



HERD HEALTH MANAGEMENT & ECONOMY

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EUBIOTICS AS AN ALTERNATIVE STRATEGY TO ZINC OXIDE USE IN WEANING PIGS

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Introduction

The recent EU ban on therapeutic levels of zinc in animal diets has led to concern regarding potential performance losses and animal welfare. The aim of this trial was to evaluate a eubiotic in replacement for therapeutic zinc oxide in an E. coli challenge piglet study.

Material & methods

Thirty six piglets (PIC (Yorkshire × Landrace) × Duroc)) were allocated to treatment diets at weaning (21 days) for 28 days in a random block design (2 pigs per pen, 6 replicates). All diets were formulated in excess of recommendations in NRC (2012) and were fed in a mash form. Treatments were; Control (CON), basal diet no additive; Eubiotic (EUB), organic acid blend on a mineral carrier (Anpario plc, Worksop, UK) 4g/kg; Zinc oxide (ZnO) commercially available 3g/kg. Eight days post weaning (29 days of age), piglets were challenged with 6 mL (6.1×10^9 cfu/mL) ETEC (E. coli, strain K88+). Body weight and feed intake were measured weekly and digesta pH was measured at D7, 14 and 28; data were evaluated using ANOVA using JMP Pro 13 (JMP.inc, SAS).

Results

A significant ($p < 0.05$) improvement of 2.11kg in final body weight between EUB compared to CON group with 18.46kg compared to 17.76kg and 16.35kg (EUB, ZnO and CON respectively). FCR did not differ significantly between treatments. Digesta pH was reduced at D28 with EUB being sig. lower ($p < 0.05$) (6.26) compared to ZnO (6.58) and CON (6.61).

Discussion & Conclusion

The eubiotic, included in this trial has resulted in similar growth performance and diet efficiency to the zinc oxide treatment. Digesta pH was also significantly reduced, which can improve diet digestibility and help maintain good gut health. Using material costs at the time of the study the eubiotic treatment provided an economical benefit over the control and zinc oxide treatment.