



VIRAL DISEASES

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CORRELATION BETWEEN SERUM POOLS, ORAL FLUID AND FECAL SOCK SAMPLES FOR PCV2 QUANTIFICATION IN A DANISH FINISHER HERD

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Introduction

Porcine circovirus type 2 (PCV2) is often quantified by qPCR from pooled serum samples or penwise oral fluid samples (OF). PCV2 can also be detected in feces.

The objectives of the study were to compare PCV2 viral loads in pooled serum samples, OF and FS collected in the same pens and to assess the impact of individual pig's viral load on a pooled serum sample.

Materials and Methods

One fecal sock sample (FS), one OF sample and blood samples from all individual pigs were collected from each of 17 pens with pigs 14-15 weeks of age or 18-19 weeks of age in a Danish finisher herd. From each pen, one serum pool including all pigs in the pen and one serum pool including only pigs having chewed on the rope during OF collection were assembled. PCV2 was quantified by qPCR.

Results

During collection of OF, 52.2% - 100% of the pigs in each pen chewed the rope. For 14-15 week pens, just barely moderate correlations were observed between PCV2 load in OF and "all-serum" pools ($r = 0.5$) and OF and "chewers-serum" pools ($r = 0.51$). No correlations were observed for 18-19 week pens.

A barely moderate correlation ($r = -0.5$) for the PCV2 load was observed between FS and "all-serum" pool, for 18-19 week pens, while no significant correlation was observed for 14-15 week pens.

PCV2 load in OF was significantly higher than in serum.

A high variation in PCV2 load in serum from individual pigs within pens was observed.

Discussion and Conclusion

In this study, we observed neither a good agreement nor a strong correlation between the results obtained from the different sample materials. This might be a result of the high variation within and between pens, indicating that the infection dynamics may play a role for the poor correlations.