

Can post-weaning *E. coli* diarrhea be prevented in nursery pigs using a live oral vaccine?

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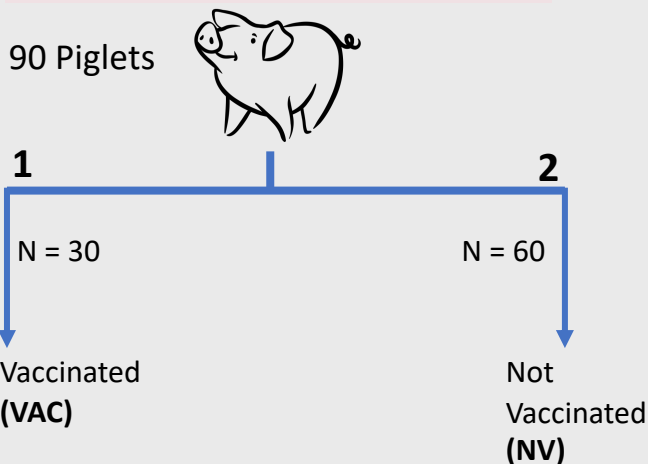
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Background

- Post-weaning diarrhea is a common problem on swine farms
 - Results in large economic losses due to weight loss, mortality and treatment cost

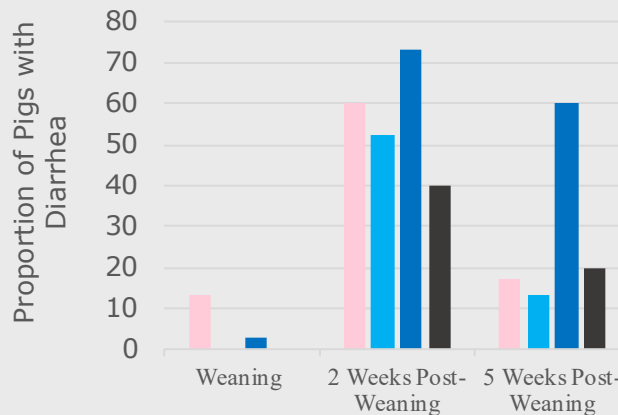
Objective: To investigate whether the vaccine is an effective preventative measure for post-weaning *E. coli* diarrhea

Methods (per trial)



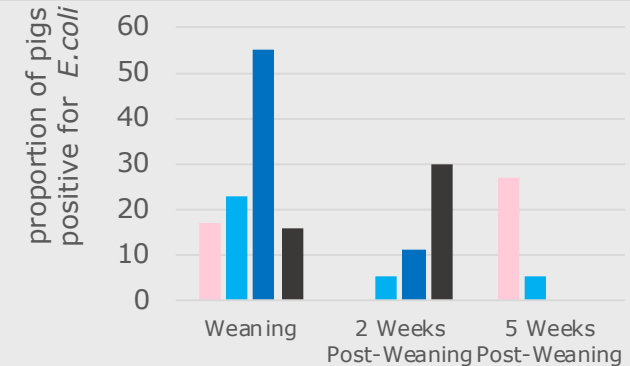
Results/Discussion

- No significant difference regarding the occurrence of diarrhea was identified between VAC and NV pigs in trial 1
- in trial 2 VAC pigs were more likely have diarrhea than NV pigs at 2 weeks post-weaning (OR = 6.9, P < 0.001)
- Average daily gain was not significantly different between the two groups in either trial
- VAC pigs were more likely to test positive for *E. coli* from rectal swabs at 2 (OR = 5.0, P = 0.001) and 5 (OR = 3.5, P=0.007) weeks post-weaning compared to NV pigs in trial 1.



■ VAC (Trial 1) ■ NV (T1) ■ VAC (T2) ■ NV (T2)

Fig 1. Proportion (%) of pigs with diarrhea per group at weaning, 2 and 5 weeks post-weaning during trial 1 (T1) and trial 2 (T2)



■ VAC (T1) ■ NV (T1) ■ VAC (T2) ■ NV (T2)
Fig 2. Proportion of pigs positive for *E. coli* per group at weaning, 2 and 5 weeks post-weaning in trial 1 (T1) and trial 2 (T2)

Conclusion/Take Home Message

The vaccine did not show promising results in this study. *E. coli* was not recovered from a proportion of pigs with diarrhea, so it is possible that other factors contributed in post-weaning diarrhea. Experimental challenge studies need to be done to evaluate the *E. coli* vaccine efficacy.

Acknowledgements

