

Porcine reproductive and respiratory syndrome virus RNA detection in tongue tips from dead animals

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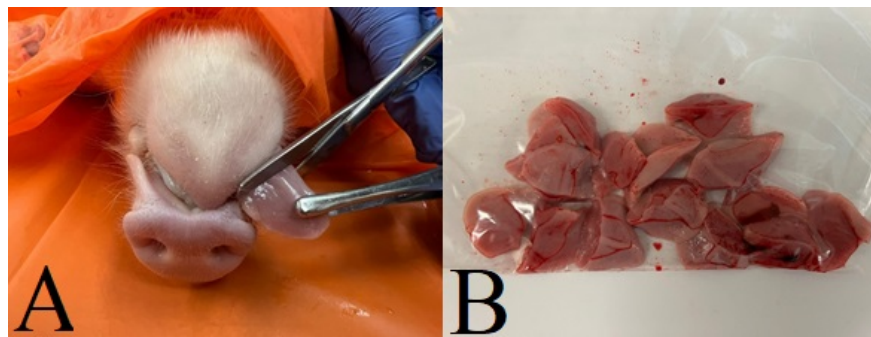
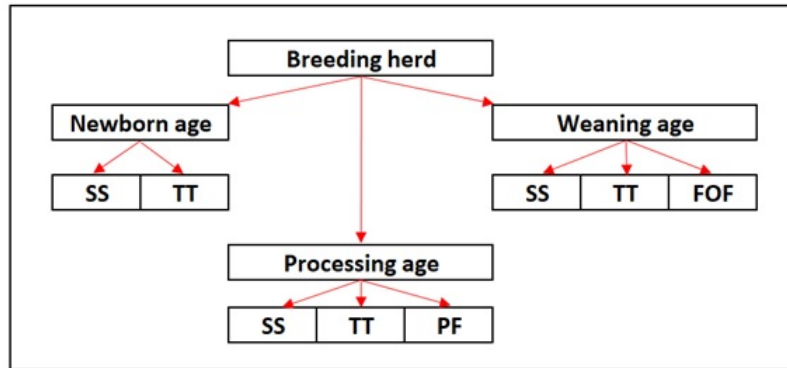
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Abstract

The control of porcine reproductive and respiratory syndrome virus (PRRSV) hinges on monitoring and surveillance. The objective of this study was to assess PRRSV RNA detection by RT-PCR in tongue tips from dead suckling piglets compared to serum samples, processing fluids, and family oral fluids. Tongue tips and serum samples were collected from three PRRSV-positive breeding herd farms (farms A, B, and C) of three different age groups: newborns (<24h), processing (2 to 7 days of age), and weaning (18 to 22 days of age). Additionally, processing fluids and family oral fluids were collected from 2-7 days of age and weaning age respectively. In farms A and B, PRRSV RNA was detected in tongue tips from all age groups (100% and 95%, respectively). In addition, PRRSV RNA was detected in pooled serum samples (42% and 27%), processing fluids (100% and 50%), and family oral fluids (11% and 22%). Interestingly, the average Ct value from tongue tips was numerically lower than the average Ct value from serum samples in the newborn age. In farm C, PRRSV RNA was only detected in serum samples (60%) and family oral fluids (43%), both from the weaning age. Further, no PRRSV RNA was detected in tongue tips when pooled serum samples from the same age group tested PRRSV RNA-negative. Taken together, these results demonstrate the potential value of tongue tips for PRRSV monitoring and surveillance.

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