

# IMPACT OF SOW VACCINATION WITH UNISTRAIN® ON THE PREVALENCE OF PRRSV ANTIBODIES AT NURSERY AGE IN A PIG FARM IN GERMANY.

P. Veltmann<sup>1</sup>; G. Klossok<sup>1</sup>, O. Niemann<sup>2</sup>

1: Veterinary practice Thesings Kreuz, Vechta, Germany ; 2: HIPRA Deutschland; Düsseldorf, Germany [olaf.niemann@hipra.com](mailto:olaf.niemann@hipra.com)

## INTRODUCTION

The Porcine Reproductive and Respiratory Syndrome (PRRS) is one of the most economically important diseases in the swine industry. Vaccination with modified live vaccines (MLV) is the preferred strategy used to control PRRS, in combination with some pig husbandry practices. The causal agent of PRRS is the PRRS virus (PRRSV), which is represented by two main genotypes (type 1 and 2), and diverse genotypes and variants, occurring all over the world. Evidence of vaccine-induced protective immunity against heterologous challenge has been published<sup>1</sup>. Concerning this matter, the PRRSV MLV UNISTRAIN® that was recently introduced in the European market, has demonstrated clinical protection against heterologous infection in gilts and sows<sup>2, 3</sup>. Furthermore, the vaccination using UNISTRAIN® enabled pregnant gilts to clear the virus and reduced its vertical and horizontal transmission to fetuses, thereby reducing the infection pressure at the herd level<sup>4</sup>. The main focus of this study was to evaluate the prevalence of specific serum antibodies in piglets against PRRSV, after vaccination with UNISTRAIN®, and the evolution of seroprevalence over time, as an indirect measure of the infection pressure dynamics in the studied population under field conditions.

## MATERIALS AND METHODS

The case was recorded in a 1000-sow herd with a 2-site production system. Site 1 is the farrow-to-nursery farm. Piglets were being weaned at 24 days of age and moved to the nursery barn. The sow herd was being vaccinated with a genotype 1 MLV PRRS vaccine other than UNISTRAIN® vaccine (mass vaccination on a 4 month interval). ELISA serology and PCR on serum samples from nursery piglets showed the presence of antibodies against PRRSV and PRRSV viremia (DV-vaccine strain and PRRSV field strain). In addition, PRRSV was identified as the cause of abortion, in a vaccinated sow, and was linked to the increase in the titres of antibodies against PRRSV in the nursery period. As a result of these findings, PRRS vaccination was changed to UNISTRAIN®. No changes were made in other vaccination regimens. The impact of vaccine change was documented by testing serum samples by ELISA (IDEXX HerdCheck PRRS X3) at different time points during nursery.

## RESULTS

3 months after the vaccine change the percentage of seropositive animals, and also the average of ELISA antibody titres in nursery piglets dropped significantly (Fig 1, Fig 2). This was accompanied

by an overall improvement of the clinical performance in regards to PRRS-related respiratory disease in the nursery. The use of antibiotics decreased in the last quarter significantly compared to the same quarter in the previous year.

Fig. 1. % PRRS positive ELISA

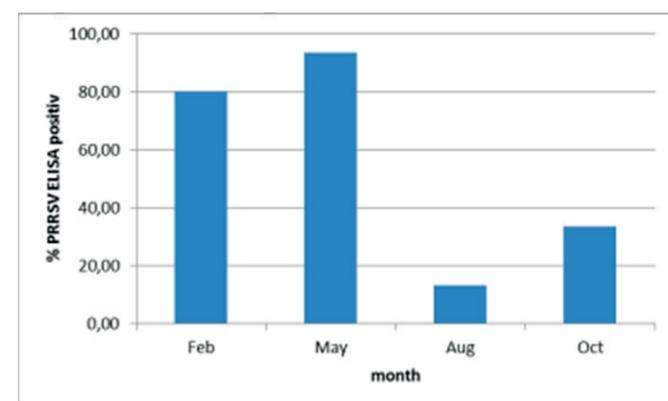
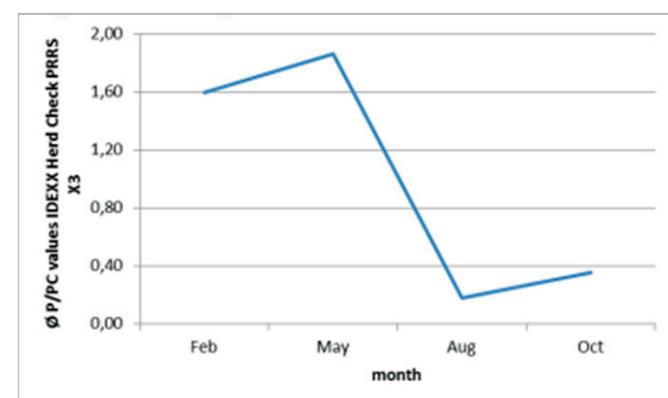


Fig. 2. Average P/PC value IDEXX ELISA



## CONCLUSIONS AND DISCUSSION

The results may be indicative of a decrease in the infection pressure exerted by PRRSV in the nursery as a consequence of the active vaccination of the sows. Nevertheless, it was not possible to eradicate the infection from the herd, but the productive parameters show clinical and virological stabilization of the breeding herd and the nursery.

## REFERENCES

- 1: Roca M., et al. (2012): Vet J. 2012 Jul; 193(1): 92-6. doi: 10.1016/j.tvjl.2011.11.019. Epub 2012 Jan 20.
- 2: Fenech, M. et al. (2012): Proc. ESPHM 2012, p 181; 3: Fenech, M. et al. (2012): Proc. ESPHM 2012, p 183; 4: Fenech, M. et al. (2012): Proc. ESPHM 2012, p 182



Laboratorios Hipra, S.A.  
Avda. la Selva, 135  
17170 Amer (Girona)  
Spain

Tel (34) 972 43 06 60  
Fax (34) 972 43 06 61  
[hipra@hipra.com](mailto:hipra@hipra.com)  
[www.hipra.com](http://www.hipra.com)