

FFoQSI

Austrian Competence Centre for Feed and Food Quality, Safety and Innovation

Programme: COMET – Competence Centers for Excellent Technologies

Programme line: COMET-Centre (K1)

Type of project: Wood-based Feed, 1/1/2021 – 12/31/2024, Company Project (multi-firm)



© AGROMED: Close-up of a wood-based feed ingredient

WOOD-BASED FEED: INNOVATIVE WOOD-BASED ANIMAL FEED

HOW WOOD-BASED FEED ADDITIVES CAN AFFECT THE HEALTH OF LIVESTOCK.

In the feeding concept for piglets, performance losses occur when therapeutic zinc oxide administration is omitted. For this reason, an innovative project was developed to investigate the **effects of wood-based feed additives on farm animals**. The research concept is based on supplements and active ingredients from fresh wood, which are rich in the bioactive secondary plant compounds lignocellulose, lignans and or phenolic acids.

Lignocellulose is an insoluble dietary fiber that cannot be digested. However, the fibers can be used, at least in part, as an energy source for intestinal bacteria, thus positively influencing the animal's intestinal flora. **Lignans** are low molecular weight polyphenols in plants that are thought to have antimicrobial, anti-inflammatory and antioxidant effects. **Phenolic acids** are also known for their antioxidant, anti-inflammatory and antimicrobial effects.

SUCCESS STORY

Impact and effects

The bioactive secondary plant compounds studied influence the animal's intestinal flora, where they can exert **antioxidant, anti-inflammatory and antimicrobial effects**. The research concept not only tests the effects, but also surveys the possible potential of wood-based feeds **for reduced antibiotic use in livestock farming**.



© FH Wels: Monolayer of Caco-2 cells (40x magnification)

Project coordination (Story)

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