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Introduction

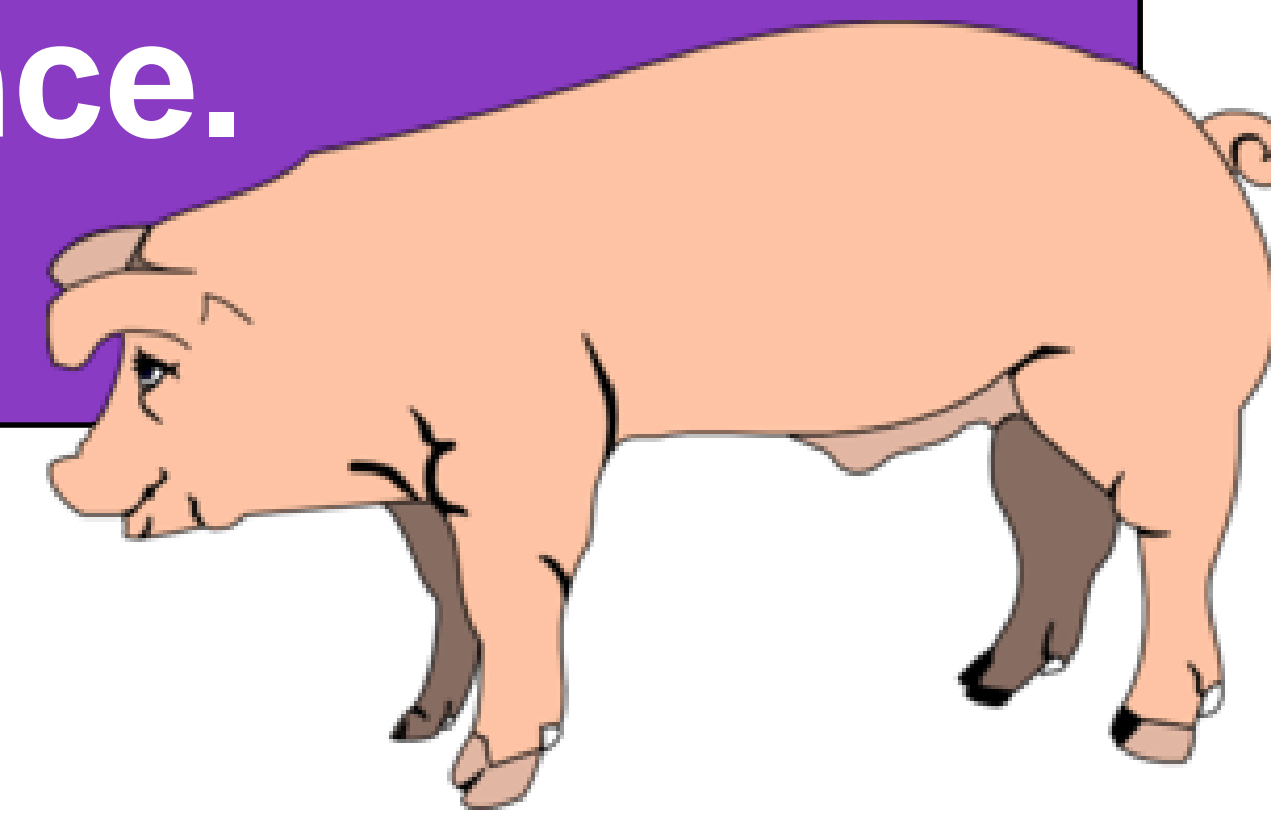
There is increasing consumer pressure to reduce the use of antimicrobials and ZnO in swine diets for health and environmental reasons. Thus far, research has shown few possible alternatives

Procedures and Methods

- Total of 360 (DNA 200x400; 5.4±0.06 kg BW) weanling pigs were assigned to one of 60 pens (6 pigs/pen) resulting in 10 replicates
- There were 6 treatments: Control¹, 3,000ppm ZnO phase 1, 1,500ppm ZnO phase 2, 50g/ton carbadox, 1% blend of C6:C8:C10, 1% Feed Energy R2 (Feed Energy Corp, Des Moines, IA), 1% FORMI GML (ADDCON, Bitterfeld-Wolfen, Germany)
- Treatment diets were provided for d0 to d19. Common diets were implemented d20 to d35.
- Individual pig weights, feeder weights, and pounds of feed added were documented for each pen every week.
- Data was analyzed with the PROC GLIMMIX (SAS version 9.4; Cary, NC) with $P < 0.05$.

