COMPARATIVE STUDY OF THE EFFECT OF INTRADERMAL AND INTRAMUSCULAR MASS VACCINATION (UNISTRAIN® PRRS) ON THE COURSE OF SEROCONVERSION IN PRRS-NEGATIVE PIGS

Busquet*, M.; Blanch, M.; Torrents, D.; Verdaguer, J.; Sánchez-Matamoros, A

*Corresponding author (marta.busquet@hipra.com)
HIPRA, Amer (Girona), Spain

OBJECTIVE
MLV UNISTRAIN® PRRS administered via the intramuscular (IM) route is an effective control measure against the PRRSV (Fenech et al, 2013). A needle-free injection device (Hipradermic®) has been designed by HIPRA as a new option for the intradermal (ID) administration of this vaccine on swine farms considering the advantages of this system (Chase et al, 2008). The aim of this study was to compare the humoral immune response following vaccination via the ID or the IM route in PRRS-negative pigs under field conditions.

MATERIALS AND METHODS
Two PRRS-negative fattening farms, housing around 430 pigs (Farm A) and 360 pigs (Farm B), 10-weeks old, were randomly divided into two different groups, the IM group and the ID group, and 35 and 42 healthy animals per group were individually marked from Farms A and B, respectively. In the same way, 12 pens on Farms A and B were selected for each group. The IM group was vaccinated intramuscularly with UNISTRAIN® PRRS (2 ml/dose) and the ID group was vaccinated intradermally with the same vaccine (0.2 ml/dose) using Hipradermic®. The PRRSV antibody response (Civtest® Suis PRRS, HIPRA), PRRSV RNA detection (Martínez et al. 2008) and safety were compared in both groups. Different statistical tests were performed according to the recorded data.

RESULTS
Prior to vaccination, all the samples were negative for RNA and PRRSV antibodies (Fig 1 and 2).

DISCUSSION AND CONCLUSIONS
Vaccination with UNISTRAIN® PRRS induces a humoral response in PRRS-naïve pigs regardless of the injection technique used. Both injection techniques had a comparable effect on the antibody response at 28 and 48 dpv, although some higher antibody levels were observed with the IM route. Vaccination with UNISTRAIN® PRRS ID seems to be a new, safe and immunogenic method for PRRS control plans.

ACKNOWLEDGMENT
The authors wish to thank DIAGNOS and CEYC (HIPRA S.A.) and F. Pijoan who participated in the study described above for their technical assistance.

REFERENCES