

## Washington Animal Agriculture Team



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### Porcine Epidemic Diarrhea Virus Confirmed in U.S.

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#### Introduction

Although present in European and Asian swine herds for more than 40 years, the Porcine Epidemic Diarrhea (PED) virus was confirmed for the first time in the U.S. in May 2013. So far, cases have been confirmed in Colorado, Illinois, Indiana, Iowa and Minnesota. The disease is a concern because the American swine herd is naïve to this virus and animals have no immunity to it.

#### The Virus

The virus is a coronavirus, the same family as the Transmissible Gastroenteritis (TGE) virus. Signs of both diseases are the same, but there is no cross-protection between them. Spread between animals is primarily through the fecal-oral route, but transmission through aerosolization is possible as well.

The incubation period can be as short as 12 hours or as long as four days. PED can rapidly sweep through an entire population on premises. Affected animals can shed the virus for over a week. Animals are sick for two or three days; those that live develop active immunity, but this immunity may not be lifelong. Sows that have been exposed to the virus will pass passive protection to their piglets, which will help protect them during their most susceptible

phase of life. The older a pig is when it encounters the virus for the first time, the greater the likelihood of survival.

#### Signs of Illness

Signs of illness include vomiting, diarrhea, depression, poor appetite, dehydration and death; these signs are most pronounced in young pigs. Sickness rates may reach 100% in naïve herds. Death rates are variable, but can be very high for young pigs. Market animals that survive this disease may have lighter finishing weights.

This disease is confined to swine; it does not affect other species, including humans. Pork products are not a means of transmission to people.

#### Diagnosis

Diagnosis can only be made through laboratory testing. Several other viruses, bacteria and even parasites can cause similar signs of illness. Work with your veterinarian to be sure the correct samples are submitted properly and in a secure manner.

#### Prevention

A PED vaccine is used in some other countries, but the vaccine strain may not be that effective against the disease

strain of the virus. Nevertheless, the vaccine seems to offer some protection for vaccinated animals. As is true with some other swine diseases, some management protocols include well-timed and deliberate exposure of breeding animals to the disease so they develop immunity before farrowing; work with your veterinarian to discuss this method, which definitely should not be used if certain other diseases are present in a herd (PRRS, for example).

This disease underscores how important biosecurity is, especially when travelling internationally and between swine operations. The PED virus is hardy and can be carried on footwear, equipment, vehicles and other fomites; it can also survive in the environment for a significant amount of time. This virus can be killed by bleach and other viricidal disinfectants. Surfaces, pens, equipment, footwear, trailers, etc. should be thoroughly cleaned with soap and water, then disinfectant applied and allowed to dry on. Other aspects of biosecurity include not co-mingling swine from different groups or

sources; maintaining separate footwear, equipment and clothing for different pig populations; practicing all-in, all-out group management; monitoring animals closely for signs of illness; and isolating sick animals. Good biosecurity resources are available at [www.pork.org/Resources/3585/biosecurityonthefarm.aspx](http://www.pork.org/Resources/3585/biosecurityonthefarm.aspx).

#### **Watch for Updates**

Veterinarians, animal health officials, swine organizations and researchers are monitoring and investigating PED. Look for updates and recommendations in the weeks ahead on the sites below.

#### **For more information**

[www.pork.org](http://www.pork.org)  
[www.thepigsite.com](http://www.thepigsite.com)  
[www.aasv.org](http://www.aasv.org)  
[www.cvm.umn.edu/sdec/SwineDiseases/PEDV/index.htm](http://www.cvm.umn.edu/sdec/SwineDiseases/PEDV/index.htm)  
[www.porknetwork.com](http://www.porknetwork.com)

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