity and gut health, and pre-weaning management.

“Climate impact of feed” project launched

Sustainability has been a major issue in the Danish pig sector for some time, as well as in the country's agricultural and food industry as a whole. Lately, the industry has launched a number of forward-looking projects to further advance climate and environmental protection in Denmark.

Recently, SEGES Innovation together with the Danish Grain and Feed Industry Association (DAKOFO) and Danish feed producers agreed to cooperate on the “Climate impact of feed” project. The aim of this cooperation is to develop livestock feed and feeding strategies that improve the climate footprint of livestock production, among other things. As a first step, those responsible for the project want to optimize the composition of feed with a view to climate protection.

As far as livestock feed is concerned, Denmark has already set the course for the future. To become even less dependent on soy imports, Danish agriculture is pushing the cultivation of domestic protein crops, for example. Among the promising candidates are grass protein and broad beans. The country's agricultural sector has also decided to use only soy from responsible and sustainable production for animal feed 2025.

Protein from grass and algae

At the end of 2020, the Danish agricultural industry set another milestone. The first commercial plant for protein production from grass was started on the Ausumgaard estate not far from the town of Struer in western Jutland. In the future, not only ruminants but also monogastrics such as pigs and poultry will be able to make nutritional use of the protein in grass. The grass protein plant is part of a development project called TailorGrass, funded by the Green Development and Demonstration Program, or GUDP, of the Danish Ministry of Environment and Food.

This SEGES Innovation project will run until 2023. It is responsible,



The so-called “ZeroZincSummit”, developed to exchange experience on piglet diarrhea at the scientific level, is held annually in Denmark. Here at the opening in Copenhagen in June 2022: Christian Fink Hansen, Director of the Pig Sector at the Danish Professional Association of Agriculture & Food.

SEGES Innovation

among other things, for the transfer of knowledge to farms and companies in the agricultural and food industries as well as other interested parties. According to Danish experts, algae could also replace imported soy protein in the future. The potential of cultivated microalgae is being researched in the so-called ReMAPP pro-

ject. This acronym stands for Resource efficient Microalgae Protein Production. In trials, algae will be produced by feeding CO₂ and nutrients from side streams of biogas plants. The aim is to produce algae with up to ten times less land than conventionally produced feed.

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Since 2020, a prototype plant for extracting protein from grass has been operating in Denmark on the Ausumgaard estate in western Jutland.

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