RESEARCH ABSTRACT

SWINE HEALTH

Title: Assesment Of Vertical Transmission From Parity One Sows Infected With A Low Dose And Mild Pathogenic Prrsv Isolate – **NPB #04-191**

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II. Abstract

In order to generate a protocol to sample lactating piglets to evaluate PRRSV chronically infected herds twelve PRRSV naïve pregnant sows were individually housed and assigned to three different groups. Sows in group A were injected with 3 mL of sterile MEM, group B with 10^1 $TCID_{50}$ total dose of PRRSV isolate MN 30-100 and sows in group C were inoculated with 10^2 $TCID_{50}$ total dose. All sows were intramuscularly injected at 90 days of gestation. Piglets were intensively observed and sampled during all lactation period. PRRSV real time PCR was used to identify and quantify the virus.

Under the conditions of this study, where completely susceptible sows were inoculated at 90 days of gestation, dose of inoculated virus did not affect the proportion of viremic piglets at birth or the viral load in serum (RNAc/mL). Four days of age seems to be best sampling age compared to birth (pre-colostrum intake) or weaning. There is no evidence that sampling should be concentrated on early farrowings because the number and viral load of positive pigs is not different; however in a chronically infected farm, those sows that have not been exposed to the virus are more likely to early farrow compared to previously infected sows. It could be suggested that stillbirths, mummies and "very sick" pigs are a better sample than all other pigs in order to catch potential positive pigs that means that the PRRS virus is still actively being transmitted in the sow herd. There is no reason to sample lighter litters or piglets at birth but as expected affected litters will have a lower growing performance during lactation. Real time PCR on blood swab could be used as an alternative tool for herd monitoring in the case that a very often evaluation is recommended and when for some reason a veterinarian can not be present.