



Project Number & Title: *2C -105 Use of plant derived compounds to condition piglet intake at weaning and reduce post-weaning use of therapeutics*

Project Leader

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Project Participants

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Aims and Objectives

The objectives were 1) to screen essential oils (EO) for their antimicrobial activity and ability to be transferred from the sow's diet to placental fluids, colostrum and milk and 2) to develop a product, which would improve piglet performance and health and potentially link post weaning feed intake with sow milk influenced via selected EOs.

Key Findings

Across all compounds, the transference to milk was higher than to placental fluids. The results have implications when considering the potential pre-natal conditioning effect of the different EOs. In addition, the research uncovered a powerful synergistic effect between EO and sow milk against ETEC but milder against lactobacillus. It was concluded that the transmission of dietary volatile compounds to sow milk might reduce the pathogenic bacterial burden in suckling piglets.
A semi commercial study using selected EOs fed the sow immediately before parturition and during lactation showed a marked and significant effect of treating the sow diet on piglet post weaning growth performance. The responses were independent of whether the weaner diet contained the same EOs or not.

Application to Industry

The project identified an innovative intervention in sow feeds based on a unique combination of EOs based on high transfer to maternal fluids and high antimicrobial activity. As a result the dietary intervention with the selected EOs improved the performance of post-weaned piglets and showed a high potential to improve their health (thus with a potential to reduce antibiotics) and welfare.