



## VIRAL DISEASES

VVD-043

### **PRRSV TYPE 1 TRANSMISSION VIA PIGLET TRAILERS - RELEVANCE FOR SPREADING?**

L. Moorkamp<sup>1</sup>, C. Revermann<sup>2</sup>, K. Fiebig<sup>3</sup>, A. Ladinig<sup>4</sup>, J. Seedorf<sup>2</sup>.

<sup>1</sup> Vet Practice Peheim, Peheim, Germany; <sup>2</sup> University of applied science Institute for Hygiene, Osnabrück, Germany; <sup>3</sup> MSD Animal Health, Unterschleißheim, Germany; <sup>4</sup> University of veterinary medicine, clinic for swine, Vienna, Germany.

#### **Introduction**

A field study was performed in Germany to evaluate the role of transport vehicles as a source of transmission of porcine reproductive and respiratory syndrome virus (PRRSV) to susceptible pigs. Risk factors for transmission of PRRSV type 2 via transport vehicles has been described, while little is known about PRRSV type 1 transmission via trucks in Europe.

#### **Material & Methods**

The procedure was performed in autumn/winter on two wet piglet transporters with multiple shipments per day after cleaning and disinfection and was repeated five times on a weekly basis. Samples were taken with a common Swiffer® dry cloth saturated with Phosphate Buffered Saline (PBS) of ten different locations before and after cleaning and disinfection. All samples were tested for PRRSV by qPCR. Every positive PCR sample was cultivated in cell culture to verify PRRSV infectivity and was then sequenced.

#### **Results**

In total, 28% of samples before and 14% of samples after cleaning and disinfection were qPCR positive for PRRSV type 1. Samples tested positive for PRRSV between 0-70% before and 0-50% after cleaning and disinfection; 50% of the transport vehicles tested positive for PRRSV type 1 after cleaning and disinfection. The lowest ct-value for PRRSV was 30.62 before and 35.43 after cleaning and disinfection. Cultivation and sequencing of PRRS positive PCR samples was not successful.

#### **Discussion & Conclusion**

Although PRRSV transmission via transport vehicles was not proven, it can also not be excluded. In addition, the high PRRSV prevalence in tested vehicles still suggests a transmission risk and confirms the knowledge, that vehicles without drying could still remain a fomite for the transmission of PRRSV despite cleaning and disinfection. Drying of the pig transport vehicle should get major consideration in case of multiple shipments with the same vehicle per day to avoid PRRSV type 1 transmission.