

Swine DeltaCoronavirus

As of March 14, 2014, the Animal Health Laboratory (AHL) has diagnosed Swine DeltaCoronavirus (SDCV) in samples from six Ontario pig farms. This pathogen was detected as a result of follow up testing on farms with clinical signs of vomiting and diarrhea, but that tested negative for Transmissible Gastroenteritis (TGE) virus and Porcine Epidemic Diarrhea (PED) virus. Samples of porcine plasma have also tested positive for SDCV at AHL and Iowa State University. The samples submitted were from the same batch that tested positive for PEDV in February 2014.

These are the first confirmed cases of SDCV in Canada.

SDCV was initially detected in pigs in Hong Kong in 2012. In February 2014, the United States Department of Agriculture along with the Ohio Department of Agriculture issued a press release indicating that SDCV had been detected in swine manure at four farms in Ohio. These farms had pigs exhibiting clinical signs similar to PED, and three of the four farms had tested positive for PED as well as SDCV.

In light of the US findings, AHL developed a PCR test for SDCV, and began testing for the virus in samples from farms that had clinical signs in pigs, yet tested negative for PEDV and TGEV. SDCV testing is currently available free of charge in Ontario for symptomatic herds.

SDCV infection is clinically similar to, but distinct from, PED and TGE. It causes diarrhea and vomiting in all age groups and mortality in nursing pigs. Mortality rates appear to be lower than in cases of PED. SDCV is not a risk to human health or to other animals, nor is it a food safety risk.

With technological advances, new types of viruses are detected on a regular basis. There are numerous coronaviruses that can cause infections in humans, other mammals and birds, so it is not surprising to find an additional one in swine.

SDCV can be prevented and managed in the same way as PED:

- ensuring vigilance and strong biosecurity at the farm level,
- diligent cleaning and disinfection by transporters, renderers, processors and other service providers
- developing herd immunity to reduce clinical signs

To protect Ontario's swine herd, it is critical that all those in the industry – producers, transporters, suppliers – continue to work together to maintain increased vigilance with biosecurity measures. Contact your veterinarian immediately if animals show any signs of illness, or if you require assistance in developing biosecurity strategies.

Under Ontario's Animal Health Act, 2009, veterinarians are required to immediately report any findings that identify a serious risk to animal health, such as SDCV.

For further information please contact the Ontario Ministry of Agriculture and Food at 1-877-424-1300 or Ontario Pork at 1-877-ONT-PORK.