

TITLE

USE OF OROPHARYNGEAL SWABS FOR PORCINE RESPIRATORY AND REPRODUCTIVE SYNDROME VIRUS DIAGNOSTICS AND SURVEILLANCE

Carles Vilalta¹, Jorge Garrido², Juan Sanhueza¹, Montserrat Torremorell¹, Cesar Corzo³

¹ *Veterinary Population Medicine Department, University of Minnesota, USA*

² *garri098@umn.edu*

³ *Background and Objectives*

CONTENT

Background and Objectives

Porcine respiratory and reproductive syndrome (PRRS) is an important economic disease in the swine industry worldwide. PRRS virus (PRRSv) monitoring and surveillance is crucial in control and elimination programs. The use of oropharyngeal swabs (OP) and udder wipes (UW) are sampling strategies that have proven their value for detection of influenza virus during the suckling period. The purpose of this study was to evaluate the use of OP and UW for detection of PRRSv when compared to serum samples.

Material & methods

One sow farm that had a PRRS outbreak was conveniently selected. 20 litters were sampled at each sampling event, the 1st month and 4th month after the outbreak, to account for different prevalence levels. All piglets were individually bled and an OP was collected together with one UW per sow. Cohen's kappa statistic, Sensitivity (Se), specificity (Sp), and total percentage of agreement (TPA) were calculated.

Results

95% (19/20) of the litters had at least 1 positive piglet. 77.56% (159/205) of the piglets were RT-PCR serum positive. Estimated Kappa value was 0.75 (95% CI 0.62-0.89). OP Se was 89% (95% CI 83%-93%) in a high prevalence scenario. TPA between OP and serum was 90 %.

Se of OP was 98.6%, 92% and 38.5% for those samples coming from animals with serum Ct values were <20, between 20-30 and over 30, respectively. Results of the low prevalence scenario will be presented in the congress.

90% (18/20) of the UW were positives.

Discussion & Conclusion

OP have been proved the best sample type when compared to nasal swabs or nasal wipes to diagnose influenza in pigs in breeding herds. OP would be a welfare friendly and reliable option to sample due-to-wean piglets for PRRSv. However, false negatives can occur, especially for Ct values higher than 30.