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

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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), typically provokes mild to severe watery diarrhea between 5 and 10 days after weaning. Most common adhesins on ETEC from PWD are the fimbriae F4 (previously called K88) and F18. Therapy to combat PWD typically consists of antibiotic treatment in combination with high doses of ZnO (3000 ppm). Recently, an oral live bivalent *E. coli* F4/F18 vaccine (Coliprotec® F4/F18; Prevtec Microbia) is available on the European market, 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 under field conditions.

Materials & methods

A 600-sow farm (weaning at 21 days) 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 (ZnO and antibiotics) was applied for prevention of PWD. Piglets were fed a farm-prepared mixed liquid feed formula. Several performance parameters were collected: weight at d0-50, time in nursery, FCR, feed cost, mortality, ADG and medication use (TI_{100}).

Results

Oral *E. coli* F4/F18 vaccination significantly reduced the mortality rate (6.0% to 3.0%; $P<0.05$) and the TI_{100} by 75% ($P<0.05$). Production parameters remained identical.

Discussion & Conclusions

The results show that live *E. coli* F4/F18 vaccination against PWD has led to similar technical performance parameters, in combination with a significant reduction in the mortality and medication use. In conclusion, control of PWD through vaccination is a good option in order to prevent piglets from the negative clinical outcomes of F18-ETEC infection during the post-weaning period.