Swine Health Bulletin

Canadian Pork Council
Conseil canadien du porc

Senecavirus A (Seneca Valley Virus)

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The Canadian Pork Council has written this document to inform producers and industry stakeholders about Seneca Valley Virus (SVV) and Seneca Valley Virus infection which has been reported in the United States but more recently Canada. There are no human health and food safety concerns associated with SVV.

Although SVV in swine is not considered to be a production limiting infection or disease, the resemblance of its clinical signs and gross lesions to other vesicular foreign animal diseases (FADs) such as Foot-and-Mouth disease (FMD), vesicular stomatitis and swine vesicular disease is cause for increased awareness. SVV is not a federally reportable disease and does not currently present a risk to our international trade market. However, any vesicular disease in pigs may disrupt production flow if noticed on farms, assembly yards and/or processing plants as a definitive diagnosis is being pursued. It is important that producers immediately report any suspicion to their herd veterinarian and CFIA so that further investigation can be pursued which may include the CFIA taking samples to ensure rapid rule out of catastrophic vesicular FADs such as FMD.

Background

Senecavirus A, also known as the Seneca Valley Virus, is a single-stranded non-enveloped RNA virus belonging to the *Picornaviradae* family. Foot-and-Mouth Disease Virus and Swine Vesicular Disease Virus (SVDV) are also part of the same viral family. All three of these diseases may present with similar clinical signs, which may lead to alarm regarding the possibility of a vesicular foreign animal disease emergence in Canada.

This infection causes vesicles (blisters) to form on the snout and coronary band of pigs and can also cause blisters on teats of recently farrowed sows. Often the first clinical sign observed is lameness.

Incidence

Last week, USDA informed the CFIA that three pigs of Canadian origin exported to the United States for immediate slaughter had vesicular lesions and were found positive for SVV. The CFIA has investigated this issue and the situation is under control. Two assembly yards and three farms in Ontario and Manitoba are implicated. No clinical signs consistent with vesicular diseases were noted at these locations. SVV was detected only in the samples taken from the assembly yard in Ontario. FADs were ruled out by CFIA in this investigation. The last finding of SVV in Canadian pigs was in 2007 in animals that were sent to U.S for immediate slaughter from Manitoba.

SVV has been reported all around the world including the United States, Canada, Australia, Italy, New Zealand and recently Brazil. SVV is moving rapidly in regions of Brazil especially in the last 12 months where over 70% of their

breeding herds have become SVV positive. More recently, the United States has observed four cases of vesicular disease in unrelated diagnostic case submissions where three came from exhibition pigs in Iowa and the last case was from a commercial finishing facility in South Dakota. Proper authorities have been advised already and the situation is under control. SVV is also been associated with lameness and other clinical signs which have been reported in 10 to 12 states. There has also been associated neonatal mortality.

Clinical signs

The following are examples of clinical signs to look for if producers suspect that they might have SVV in their facility. These signs may vary among cases. When in doubt, producers should consult with their veterinarian for proper diagnostics.

Neonatal Pigs:

Increase mortality in litters less than 7 days of age

- Become infected shortly after birth
- Diarrhea may or may not be associated with it
- Morbidity and mortality can range from 30% to 70% for short periods of time

Breeders, Growers and Finishers:

- Loss of appetite
- Fever
- Lethargy
- Intact or ruptured vesicles (blisters) on snout, mouth, feet or teats
- Lesions on feet surrounding the coronary bands
    - Ulceration of hoof wall
    - Deep nail bed hemorrhages
- Lameness ranging from slight discomfort to movement refusal
- Loose foot pads which may lead to loss of hooves

Transmission

It is still unclear how the disease is transmitted. However, it is important to strengthen biosecurity measures and maintain best management practices to prevent possible transmission of this disease. It is important for producers to be vigilant and regularly monitor their animals in order to quickly report any suspicion.

What to do if suspected

If SVV or any other type of vesicular foreign animal disease is suspected, it is important to immediately report this to your herd veterinarian and the CFIA. Any failure to report could lead to missing a potential FMD infection which could have huge impacts for the industry. Biosecurity measures should be reviewed and movement from the farm should be halted. No sick, lame or animals with active and/or healing vesicular lesions should be sent out and that includes movement to slaughter. CFIA will investigate all suspect cases which may include taking samples to rule out vesicular FADs. The test results usually become available within 24 hours from the time the samples reach the CFIA laboratory.