

# INTRADERMAL VACCINATION WITH UNISTRAIN® PRRS IN GILTS IMPROVES THE PERFORMANCE OF THEIR OFFSPRING

Simon-Grifé<sup>1</sup>, M.; Ros<sup>1</sup>, M.; Saun<sup>1</sup>, X.; March<sup>1</sup>, R.; Sitjà<sup>1</sup>, M.; Fenech<sup>\*1</sup>, M.  
<sup>1</sup>HIPRA, Amer, Spain



## INTRODUCTION

The aim of this study was to demonstrate that UNISTRAIN® PRRS applied by the intradermal route (ID) with a Hipradermic® device in gilts improves the performance of piglets born from vaccinated gilts.

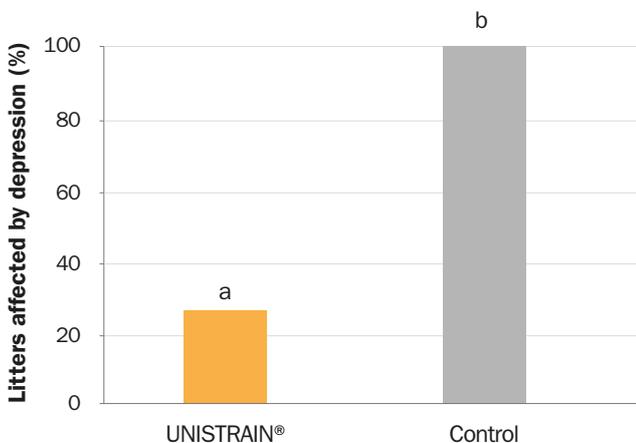
## MATERIAL & METHODS

Sixteen gilts, clinically healthy and free from virus and antibodies against PRRS, were randomly assigned to two different groups. One group was vaccinated with UNISTRAIN® PRRS by the ID route (0.2 ml/dose;  $10^{3.5}$  CCID<sub>50</sub>/animal) 4 weeks before artificial insemination (AI). Animals in the non-vaccinated control group received 0.2 ml of PBS (ID). At 90 days of gestation, all the gilts were challenged by intranasal route with a heterologous pathogenic strain of genotype I PRRSV (Italian strain; 89% ORF5 homology;  $10^{5.4}$  CCID<sub>50</sub>/ gilt).

## RESULTS

Piglets from the non-vaccinated gilts (10.6%) suffered more clinical signs than those born from gilts that had been vaccinated (1.1%). Depression and anorexia were the two clinical sign most observed in this group, and the difference in the proportion of litters affected by depression was statistically higher in the non-vaccinated group (8/8 litters) than in the UNISTRAIN® group (2/8 litters).

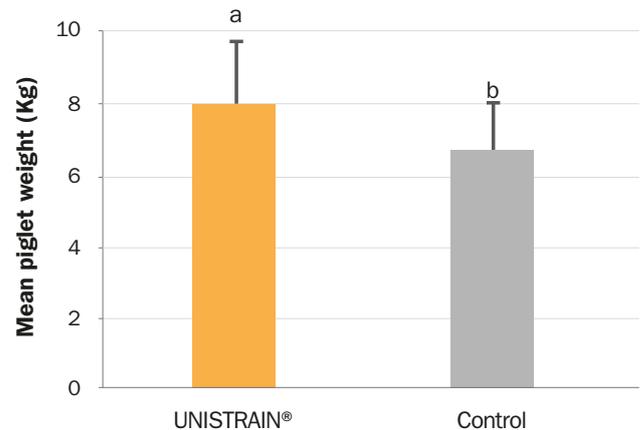
Figure 1. Clinically affected litters after challenge.



Different superscript letters indicate statistically significant differences ( $p < 0.05$ ) among groups.

Indirectly, vaccination of the gilts had an impact on their litters with significantly ( $p < 0.05$ ) better weight performances and average daily weight gain in the vaccinated group ( $232.5$  g/piglet/day  $\pm$   $45.1$  g) vs control group ( $191.8$  g/piglet/day  $\pm$   $46.9$  g).

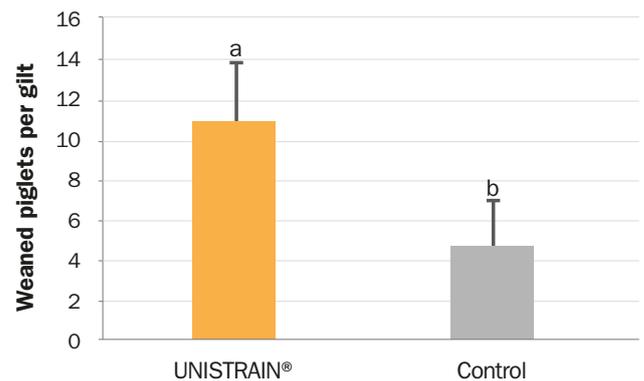
Figure 2. Piglet weight at weaning.



Different superscript letters indicate statistically significant differences ( $p < 0.05$ ) among groups.

Furthermore, vaccination with UNISTRAIN® PRRS by the ID route resulted in a significantly higher number of piglets weaned ( $10.6 \pm 2.9$  weaned piglets) than in control group ( $4.3 \pm 2.1$  weaned piglets).

Figure 3. Weaned piglets at 28 days postpartum.



Different superscript letters indicate statistically significant differences ( $p < 0.05$ ) among groups.

## DISCUSSION

Vaccination of gilts with UNISTRAIN® PRRS ID by Hipradermic® improves piglet performance. Moreover, piglets were healthiest during the lactation period and the number of weaned piglets also increased when females were vaccinated with UNISTRAIN® PRRS.