

# Porcine Epidemic Diarrhea Virus (PEDV)

The presence of Porcine Epidemic Diarrhea Virus was confirmed in the United States during the week of May 13, 2013. PEDV is thought to have caused outbreaks of diarrhea in Europe as early as 1971 and was identified in Asia as early as 1982. Epidemic outbreaks are sporadic in these regions and are reported to be of greater significance in Asia in more recent years.

## What is Porcine Epidemic Diarrhea Virus (PEDV)?

- Porcine Epidemic Diarrhea virus is a member of the family *Coronaviridae* that also includes other swine viruses such as transmissible gastroenteritis virus (TGEV), porcine respiratory coronavirus (PRCV), and porcine hemagglutinating encephalomyelitis virus (HEV).

## What do we know about PEDV (incubation, clinical signs and treatment)?

- Incubation in individual pigs may be as short as 22-36 hours or 2-4 days at the herd level.
- Clinical signs of PEDV are similar to TGEV:
  - Characterized by acute outbreaks of severe diarrhea and vomiting that can affect up to 100% of the herd when previously unexposed;
  - Significant mortality (i.e. average = 50%; high= 100%) is reported to occur in suckling piglets under 7 days of age while pigs that are older than 7 days are expected to recover;
  - In herds that have become endemic, diarrhea and vomiting are typically limited to suckling and recently weaned pigs.
- Treatment is normally limited to supportive therapy to address dehydration.

## How is PEDV diagnosed?

- A clinical history of diarrhea in more than 50% of pigs on a site over a short period of time is characteristic.
- By histopathology, where atrophic enteritis is demonstrated in the small intestine.
- Confirmation of the virus by PCR on feces from acutely affected pigs.

## How is PEDV transmitted and what biosecurity measures are recommended?

- The virus can be transmitted by the direct or indirect fecal-oral route.
- While the direct route would involve animal to animal contact, the indirect route may include contaminated fomites such as footwear, clothing, farm supplies, and vehicles.
- Critical steps for the prevention of PEDV entry:
  - Ensure the introduction of negative animals;
  - Institute biosecurity protocols that include measures addressing personnel, animal, and supply movements.
- Common disinfectants and drying are effective in killing PEDV.

## Are there Import/Export issues?

- PEDV is not a disease that is listed as notifiable by the World Organisation of Animal Health (OIE).
- PEDV is not considered a foreign animal disease by the United States Department of Agriculture (USDA) and within the USA there are no associated interstate trade restrictions.

## Are there public health concerns?

- No, this disease is only infectious to swine.
- As such, it is not a food safety concern.

## Additional Information:

University of Minnesota Veterinary Diagnostic Laboratory: [www.cvm.umn.edu/vdl](http://www.cvm.umn.edu/vdl), 612-625-8787

[AASV Resource Page – Porcine Epidemic Diarrhea](#)

*This fact sheet is meant to provide basic information. For specific health concerns please contact your veterinarian. Created 05/2013.*