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NEW STRATEGIES FOR SAMPLING PIGLETS

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Introduction

Several techniques have made diagnostics for PRRSV (porcine reproductive and respiratory syndrome virus) easier and cheaper (e.g. oral fluids, blood swabs or pooling samples). However, there are still opportunities for newer strategies to sample more animals with less effort. Taking advantage of routines at farms such as the collection of tissues at piglet processing (castration or tail docking) or the collection of environmental samples is worth to explore.

The goal of this study was to evaluate the sensitivity of different diagnostic strategies to define the infectious status of a sow farm infected with PRRSV.

Materials and methods

The study started 2 weeks after a PRRSV outbreak was reported in a sow farm and sampling occurred every three weeks for a total of 8 samplings over 24 weeks. At each time period, 10 litters were conveniently selected at processing (~ 3 days of age) before fostering. Processing fluids (PF) (fluids derived from tails and testes at castration) from the whole litter and individual serum samples from all piglets within the litter were collected. Wipes were collected from crate surfaces, udder skin from lactating sows and surfaces containing airborne particles deposited by gravitation.

Results

PF showed a sensitivity (Se) and Specificity (Sp) of 83% and 92% respectively when compared with the serum results used as gold standard. Surface and udder swab results showed a Se of 50% and 42%, and Sp of 92% and 98%, respectively when compared to the individual serum results. PRRSV RNA was detected in environmental and skin sow samples for up to 14 weeks after the outbreak.

Discussion & Conclusion

PF are an effective sample to detect PRRSV in piglets, even after significant time since outbreak (~ 6 months). The environment and the lactation sow may be a source for PRRSV infection in the farrowing environment.