

COMPARATIVE STUDY OF THE HUMORAL RESPONSE AGAINST SWINE ERYSIPELAS AND PORCINE PARVOVIRUS INDUCED BY TWO COMMERCIAL VACCINES

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INTRODUCTION

Protection against Swine Erysipelas (SE) and Porcine Parvovirus (PPV) mainly comes from humoral immunity induced by consecutive vaccinations. Therefore, when a serological analysis is performed by means of a serological profile in a herd of vaccinated breeders, it is expected that most of the sows will be seropositive. If seronegative sows are detected in the herd, these sows represent sub-populations exposed to diseases if they come into contact with the reproductive pathogens during the gestation period¹⁻³.

ERYSENG® PARVO is a new bivalent vaccine against SE and PPV, adjuvanted with HIPRAMUNE® G^d.

The aim of this study was to compare the humoral immune response to SE and PPV developed by two commercial vaccines, ERYSENG® PARVO and Vaccine A (vaccine against SE, PPV and *Leptospira*, adjuvanted with Amphigen®).

MATERIALS AND METHODS

A total of 30 gilts free of antibodies against *Erysipelothrix rhusiopathiae* and PPV were randomly assigned to 3 groups of 10 animals each. The animals in groups 1 and 2 were vaccinated twice intramuscularly (days 0 and 21 of the study) with ERYSENG® PARVO and with Vaccine A respectively. The animals in group 3 received PBS.

Serum samples were taken on days 0, 21, 42 and 64, and tested using a commercial ELISA kit (CIVTEST® SUIS SE/MR) for SE and the IHA technique for PPV.

The results were analysed using the ANOVA and Kruskal-Wallis tests respectively, with a significance level of 95 %.

RESULTS

The titres of the antibodies against SE (Figure 1) of the group vaccinated with ERYSENG® PARVO were the highest, and showed statistically significant differences ($p<0.05$) to Vaccine A and control groups on all the days of the study (d21, d42 and d64).

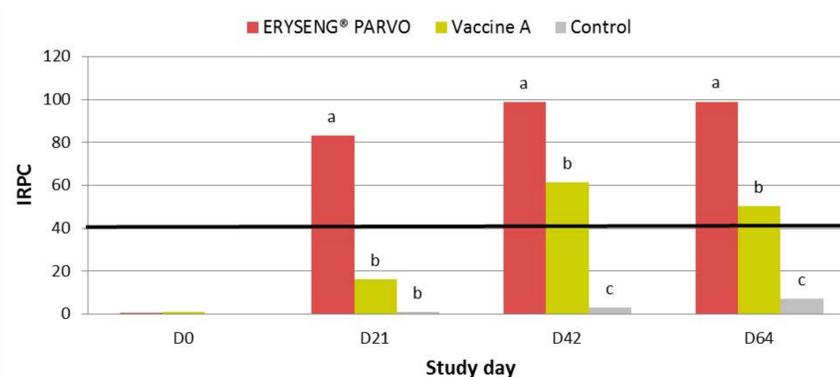


Figure 1. Mean antibodies titres against SE. Different superscripts show statistically significant differences ($p<0.05$).

With regard to the values of antibodies against PPV (Figure 2), the ERYSENG® PARVO group was the only one which showed statistically significant differences ($p<0.05$) compared to the control group during the days 42 and 64 of the study.

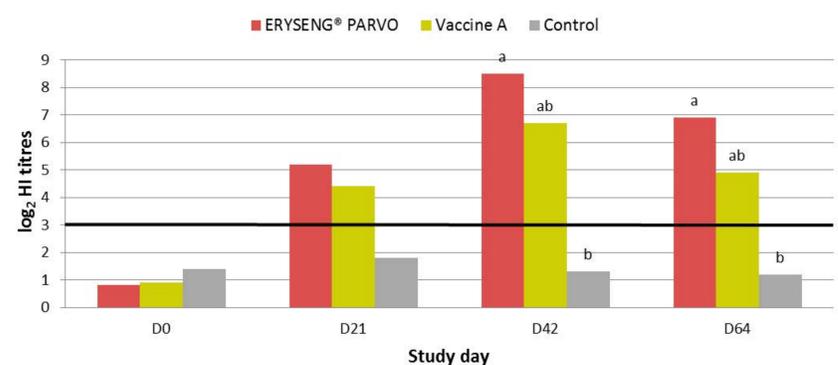


Figure 2. Mean antibodies titres against PPV. Different superscripts show statistically significant differences ($p<0.05$).

CONCLUSIONS

The humoral immune response against SE and PPV developed by ERYSENG® PARVO was faster, higher and lasted longer than the response obtained with Vaccine A.

This situation guarantees better protection for sows during the gestation period and would prevent the presence of negative sub-populations susceptible to suffering from clinical diseases with the consequent associated reproduction losses.

REFERENCES

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