

Comparing post-weaning mortality in pigs born from sows vaccinated with two different Coli-Clostridia combination vaccines



Rutger Jansen¹, Sanne van Dieten², Martijn Steenaert¹

¹Boehringer Ingelheim Animal Health The Netherlands, Alkmaar, The Netherlands; ²Slingeland Dierenartsen, The Netherlands



INTRODUCTION

Among the most common reasons of mortality and antibiotics used post-weaning are E.coli-associated diseases like post-weaning diarrhea (PWD) and edema disease (ED)¹. Recently a novel Coli-Clostridia combination vaccine, Entericolix[®], containing F4 and F18 E. coli fimbrial antigen, was registered in the EU. The objective of this field observation was to evaluate the efficacy of two different commercial Coli-Clostridia sow vaccines in reducing PWD-associated mortality in their off-spring.

DISCUSSION AND CONCLUSION

In this field observation mortality due to PWD after weaning was significantly reduced by the use of Coli-Clostridia combination vaccine compared to the previous farm protocol. Mortality was postponed to a later age in EP pigs, which might be explained by a longer lasting maternal immunity. With the expected ban off using high concentrations of zinc oxide in weaned piglet diets in the EU², alternative methods to protect against PWD gain further relevance. Coli-Clostridia sow vaccines can play an important role in this, specifically vaccines that provide long lasting protection.

MATERIALS AND METHODS

On a commercial 425 head sow farm piglets were suffering from E.coli F4 PWD (weaning age 26 days). Control piglets (CP; n = 1908) were born to sows vaccinated with a commercial Coli-Clostridium vaccine previously used on the farm and weaned between February and April 2017 (13 batches). Piglets born out of Entericolix-vaccinated sows (EP; n = 2220) were weaned between May and June 2017 (12 batches). Date and reason of mortality (by judgement of the animal caretaker) from weaning to 45 days post-weaning were recorded per batch.

REFERENCES

1. Fairbrother, John M., Éric Nadeau, and Carlton L. Gyles. "Escherichia coli in postweaning diarrhea in pigs: an update on bacterial types, pathogenesis, and prevention strategies." *Animal Health Research Reviews* 6.1 (2005): 17 – 39.
2. Anonymous "Questions and answers on veterinary medicinal products containing zinc oxide to be administered orally to food-producing species" EMA 394961/2017

RESULTS

Total mortality after weaning was lower for EP compared to CP (1,7% vs 2,2%). PWD-associated mortality was reduced significantly from 16 (0,8%) in CP to 3 (0,1%) in EP (OR 0,16; p < 0,005). The average age of mortality due to PWD increased from 9 days (CP) to 29 days post-weaning (EP).

Results	Before	After
Numbers of pigs (#)	1908	2220
Mortality(#)	42	37
Mortality (%)	2.2%	1.7%
E.coli associated mortality	16	3
Age E.coli associated mortality (days after weaning)	9	29

