

Help Oregon Take a Stand Against a New Deadly Pig Disease

Porcine Epidemic Diarrhea Virus

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Porcine Epidemic Diarrhea Virus (PEDv)

History

PEDv has been relatively common in Asia and Europe since the 1970s. The first US case appeared in Iowa last May (2013) and has now spread to 26 states, some of them close to Oregon such as California, Idaho, and Montana. To date, this disease has killed an estimated one million pigs in the US alone.

Clinical Signs

The clinical signs of disease are very age-specific; being much more severe in younger animals. In suckling pigs (less than 7 days old) there is profuse, watery diarrhea which is often yellow in color. In many cases, the pigs also vomit, lose their appetite, become dehydrated and die. It generally affects entire litters and up to 50-100% of the litter may die. Pigs over a week of age typically recover. When older animals (nursery, grower, finisher, sows, boars) become infected they may go off feed for 2-4 days, have loose manure (similar to a cow pie) and vomit. The death rate is very low in post-weaning animals (1-3%) but the entire herd may have clinical signs after initial exposure. In herds where the disease has become established only suckling and recently weaned pigs become ill. The incubation in individual animals is as short as 22-36 hours and the first cases are usually observed 4-5 days after exposure. The disease will spread rapidly within a herd. There are other diseases that cause very similar clinical signs, such as coccidiosis, transmissible gastroenteritis, rota viral diarrhea, *Clostridium perfringens* enterotoxemia, and *E. coli* scours. It is essential to submit proper samples to a veterinary diagnostic laboratory for diagnosis.

It is important to note that PEDv only affects swine and cannot spread to humans, nor does it cause a health risk to those who consume pork products derived from infected animals.

Transmission

The virus is spread by a fecal-oral route. Infected pigs shed enormous amounts of viruses for 7-9 days. Infection may be through direct contact with infected pigs or indirectly by exposure to manure on boots and clothing, farm supplies and equipment, or trucks/trailers used to move pigs. The virus is killed by common disinfectants such as bleach, Virkon® S, 1-Stroke, Environ, and drying. It may persist in cool, damp organic matter for up to a month.

Treatment

No specific treatment is available. Affected pigs should be kept warm, dry, and well hydrated with oral electrolyte supplementation. In very young animals treatment is usually futile.

Prevention

Strict biosecurity and sanitation are the best means of prevention. It is important to know the PEDv status of herds where pigs are purchased and avoid those that have had the virus. Be sure trucks and trailers used to haul pigs have not been contaminated by infected pigs. It takes a very small amount of manure for infection to occur. Do not commingle pigs from multiple sources or groups of pigs. Do not take boots, clothing, or equipment between pig farms. There are currently no effective vaccines available.

Diagnosis

Diagnostic tests are available to confirm PEDv infection in pigs. The following samples should be collected from acutely-affected pigs within the first 24 hours after onset of diarrhea. Please consult your veterinarian for assistance with sample collection.

PCR testing

Feces: a minimum of 10 ml of feces collected in a leak-proof container

Intestine: segments of fresh jejunum, ileum, and colon (each approx. 10 inches) placed in separate leak proof containers

These specimens should be refrigerated and transported on frozen gel packs.

Immunohistochemistry testing

Formalin-fixed segments of jejunum, ileum, and colon (each approx. 1 inch, opened to expose mucosa to fixative) placed in leak proof containers.

The Veterinary Diagnostic Laboratory at Oregon State University does not currently offer the diagnostic tests for PEDv. However, you may deliver your specimens to the VDL and they will arrange for their transport and submission to another accredited diagnostic laboratory for testing.

If you suspect your pigs are infected

Because clinical signs of PEDv are similar to those associated with other diseases, laboratory diagnosis is the only way to confirm a diagnosis. Please work with your veterinarian if you have scouring pigs to determine the cause and prevent spread of disease.

Importing pigs into Oregon

This disease has not yet been diagnosed in Oregon. The main goal of the Oregon Department of Agriculture is to ensure the health of our state's pork industry. To accomplish this goal, a special Oregon Department of Agriculture directive went into effect February 10, 2014. This directive requires that Certificates of Veterinary Inspection accompanying hogs entering Oregon, for purposes other than immediate slaughter, contain the following statement from the issuing veterinarian:

"To the best of my knowledge, swine represented on this certificate have not originated from a premise known to be affected by Porcine Epidemic Diarrhea virus (PEDv), and have not been exposed to PEDv within the last 30 days."

Producers importing animals from PEDv affected states are strongly encouraged to voluntarily quarantine their new arrivals for at least three weeks and call their veterinarian immediately if the animals show any signs of disease.

Special considerations for show pigs

Exhibitors and their leaders should carefully weigh the risks associated with comingling pigs from multiple sources at shows and fairs. There should be a discussion regarding the risks associated with weigh-ins and exhibition events.

To add another layer of biosecurity, the discussions by county fair boards, market program organizers and other events where swine are exhibited, should include considerations for the following during the 2014 show season:

1. *Cancelling the pre-fair weigh-in of market hogs*
2. *Cancelling youth swine breeding shows*
3. *Implementing a terminal show for market hogs*

Detailed information can be found at the National Pork Board link below:

<http://www.pork.org/filelibrary/RecommendExhibitor.pdf>

For More Information

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