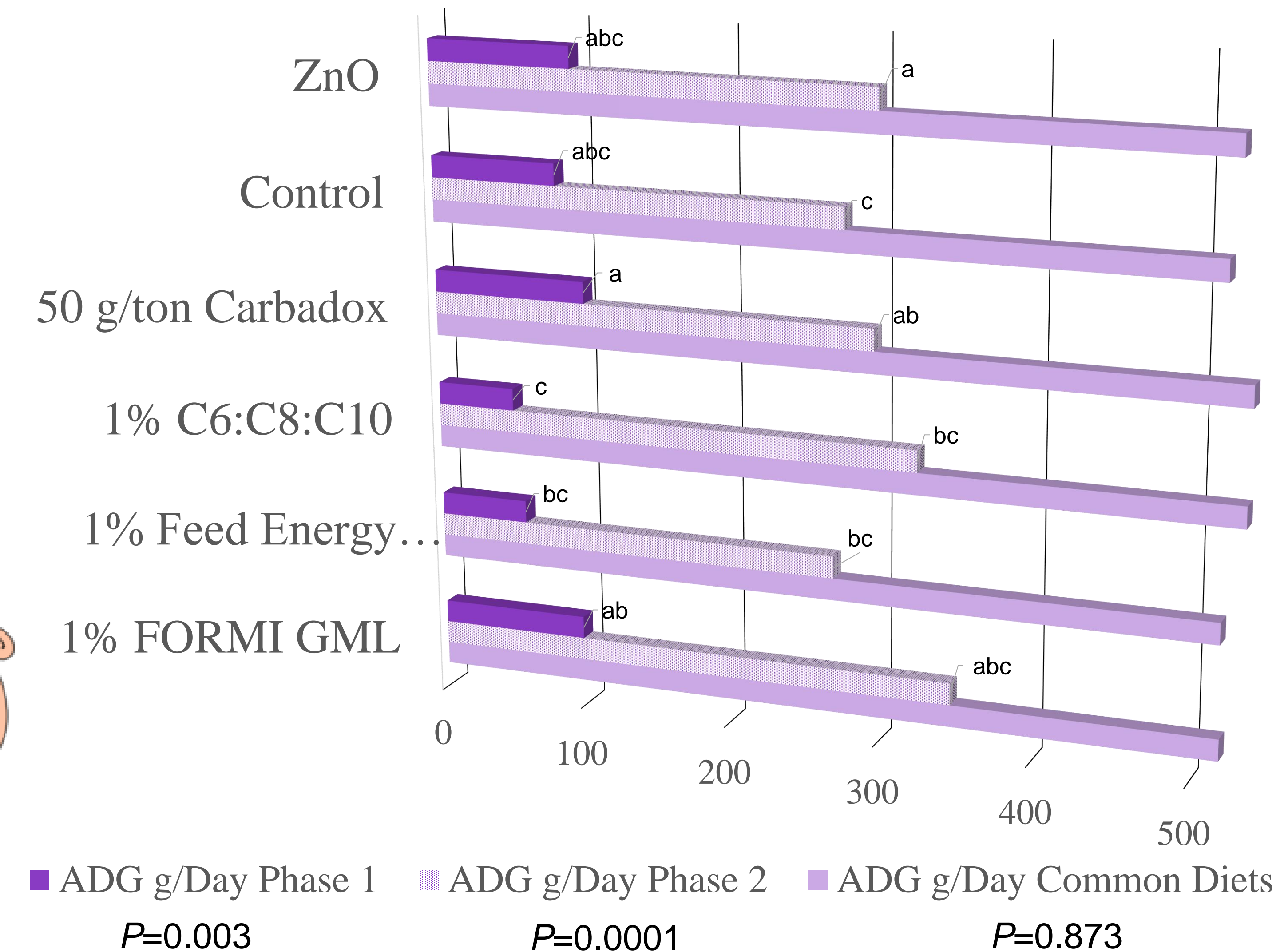
Objective

In this study medium chain fatty acids (MCFAs) were compared to ZnO and carbadox for their overall efficacy on nursery pig performance.



