

## Season 4, Episode 9: Porcine sapovirus

Dr. Chris Rademacher, Iowa State University, and Dr. Tom Petznick, Owner and Veterinarian of ArkCare, discuss Porcine sapovirus.



### **Background**

Porcine sapovirus was first detected in pigs with both minor and severe diarrhea in the 1980s. This newly discovered virus is typically found as a co-infection with other pathogens but has also been found as the sole cause of diarrhea in a few outbreaks. Porcine sapovirus is uncommon and is broadly spread throughout North America. This pathogen is the most prevalent in late lactation and early nursery pigs, however clinical symptoms have been observed at 7 – 10 days of age.

### **Diagnosis**

Dr. Petznick came across this pathogen by working with a farm that had mid to late lactation diarrhea issues that caused weight loss and pre-wean mortality. He collected and analyzed diarrhea samples from this farm, ruling out rotavirus, coccidiosis, Salmonella, Clostridium, and E. coli. Dr. Petznick worked closely with the Veterinary Diagnostic Laboratory (VDL) at Iowa State University. Dr. Petznick and the VDL team utilized next-generation sequencing (NGS), finding porcine sapovirus in correlation. The VDL team noted that almost all the NGS reads detected porcine sapovirus, which led to clinical and non-clinical research trials and the development of a vaccine.

### **Vaccination**

The porcine sapovirus vaccine can limit pathogen exposure and keep piglets healthy by vaccinating sows and gilts. In a herd that has never been vaccinated, Dr. Petznick recommends beginning to vaccinate sows four- and two-weeks prior to farrowing. Once the entire herd has received two doses of the vaccination, the sows should be reduced to only one dose, two weeks pre-farrow. However, gilts should continue to be vaccinated both at four- and two-weeks pre-farrow. It is recommended to keep vaccinating due to pigs losing the antibody to fight off the porcine sapovirus pathogen.

### **Prevention**

Ultimately, vaccinating your herd and sanitizing your barns are great ways to limit porcine sapovirus. Continuing to vaccinate your herd strengthens the sow's immune system, making it more difficult for this pathogen to infect the piglet. Sanitation plays an important role in piglet health. Porcine sapovirus can be transmitted from dirty gestation stalls to clean farrowing stalls. The piglets can be infected with the pathogen, but no clinical signs are observed until the nursery phase, due to the piglet's lactic immunity.

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