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ALTERNATIVE FEED CONCEPTS TO REPLACE ZINC IN FEED FOR WEANED PIGS

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Background and Objectives

High doses of in-feed zinc are an effective preventive measure against post-weaning diarrhoea. Due to the consequences of the rising zinc concentrations in the soil, the EU Commission has decided to terminate the use of zinc in the EU by June 2022. This has increased the focus on finding feed alternatives to zinc.

Material & Methods

23 companies submitted an application describing their concept as an alternative to zinc, and among these, 4 were chosen for the trial; FRAmelco, Trouw Nutrition, Evonik and Vitfoss. The four concepts were then compared to a positive control (2500 ppm zinc) and a negative control (0 ppm zinc). The trial comprised a total of 4,500 weaned pigs divided into six groups that were followed in the 7-30 kg period in a Danish SPF herd.

Results

The concept from Trouw Nutrition showed significantly fewer treatments of diarrhoea per pen and a higher productivity ($p < 0.05$) compared to the positive control (2500 ppm zinc). However, the additional costs were higher: approximately € 1.07 per pig. The concept from Vitfoss was identical to the positive control (2500 ppm zinc) in terms of productivity and diarrhoea treatments, but cost an additional € 0.88 per pig. The concepts from Evonik and FRAmelco did not differ from the negative control group (0 ppm zinc), and therefore showed no effect on treatments for diarrhoea.

Discussion & Conclusion

Even though the concept from Trouw Nutrition lead to a higher productivity and fewer treatments of diarrhoea per pen compared to the positive control group (2500 ppm zinc), the effect on diarrhoea, the reduced antimicrobial use and the increased productivity were not enough to cover the additional cost of the feed. Consequently, we need more research and development of alternatives that are also cost-effective.