

The effect of feed antimicrobial on the prevention and treatment of *E coli* K88 diarrhoea in young piglets

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A total of 342 Hypor piglets (20 " 1 d) were used in a 35 d trial to evaluate the effects of feed antimicrobial on the prevention and treatment of non-induced, naturally occurring *E. coli* K 88 diarrhoea in a university nursery facility.

The dietary treatments were: basal (control) diet containing zinc oxide (3,000 parts per million (ppm) at Phase 1 and 1,000 ppm at Phases 2 and 3); Flavomycin® 4 (12 mg/kg diet bambermycin at Phases 1, 2, and 3); Neoterramycin® 50/50 (220 mg/kg diet neomycin sulphate, 220 mg/kg diet oxytetracycline hydrochloride at Phases 1, 2, and 3); Tylan® (44 mg/kg diet tylosin phosphate at Phases 1, 2, and 3); increased zinc oxide level (3,000 ppm at Phase 1 and 1,500 ppm at Phases 2 and 3). There were eight pigs per pen and eight pens per treatment. The test diets were offered in three different feeding phases from weaning; a non-medicated common diet was offered during the last week of the trial to avoid conflicting with the administration of the water-soluble ileitis vaccine. Pigs were weighed and scored for symptoms of diarrhoea at the beginning and end of each feeding phase.

There was no treatment effect on ADFI, ADG and G:F ($P > 0.05$) for each feeding phase or the overall trial. Pigs fed the medicated diets had better scores ($P < 0.05$) for the lack of incidence of diarrhoea, bum cleanliness, and fewer clinical symptoms of dehydration than those fed the non-medicated, control diet. The use of zinc oxide led to the lowest cost per kg BW gained.

Implications:

Inclusion of antimicrobials in young pig diets may not improve growth performance. The dietary inclusion of zinc oxide was the most cost-effective strategy compared to the tested drug inclusions.