THE GOLDILOCKS PROBLEM OF SELECTING JUST THE ONE HEALTH ADDITIVE FOR PIGLETS COMPARED TO ALTERNATIVES.

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Background and Objectives

Without routine antibiotics, health-promoting feed components are common in pig production. This study compared several alternatives in one trial to identify the best for herd health and performance. Economics typically allow only one product in the weaned-to-finish period. Three alternatives (butyrate, immunomodulator, probiotic) were compared to a control. Conducted outside the EU under challenging conditions, a negative control was deemed too risky, so an antibiotic-positive control was used to assess each alternative's relative benefits.

Material and Methods

25 day-olds piglets sorted by genetic line and sex and randomly grouped into four treatments: T0 (Positive control) 529 pigs/23 pens, T 1-3 (butyrate, immunomodulator, probiotic) each respectively 552 pigs/24 pens. Pigs were fed a standard commercial diet with in feed addition of the respective treatements. Trial concluded at 137 days of age, all commercial production parameters (BW, FI, FCR, ADG) were recorded and subsequently statistically analysed on a per pen basis. Data were analyzed, and the main and interactive effects of gender and feeding program were tested using the statistical model. Faeces consistency and mortality were recorded for the entire trial period.

Results

Numerically BW at 137 days was highest for the positive control group (T0) with 91.98, however this was not statistically significant (p>0.05). All treatments T1-T3 significantly outperformed the control in survival (p<0.05). Treatments T1 and T3 showed equal diarrhoea scores to Positive control (T0), with only T2 showing a slight but significant increase; 6-10% in the nursery phase (p<0.05).

Discussion and Conclusion

This unique opportunity to test three alternatives on a commercial farm with a large number of animals confirmed that viable options exist to replace routine antibiotics in terms of performance. However, to identify differences between these alternatives, well-designed challenge trials or field studies are needed, as even the large animal numbers in the present study were insufficient to show statistically significant differences between T1-T3