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TITLE

BREED-TO-WEAN FARM PERFORMANCE AND PRRSV RNA DETECTION IN PROCESSING FLUIDS OVER TIME ON A PRRS NAIVE HERD VACCINATED WITH MLV VACCINE

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CONTENT

Background and Objectives

PRRS affects the global swine herd. At risk breeding herds use PRRS MLV vaccine to build immunity. Our purpose was to evaluate production performance and PRRSv RNA detection over time in processing fluids (PF) on an ELISA-negative (naïve) breeding herd after intentional PRRS MLV exposure.

Material and Methods

A 6,000 breed-to-wean sow herd in the U.S. with a 10-month history of ELISA-negative results for PRRSV was exposed to PRRS Ingelvac MLV (Boehringer Ingelheim Vetmedica Inc., St Joseph, MO). Whole-herd exposure to MLV was defined as week 0. PF-sampling took place for all rooms and days of processing after MLV and were tested by pools of 5 at Iowa State Veterinary Diagnostic Laboratory. EWMA analysis using proc MACONTROL on SAS 9.4 (SAS Institute Inc., Cary, North Carolina) were performed to detect changes in key production parameters. The period between weeks -44 and -2 were used to define baseline. EWMA charts were created for percentage of mummies (MUM), stillborn, litter with <7 born alive, preweaning mortality rate (PWM), number of abortions, total and liveborn per farrow, pigs weaned per week, and per litter (PWL), total services, repeated services (RS), sow death, weaning to first service interval, and age at first service.

Results

PF were PCR-positive at week 1, with Ct values around 20 for weeks 2 to 4 increasing afterward keeping positive at end point of week 16. Outside baseline levels were detected for following parameters, week, and average change: MUM 4 to 20 +1.16%, PWM 2 to 5 3.35%, PWL 5 to 11 -0.95, RS 3 to 20 +6.69 per 100 sows mated.

Discussion & Conclusion

PRRS MLV vaccination on a naive herd could alter performance of newborn piglets increasing PWM and MUM, leading to decreasing the PWL. Defining this impact helps producers determine PRRS MLV value.