A case report of efficacy and profitability of piglet vaccination to control Highly Pathogenic (HP) PRRSV1 infection in weaners

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Background & Objectives

The objective of this trial was to evaluate the efficacy and profitability of piglet PRRS vaccination, in combination with management measures, to control post-weaning mortality induced by a variant of a highly pathogenic PRRSV1 strain (Genbank accession number ON571708, commonly known as Rosalia).

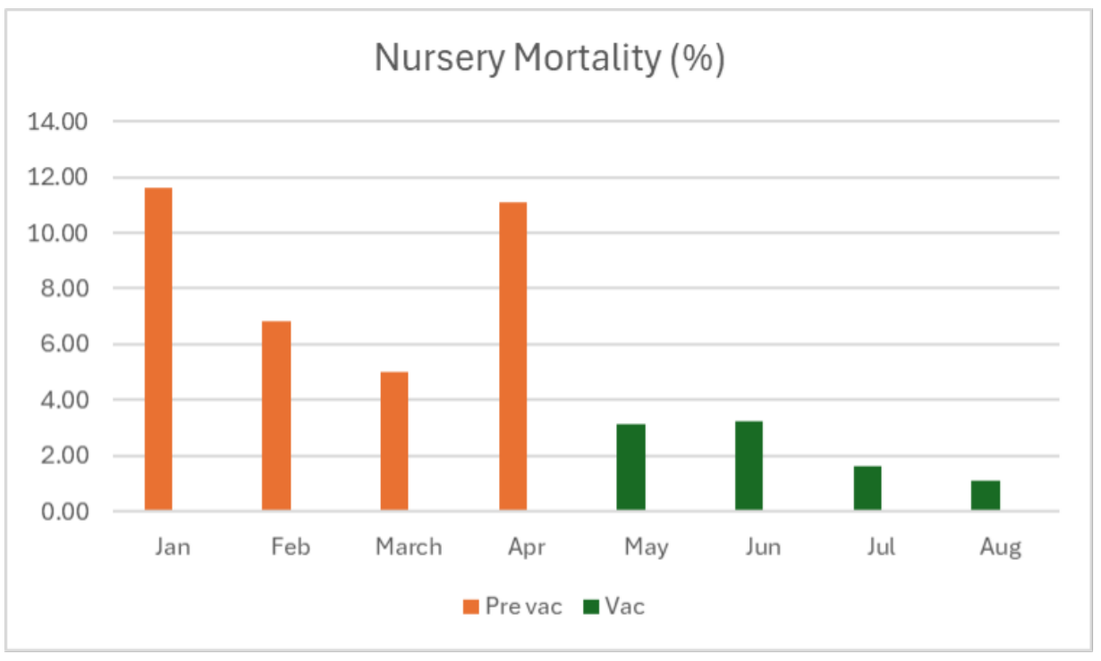
Materials & Methods

The study took place in a 270-sows closed herd, located in Catalonia (Spain). In 2024, the farm suffered a PRRSV outbreak of a variant of the highly pathogenic PRRSV strain Rosalia (97.52% homology with Genbank ON571708). In April 2025, although sows were stable, nursery mortality was still higher than expected. Once confirmed via PCR that piglet flux was PRRSV negative at birth, it was decided to vaccinate piglets at 2w of age (Porcilis® PRRS via intradermal (ID) administration, MSD Animal Health) for a 6-months period. Also, some management strategies were implemented, such as the 3w batch-system, AI-AO and a strict policy of sacrifices of non-recoverable animals.

Efficacy of vaccination was determined by comparing mortality and clinical signs compatible with PRRS of pre- and post-vaccination batches. PRRSV presence was determined by PCR in blood samples from piglets at 6 and 9w of age. Data were statistically analyzed based on monthly mortality using the Pearson's Chi square test.

Results

The mortality of nursery was reduced by 87%, from an average of 8.66% pre-vaccination, to 2.2% after the implementation vaccination with Porcilis® PRRS ($p<0.001$) (Table 1 and Graph 1).
No clinical signs compatible with PRRS were observed in the vaccinated batches.
No field virus was found in blood samples of piglets at 6 and 9w of age.
Vaccinated batches, only considering the reduction in mortality in nursery phase, had an extra benefit of 2.62 €/piglet, including cost of vaccination.



Graph 1: Monthly mortality rate by batch in nursery

	Pre-vaccination	After implementation of Porcilis® PRRS vaccination	Statistical significance
Number of animals	2906	3106	
Mortality (%)	8.66	2.26	$p<0.001$

Table 1: Monthly mortality rate in nursery pre-vaccinated versus post-vaccinated batches

Discussion & Conclusion

In this field experience, the combination of piglet vaccination and management measures was shown to be an effective and profitable strategy to reduce PRRS-induced mortality in weaners induced by a HP PRRSV1 strain.

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