



CONTROLLING POST-WEANING DIARRHOEA IN PIGLETS WITH ENCAPSULATED ZINC OXIDE

EVALUATING THE REPLACEMENT OF HIGH LEVELS OF
ZINC OXIDE WITH AN ENCAPSULATED ZINC OXIDE
PRODUCT AS A MEANS OF CONTROLLING
POST-WEANING DIARRHOEA IN PIGS

Project Participants

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Problem

Post-weaning diarrhoea and poor gut health after weaning compromises the potential growth of pigs and can cause an increase in morbidity and mortality rates. Pharmacological use of zinc oxide (ZnO) is one non-antimicrobial means of controlling post-weaning diarrhoea, however it results in high levels of zinc being excreted into the environment through the effluent system and as such, there is a need for an effective, environmentally safe alternative.

Project

This project assessed whether a microencapsulated ZnO product was effective at reducing post-weaning diarrhoea whilst also reducing the levels of zinc excreted into the environment.

Value for Producers

Inclusion of a microencapsulated ZnO product into weaner pig diets for 2 weeks immediately after weaning can reduce post-weaning diarrhoea without impacting the environment.

Background

A microencapsulated ZnO product, coated in a lipid (fat), claims to dramatically decrease inclusion of ZnO from 2,500 to 3,000 parts per million (ppm) to 100ppm, while achieving the same effect on post-weaning diarrhoea.

Recommendations

The inclusion of 100ppm of microencapsulated ZnO for two weeks immediately after weaning suppresses post-weaning diarrhoea in both *E. coli* challenged and non-challenged pigs. The suppressing effect on post-weaning diarrhoea was comparable to pigs fed a diet supplemented with 3,000ppm ZnO.

Providing this supplement also keeps the plasma and faecal zinc levels to the levels found in pigs fed control diets without additional ZnO supplementation, thus reducing zinc excretion and the impact on the environment.

Findings suggest the microencapsulated ZnO can be beneficial in commercial production systems to fight post weaning diarrhoea that is caused by bacteria like *E. coli*.

More Information

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