

## SIMULTANEOUS PRRSV AND SIV INFECTIONS INCREASE ANTIMICROBIAL CONSUMPTION IN NURSERY

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### Background & Objectives

The aim of this study was to assess the correlation between positivity for Porcine Reproductive and Respiratory Syndrome Virus (PRRSV) and Swine Influenza Virus (SIV) and the use of antimicrobial treatments in the nursery.

### Materials & Methods



110 nurseries

- Oral Fluids: 2-3 ropes/farm
- 12-24 pigs/rope (8 weeks of age piglets)
- Refrigerated and sent to lab within 24h
- Submitted to PRRSV RT-PCR and SIV RT-PCR.

Figure 1. The oral fluid samples were collected with ORALCHECK pack.

After the sample collection a survey was filled for each farm, collecting data on productive parameters and antibiotic usage (records from previous 3 months).

### Results

63.6% of the farms were positive for at least one of the viruses, with 21.8% being simultaneously positive for both. The double-positive farms had a higher rate of treatments against streptococcal infections (30.4% of animals versus 15% on double-negative farms, 12.5% on SIV-positive farms and 15% on the PRRS-positive farms). SIV-positive farms had higher DDD<sup>1</sup> values compared to SIV-negative farms (Fig.2). For PRRSV, no correlation was observed between positivity and DDD, but lower Ct values correlated with higher mortality in the nursery phase (Fig.3)

Figure 2. Average consumption of antibiotics (DDD\*) during nursery phase and positivity to PRRS and SIV.

\*DDD – Defined Daily Dose (AACTING, 2019)

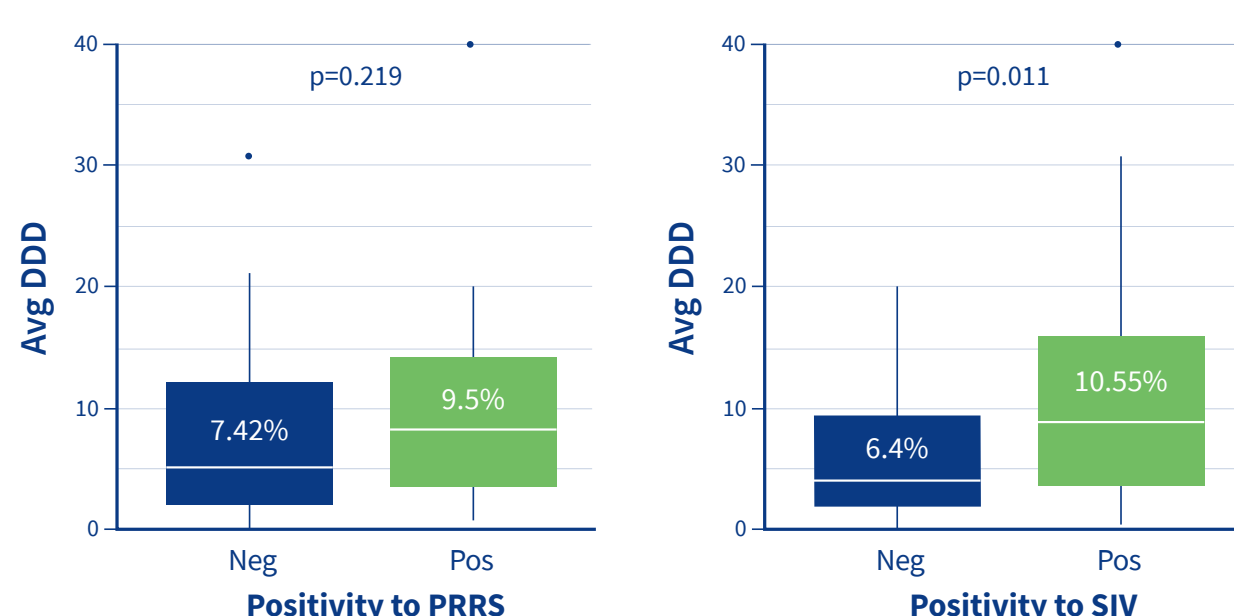
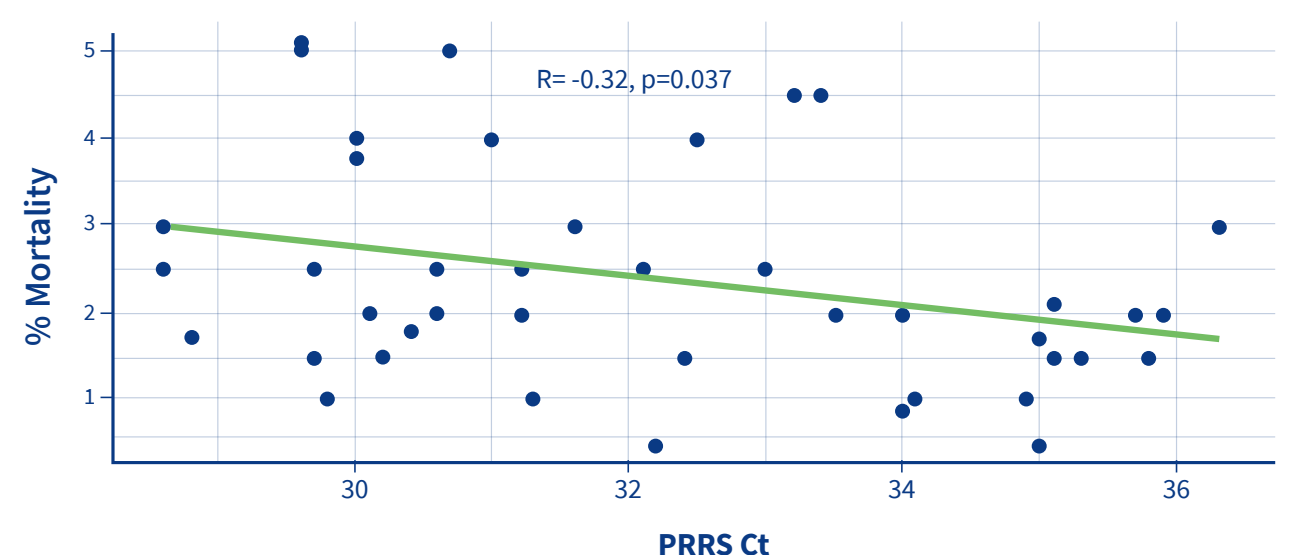


Figure 3. Correlation between positivity to PRRSV and mortality during nursery phase (p=0.037).



### Discussion & Conclusion

The results show that not only most of the farms were positive for at least one of the viruses, but that PRRSV and SIV infection during the nursery phase was associated with a higher incidence of streptococcal infections, increased antimicrobial treatments and mortality.

These findings reinforce the need to establish proper control of PRRSV and SIV at farm level to reduce antimicrobial usage during the nursery phase, particularly on farms with a high incidence of streptococcal infections.

### References

1. DDD – Defined Daily Dose. AACTING, Guidelines for Collection, Analysis and Reporting of Farm-Level Antimicrobial Use, in the Scope of Antimicrobial Stewardship Version 1.2, 2019

Code assign: HHM-PP-69