# AASV Quick Facts

## Porcine Epidemic Diarrhea

Porcine Epidemic Diarrhea (PED) is a viral disease caused by a member of the family *Coronaviridae.* Although clinically similar to transmissible gastroenteritis (TGE), the virus is unrelated to TGE. Prior vaccination for TGE (or, presumably, prior exposure to TGE or respiratory coronavirus) does not infer protection against PEDV. Introduction of PED virus into a naïve herd typically results in acute outbreaks of severe diarrhea, vomiting, high morbidity (often 100%) and variable mortality (some reports as high as 100% in young pigs). The incubation period is short (2 - 4 days) and natural immunity develops over two to three weeks, resulting in colostral protection for neonatal piglets. The virus spreads via the fecal-oral route and fomites.

The virus is diagnosed based on clinical signs, history, ELISA or electron microscopic examination of fecal material, PCR and post-mortem examination of dead pigs. Differentiation from TGE requires laboratory diagnosis. Treatment is supportive to maintain hydration. The virus is susceptible to a number of common disinfectants including: Virkon S, Clorox, 1 Stroke Environ, and Tek-Trol (Pospischil A, et al; 2002). Sanitizing and drying pig trailers is effective against PEDV.

The disease occurs in Europe (first identified in 1971 in Great Britain) and became endemic in Asia in 1982. There have been reported cases in Canada as well. Two clinical presentations are recognized: PED Type I only affects growing pigs while PED Type II can affect any age group including adult sows. In 2010, a variant strain was identified on pig farms in China resulting in decreased efficacy of the PED vaccines routinely used in Chinese sow herds and severe disease (high morbidity and mortality).

PEDV is not a listed disease of the World Organization for Animal Health (OIE); is not considered a foreign animal disease in the United States; and there are currently no interstate trade restrictions pertaining to PEDV in U.S. swine. It is not a zoonotic disease, does not affect people, and is not a food safety concern.

**References:**


Li W, Li H, Liu Y, Pan Y, Deng F, Song Y, et al; New variants of porcine epidemic diarrhea virus, China, 2011. *Emerg Infect Dis.* 2012 Aug. http://dx.doi.org/10.3201/eid1808.120002 DOI: 10.3201/eid1808.120002

Pospischil A, Stuedli A, Kiupel M, et al; Update on porcine epidemic diarrhea. *J Swine Health Prod.*2002;10(2):81–85.

E.J. Neumann, A. Ramirez, and K.J. Schwartz; Porcine Epidemic Diarrhea; *Swine Disease Manual*, 4th Ed.; Chapter 56, page 141.

Song D, Park B; Porcine epidemic diarrhoea virus: a comprehensive review of molecular epidemiology, diagnosis, and vaccines; *Virus Genes*. 2012 Apr;44(2):167-75. doi: 10.1007/s11262-012-0713-1. Epub 2012 Jan 22.

# AASV Quick Facts

AASV Quick Facts - Issued May 20, 2013

830 26th STREET • PERRY, IA 50220 • USA • PHONE 515-465-5255 • FAX 515-465-3832 • aasv@aasv.org