EVALUATION OF PRRS PIGLET VACCINATION IN A MULTI-ORIGIN NURSERY UNIT IN SPAIN

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Background & Objectives

Vaccination against the porcine reproductive and respiratory syndrome virus (PRRSv) is widely used to prevent production losses in the swine industry. With regard to piglets, vaccination against PRRS has been shown to be a useful and profitable measure to not only decrease PRRS infection pressure in the nursery phase but also to provide reasonable protection for piglets, that is usually seen as a reduction in mortality[1]. This is especially important in the current scenario of the Spanish swine industry where since the appearance of highly pathogenic PRRSv strains, primary and secondary infections by agents such as Influenza virus, *Glaesserella parasuis*, *Actinobacillus pleuropneumoniae*, *Streptococcus suis* or P*asteurella multocida* have increased due to the immunosuppression that this virus causes, acting as a gateway that can seriously worsen the health status of the animals[2]. In this study, the efficacy of piglet vaccination was assessed in a multi-origin nursery unit in the southeast of Spain.

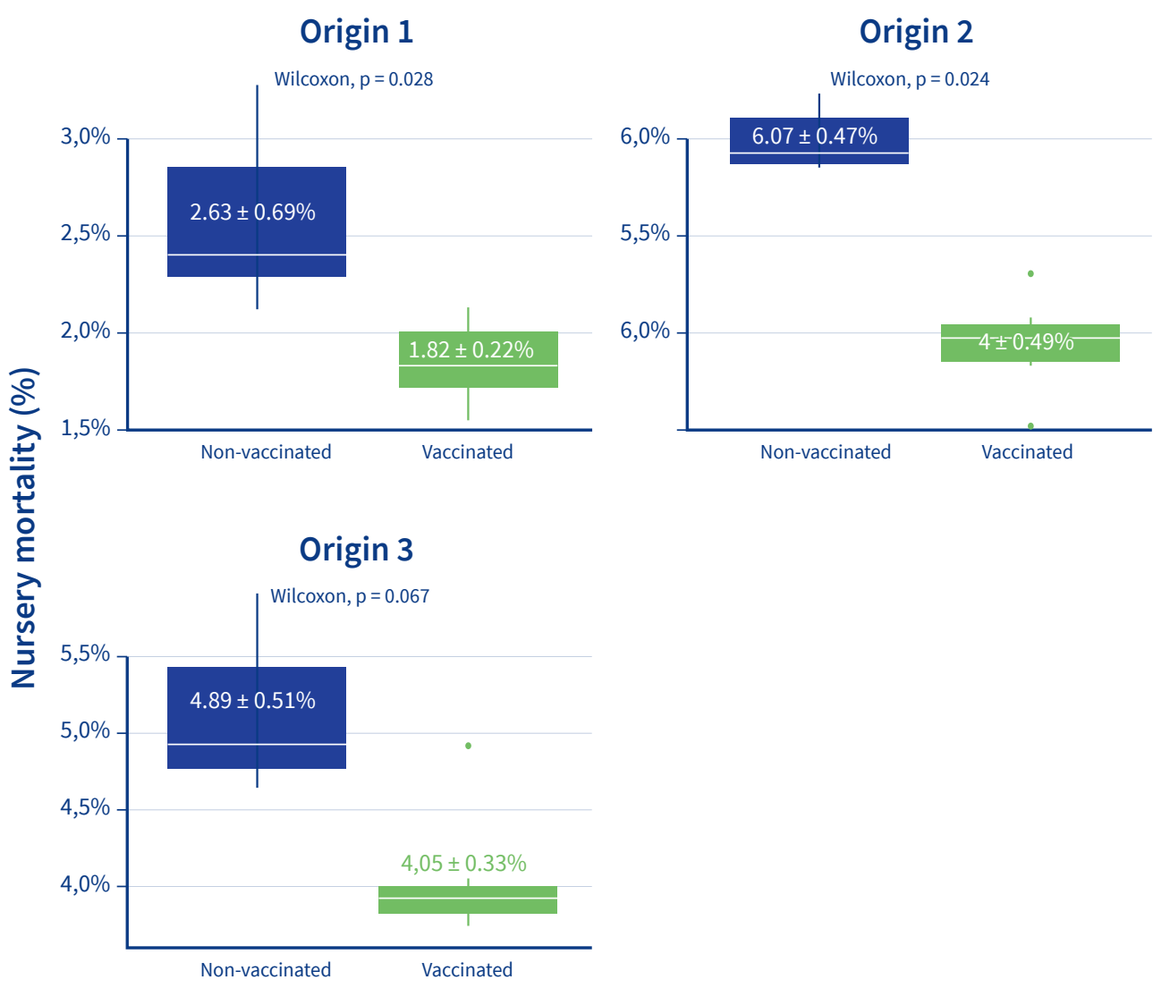
Materials & Methods

A post-weaning phase unit located in one of the highest density swine production areas in Spain received 850 weaned piglets weekly from 3 different sow farms (O1: 700, O2: 650 and O3: 800 sow census farms). All 3 sow farms were PRRS-stable, checked by a negative PCR result from serum samples from weaned piglets. When the piglets were moved together into a single nursery unit, they became positive for PRRS by PCR with variable Ct values between 30-35 at 8-9 weeks of age. This positivity was reflected in an increase in the mortality rate from 2.5% to 5%. To reduce this horizontal virus circulation and its impact on production, PRRS piglet vaccination with Unistrain® PRRS IM at 3 weeks of age was applied at entry into the nursery phase. Mortality in the nursery phase amongst the vaccinated animals from 3 different origins (n = 35,672) was recorded over a period of 6 months and compared to the previous 3 months for non-vaccinated piglets (n = 17,836). The differences were tested by Wilcoxon test.

Results

After the introduction of PRRS piglet vaccination, the mortality rate was reduced in the vaccinated piglets from 3 different origins, significantly in O1, decreasing from 2.63% to 1.82% (p-value = 0.028) and from 6.07% to 4% in 02 (p-value = 0.024). The reduction in the mortality of the piglets from the third origin (O3) went from 4.89% to 4.05% with a p-value of 0.067.

Figure 1. Mortality rate (%) in nursery phase vaccinated and non-vaccinated animals, divided by origin.



Discussion & Conclusion

The results obtained show the effectiveness of PRRS piglet vaccination applied at the correct time as a tool to reduce mortality in a multi-origin nursery phase. Vaccination is just one of the pillars of a complete PRRS control strategy that should be complemented by other measures such as biosecurity, management, and monitoring measures.

References

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