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FIELD EVALUATION OF ID AND IM PRRSV MLV VACCINATION IN SUCKLING PIGLETS ON HEALTH AND PERFORMANCE


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Introduction

PRRSV vaccination is a potential strategy to reduce not only the virus shedding, but also the severity of respiratory signs of growing/finishing pigs. This field study evaluated the ID and IM vaccination in suckling piglets.

Material & Methods

The study included 187 piglets (2 weeks-wks) from a PRRSV-positive farm (11-12 x 4 groups x 4 replicates); group A: IM-vac with Porcilis®PRRS at 2wks, group B: ID- vac with Porcilis®PRRS at 2wks, group C: ID placebo, group D: IM placebo. Indicate when they were vaccinated. Blood samples were collected at 4, 7, 10, 13, 17 and 21 wks. Sera were examined by qRT-PCR for PRRSV (types 1 and 2) and by ELISA for PRRSV Abs. Local/systemic reactions, performance parameters (ADG), mortality, lung lesion (LLS) and pleurisy score (PS) were recorded.

Results

Based on qRT-PCR Ct results (0=negative, 1=weak positive-Ct≥35, 2=positive-Ct<35, ≥25, 3=strong positive-Ct<25) category 3 was more frequent in non-vaccinated groups at 7, 10 and 13 wks. The analysis of ELISA and qRT-PCR results indicated that the ID or IM vaccination induces important seroconversion 2-5 wks after vaccination.

No local/systemic reactions were observed. ADG from admission of vaccination until slaughter was statistically improved in group B (A:0.75±0.01, B:0.74±0.01, C:0.72±0.01, D:0.71±0.01; BvsC-p=0.043, BvsD-p=0.043). The mortality rate at finishing stage (A:4.3%, B:2.3%, C:17.5%, D:17.9%; AvsC-p=0.039, AvsD-p=0.039, BvsC-p=0.015, BvsD-p=0.015) and totally from nursery to finishing stage (A:6.3%, B:8.5%, C:28.3%, D:32%; AvsC-p=0.002, AvsD-p=0.002, BvsC-p=0.007, BvsD-p=0.005), as well as the LLS (A:7.76±2.89, B:7.57±2.99, C:11.44±6.43, D:11.84±7.07; AvsC-p=0.001, AvsD-p=0.002, BvsC-p=0.001, BvsD-p=0.001) and PS (A:0.06±0.25, B:0.06±0.32, C:0.46±0.75, D:0.45±0.77; AvsC-p=0.001, AvsD-p=0.002, BvsC-p=0.001, BvsD-p=0.001) were significantly lower in vaccinated groups.

Discussion & Conclusion

Both ID and IM vaccination against PRRSV leads to a significant decrease of mortality rate and of respiratory disorders compared to non-vaccination. Moreover, ID vaccination has beneficial effects on protection against PRRSV viremia, equally with IM vaccination.