The **Reference** in **Prevention** for **Animal Health**

# ASSESSMENT OF THE SAFETY OF ERYSENG® PARVO COMPARED TO A TRIVALENT VACCINE

Jordà[1], R. Galé*[1], I.; Ballarà[1], I.
** Corresponding author (irene.gale@hipra.com)*
[1]HIPRA, Amer (Girona), Spain

## INTRODUCTION

The maximum level of antibodies against Swine Erysipelas (SE) and Porcine Parvovirus (PPV) is reached 21 days after vaccination with the last dose[1], so that, the optimum time for vaccination is during lactation at 21 days before the next artificial insemination.

Recently, different studies have shown how important the safety of different vaccines is when they are administered during lactation, as they could affect feed intake, milk production, and consequently, piglet performance during lactation[2].

The aim of this study was to assess and compare the safety, in terms of local reactions and increase in body temperature, of two different reproductive vaccines.

## MATERIALS AND METHODS

A blinded and controlled experimental trial was performed with 27 sows during lactation. These animals were randomly assigned to three groups; Group 1 (G1, n=10) was vaccinated with ERYSENG® PARVO (bivalent vaccine against SE and PPV adjuvanted with HIPRAMUNE® G), Group 2 (G2, n=10) was given Vaccine B (trivalent vaccine against SE, PPV and *Leptospira interrogans sp.* adjuvanted with α-tocopherol-acetate), and Group 3 (G3) was injected with PBS as a control group. All the groups were vaccinated on approximately day 16 of lactation following the manufacturer's instructions.

Rectal temperature (RT) and local reactions (LR), in terms of inflammation at the inoculation point, were evaluated 24 hours before vaccination, at the time of vaccination (0 hours), 6 hours post vaccination (hpv), 24 hpv and 48 hpv.

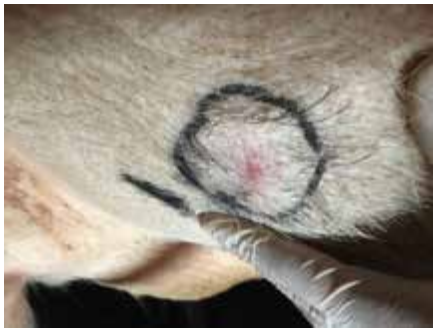
## RESULTS

At the time of vaccination, none of the animals had fever. At 6 hpv, significant differences were found between G2 and the control group *(p<0.05)*, with more than half a degree difference. Furthermore, the increase in rectal temperature in G2 was higher than in the group vaccinated with ERYSENG® PARVO just after vaccination and until the end of the study, as seen in table 1.

| Time | Control | Vaccine B | ERYSENG® PARVO | *P-value* |
|---|---|---|---|---|
| **Reference** | **-1 day** | **-1 day** | **-1 day** | |
| **0** | 0.345 | 0.325 | 0.336 | 0.99 |
| **6h** | $0.288^{A}$ | $0.865^{B}$ | $0.699^{AB}$ | 0.03* |
| **1 day** | 0.168 | 0.517 | 0.293 | 0.35 |
| **2 days** | 0.33 | 0.07 | 0.016 | 0.82 |

**Table 1.** *Mean increase in RT of the different groups during the study. An ANOVA test was performed to analyse the differences between groups. Different subscripts mean significant differences (p<0.05)*

There were also significant differences in terms of LR (inflammation at the inoculation point) between G2 (mean of 0.4 cm diameter) and G3 (mean of 0 cm diameter) at 6 hpv (p<0.05). No significant differences were observed between G1 (0.2 cm diameter) and the control group at any time point in the study.



**Picture 1.** Assessment of LR (Inflammation at the inoculation point) of a sow from Group 2.

## CONCLUSIONS AND DISCUSSION

The present study was intended to explore differences in safety, and the results indicate a difference in terms of an increase in body temperature and local reactions between G2 and the control group. Thus, these differences could have a negative impact on sow performance during lactation (low feed intake and reduced milk production) and consequently, a worse outcome for piglets at weaning.

Further studies should be performed to determine how the lack of safety of some reproductive vaccines could affect reproductive performance in sows during subsequent insemination and gestation periods.

## ACKNOWLEDGMENTS

HIPRASTAT team for their statistical support.

## REFERENCES

1. Camprodon *et al.* ESPHM Proceedings 2017. P365.
2. Balderrama V *et al.* 2019. Proceedings 50th Annual Meeting AASV.

*This poster in press belongs to approved proceedings to IPVS Congress 2020 to be held in Brasil, which has been postponed due to COVID-19.*