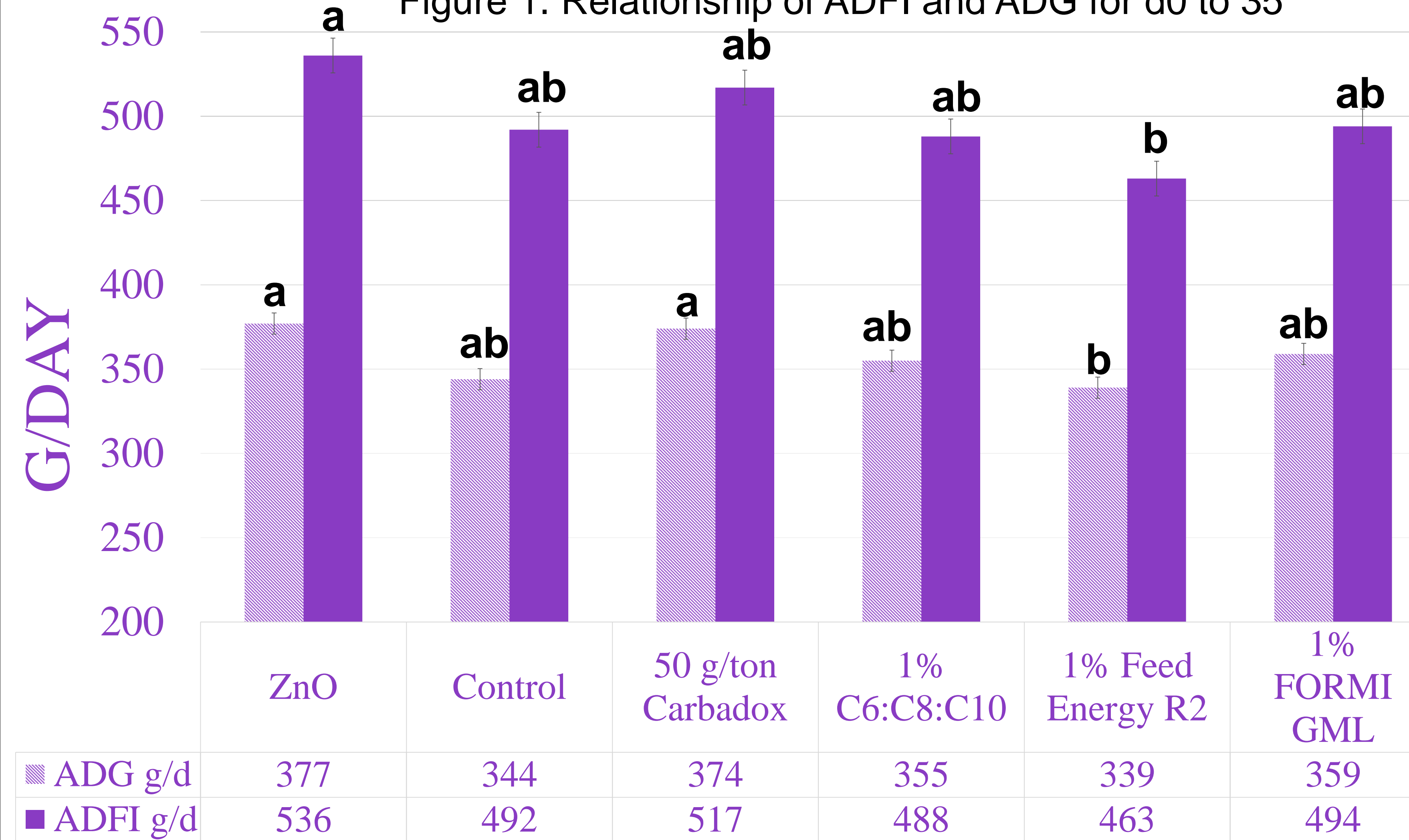
Results

Figure 2. ADG g/Day for individual treatment phases¹



¹abc superscripts within a bar color that do not share a common letter differ $P < 0.05$.

Figure 1. Relationship of ADFI and ADG for d0 to 35



abc means without a common superscript differ, $P < 0.05$
¹Control diet was formulated using 1.5% choice white grease.

Conclusions

- Pigs fed ZnO, carbadox, or 1% FORMI GML had greater ADG ($P < 0.0001$).
- Differences were detected for ADFI between pigs fed ZnO or those fed the control, MCFA, or 1% FORMI diets ($P = 0.0004$).
- ADG ($P = 0.873$), ADFI ($P = 0.089$), and G:F ($P = 0.158$) show no difference for the treatments during the common phase diet
- In conclusion 1% FORMI had similar performance as ZnO and carbadox
- Other tested MCFA require further research

Discussion

Although ZnO and Carbadox use is undesired by consumers, research continues to show few possible alternatives for an increase in nursery pig performance.

Appreciation

Appreciation is expressed to Dr. Mark and Kim Young and ADDCON for proving a research fund to conduct this study.

