

# EFFECTS OF VEPURED® ON PRODUCTION ON A VT2E-POSITIVE FARM WITHOUT CLINICAL SIGNS OR MORTALITY RELATED TO OEDEMA DISEASE

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## BACKGROUND & OBJECTIVES

Oedema disease (OD) is an enterotoxaemia caused by the Verotoxin 2e (Vt2e) of *E. coli*. The subclinical form of the disease is characterized by delayed growth performance without clinical signs<sup>1</sup>. Detection of the *vt2e* gene in piglets allows identification of this disease, whilst vaccination against OD could improve productive parameters<sup>2,3</sup>. The aim of this study was to evaluate the effect of VEPURED® vaccination on growth performance on a *vt2e*-positive farm without clinical signs or mortality related to OD.

## MATERIALS AND METHODS

A Belgian farrow-to-finish commercial farm, without clinical signs or mortality related to OD and *vt2e* positive PCR, was selected. One batch of 621 piglets of 2-4 days of age was randomized to a vaccinated group and a control group to which VEPURED® (HIPRA) or 1 ml of PBS was administered respectively. OD clinical signs, *vt2e* presence in oral fluid (VEROCHECK<sup>4,5,6</sup>), mortality and individual productive parameters were assessed from farrowing to slaughter.

## RESULTS

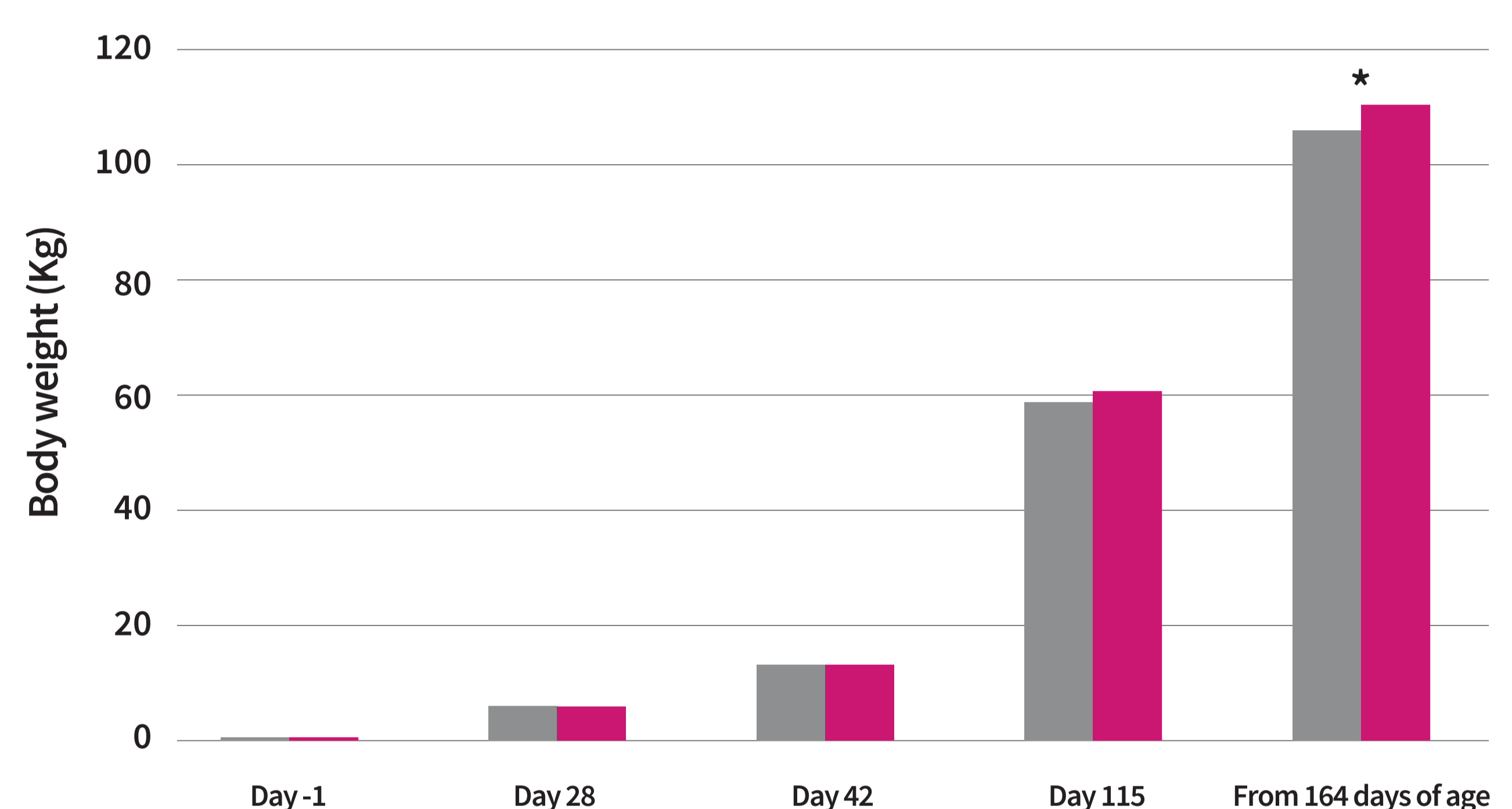
This farm was diagnosed with subclinical OD disease based on *vt2e* detection, absence of OD clinical signs and mortality, together with a suspicion of reduced productive results. During the trial, the presence of *vt2e* was confirmed in the fattening phase (Table 1). This set-up allowed the efficacy of the vaccine against subclinical OD to be assessed, based on productive results.

**Table 1.** % of positive animals for *vt2e* on different days post-vaccination, total of samples and number of positive samples.

Days Post-vaccination	Total Samples	<i>vt2e</i> Positive Samples	% <i>vt2e</i> Positive
21	6	0	0 %
45	7	0	0 %
77	6	4	66.7 %
105	6	1	16.7 %
167	6	1	16.7 %

During the nursery period, individual growth performance of the vaccinated group was not statistically higher than that of the control group (Figure 1). At the end of the fattening period, individual growth performance was significantly higher ( $p$ -value<0.01) in the vaccinated animals (Figure 1). The animals in the vaccinated group had a mean weight that was 2,669 gr higher than the control group.

Similarly, the carcass weight in the slaughterhouse was significantly higher in the vaccinated group (92.92 Kg) compared to the control group (90.88 Kg), although the lean meat and carcass classification was similar between groups.



**Figure 1.** Mean animal body weight progression (kg). \* $p$ -value < 0.001; Student t-test

## CONCLUSIONS

Piglet vaccination against OD showed a positive effect on this particular farm with a significant improvement in the productive parameters at culling time. These results confirm that piglet vaccination with VEPURED® from 2 days of age could be a useful tool against delayed growth performance and its economic effects on farms with a subclinical form of OD.

## ACKNOWLEDGEMENTS

PROVET, DIAGNOS and CEYC for their technical and logistical support.

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