IMM-OP-03

TITLE

EFFECT OF EARLY PRRSV (PORCINE REPRODUCTIVE AND RESPIRATORY SYNDROME VIRUS) VACCINATION ON PIG HEALTH AND PERFORMANCE: THE EARLIER THE BETTER?

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CONTENT

Background and Objectives: Vaccination is a cornerstone of infectious disease control, especially in intensive swine farming systems with high infectious pressure. Despite being very vulnerable, newborn piglets are not commonly vaccinated because most vaccines are susceptible to interference from maternally derived antibodies (MDA). An effective early PRRS vaccination, overcoming MDA interference and administered at the time of other routine procedures would provide significant health and managerial benefits. This study evaluated the safety and efficacy of the vaccine Suvaxyn® PRRS MLV administered at processing in a PRRSv-positive and unstable farm.
Material and Methods: 636 piglets from two batches, were physically examined and randomly allocated to vaccination or negative control groups and housed in separate rooms from farrowing to post-weaning. Each pig was injected with either vaccine or saline after individual weighing at 1-4 days of age. Ten randomly selected piglets per group were longitudinally sampled (blood and nasal swab) at days 0, 7, 14, 21, 28, 35, 42, 56 and 70 to evaluate antibody levels, viremia, and nasal shedding of field (WT-PRRSv) and vaccine PRRSv strains. ADWG until day 70 was calculated.
Results: No adverse reactions/hyperthermia following vaccination were reported. Both groups had comparable MDA against PRRSv and became infected by WT-PRRSv, although at different time-points. The onset of humoral response was at day 21. Vaccinated animals showed shorter viremia (median 14 vs 28 days), lower maximum number of positive pigs (60% vs 100%) and a significantly reduced duration of WT-PRRSv nasal shedding. Vaccinated pigs showed significantly higher ADWG than controls (30 and 60g/day, respectively in the two batches studied).
Conclusion: Early vaccination using Suvaxyn PRRS MLV, in the presence of MDA, was safe and reduced the duration and frequency of PRRS viremia, thereby decreasing the risk of virus spread. The improved control of PRRSv infection resulted in significantly better productivity.