VAC-054 - EDEMA DISEASE VACCINATION IN CHRONICAL WEANERS IMPROVES THE FEED CONVERSION RATE

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Background & Objectives

Edema disease is an E.Coli enterotoxemia in pigs usually occurring after weaning. In positive herds, also subclinical or surviving pigs become unthrifty and show reduced daily weight gain and feed conversion rate. Aim of the present study was to determine if vaccination of pigs with a genetically modified recombinant Stx2e antigen could prevent both subclinical and clinical edema disease.

Material & Methods

The study was performed in 490 piglets from a farrowing site with an history of recurring clinical edema disease and Stx2e positive laboratory results. Animals were randomly assigned to two groups: Vaccinated (n=244; intramuscular injection at 4days of age of Ecoporc Shiga, Chemifarma-IDT Biologika GmbH), and Non-vaccinated group (n=246). The preventive use of all drugs against E.Coli was banned. All pigs were weighed by group at weaning (28days) and 55days after. Within each group, 40 piglets were also individually weighted. Clinical signs, mortality, feed consumption and pharmacological treatments were recorded over the whole period.

Results

No clinical signs were showed in both groups, nor any statistical difference (P>0,05) for average daily gain (358 vs 350gr) and percentage of treated animals/day (1,6 vs 1,9). However, a greater mortality was showed in non-vaccinated pigs (2.5 vs 4.9%) as a greater percentage of pigs that did not reach the threshold of 20kg at 55days (28.5 vs 21.7%). Moreover, the feed conversion rate was improved in vaccinated pigs (1.55 vs 1.81). Improved parameters led to an estimating production cost of vaccinated pigs about 1.5€ lower than non-vaccinated.

Discussion & Conclusion

Vaccination has positive effect on growth performance and feed conversion rate in case of edema disease even in absence of clinical signs. The study suggests the potential for using vaccination also in herds with a chronical edema disease with unspecific signs like unfavorable feed conversion rate and poor uniformity.