



BACTERIAL DISEASES

BBD-074

VACCINATION WITH A LIVE BIVALENT *E. COLI* F4/F18 VACCINE FOR THE PREVENTION OF F18-ETEC POST-WEANING DIARRHEA - REDUCTION OF MORTALITY AND ANTIBIOTIC USE

F. Vangroenweghe¹, A. Jacobs², P. Defoort².

¹Elanco Animal Health, Antwerpen, Belgium; ²DAP Provet, Torhout, Belgium.

Introduction

Post-weaning *Escherichia coli* diarrhea (PWD) remains a major cause of economic losses for the pig industry. PWD, caused by enterotoxigenic *E. coli* (ETEC), provokes mild to severe watery diarrhea (5-10 days post-weaning). Most common adhesins on ETEC from PWD are the fimbriae F4 (previously called K88) and F18. An oral live bivalent *E. coli* F4/F18 vaccine (Coliprotec® F4/F18; Prevet Microbia) is available, which reduces the impact of PWD provoked by F4-ETEC and F18-ETEC. The objective was to compare technical results of *E. coli* F4/F18 vaccination with previous standard therapeutic approach.

Materials & methods

An 800-sow farm with diagnosed problems of PWD due to F18-ETEC was selected. Piglets were vaccinated at 18 days with the oral live bivalent *E. coli* F4/ F18 vaccine. At weaning, no standard group medication (antibiotics) was applied for prevention of PWD. Several performance parameters were collected before (n = 3 groups) and after implementation of the vaccination (n = 5 groups): time in nursery, mortality and medication use (TI₁₀₀) in the nursery phase and days to slaughter in the fattening phase.

Results

Oral *E. coli* F4/F18 vaccination significantly reduced the mortality (4.3% to 1.9%; P<0.05) and the TI₁₀₀ by 80% in the nursery. Finisher vaccinated pigs were slaughtered 7 days earlier at the same end body weight. Production parameters were identical before and after the vaccination.

Discussion and conclusions

The live *E. coli* F4/F18 vaccination against PWD has led to similar technical performance parameters, in combination with a significant reduction in mortality and medication use in the nursery phase and reduction of number of days in the fattening. In conclusion, control of PWD through vaccination is a good option to prevent piglets from the negative clinical outcomes of post-weaning F18-ETEC infection with additional effect on finisher pig performances.