

MAFFRA II

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Plants as antibacterial feed for preventing diarrhoea in piglets

Weaning diarrhoea in piglets constitutes a serious animal welfare and economic problem in the Danish pig production, which traditionally is solved using antibiotics, zinc oxide, and synthetic organic acids. Almost half of the antibiotics for pigs are used for weaning pigs, and about 94% of the used medical zinc oxide ends up in the manure.

The problem with the development of bacterial resistance and environmental consequences of the accumulation of zinc in soil has led to political demands for the reduction of antibiotics and phasing out of medical zinc in the EU.

In general, there is a strong interest in finding 'natural' alternatives to antibiotics, zinc oxide and organic acids to prevent diarrhoea in pigs.

Purpose of the project

The purpose of the Organic RDD project MAFFRA II is to refine and establish final proof of effect of a natural, plant-based, antimicrobial feed additive for piglets that prevents weaning diarrhoea and that can reduce/replace the use of antibiotics and zinc. The project will document that the very promising research results obtained by using antimicrobial plant cocktails in the pilot study (MAFFRA) can also be obtained on a larger scale and be used in practical organic pig production.

The goal is to obtain an improved intestinal health and reduced diarrhoea. The project optimizes and scales up from the production of raw materials to finished products in the selected plant products and "side streams". Finally, the economics regarding the use of the new multi-component feed additive in pig production will be documented.

MAFFRA II will contribute to green sustainability through new bioactive crops and utilization of residues from berries and garlic/ramsons.

The feed additive is **expected to be an alternative to antibiotics and medical zinc, ensure less diarrhoea and less mortality** in organic pig production.

Project period: 2019-2021



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