October 3, 2016

To Ontario Pork Producers:

Senecavirus A has now been confirmed in the province of Ontario. Clinical signs of this disease are similar to a foreign animal disease and as such the Canadian Food Inspection Agency is testing all swine at federal processing plants that are symptomatic. Processing plants can be shut down up to 72 hours while testing is being conducted.

**Plant closure will immediately stop the flow of hogs and shipping of pork products** from that facility. If a plant is shut down, its customers and suppliers will be notified of pending production and product delays/cancellations.

Producers should take the following biosecurity measures:

- **Know the symptoms of Senecavirus A**
  - Blisters (vesicles) or ulcers of the snout, mouth, and/or just above the hoof
  - Lameness, fevers, lack of energy and/or appetite
  - Lesions
  - 4-10 day increase in piglet mortality with/without diarrhea
- Ensure your transporters exercise biosecurity and know the symptoms of Senecavirus A
- Ask your plant, marketer and/or assembly yard about their processes to address this disease

**If you have any of the symptoms above:**

- **Stop any movement on and off farm.**
- **Call your herd veterinarian and CFIA office.**
- **Do not leave the premises while awaiting CFIA and veterinary help.**
- **Notify your transporter, plant and/or assembly yard, if loads left your farm in the previous 12-24 hours of you noticing symptoms.**

Attached is more information about this disease. Please contact your herd veterinarian, your plant or marketer or Ontario Pork if you have any questions.

## Senecavirus A: The Facts

**What is Senecavirus A**?

Senecavirus is a picornavirus genus containing a single species, Senecavirus A (SVA) (formerly named Seneca Valley virus*)*. It was unknown until 2002 when it was discovered incidentally as a cell culture contaminant. Only a single species is classified in the genus Senecavirus. The family Picornaviridae also contains foot-and-mouth disease virus (FMDV) and swine vesicular disease virus (SVDV).

Senecavirus A has been reported in the United States, Canada, Australia, Italy, New Zealand and in Brazil. Farm outbreaks in the United States have been identified in California, Illinois, Iowa, Louisiana, Minnesota, New Jersey, and North Carolina between 1988 and recently.

Besides affecting animal health, SVA infection is notable because its clinical symptoms resemble those caused by foot-and-mouth disease and vesicular stomatitis viruses. When vesicular disease is observed in Canada and U.S. swine, mandatory reporting and testing of animals for foreign animal diseases are required.

**What are the symptoms?**
The clinical signs associated with Senecavirus A in pigs include vesicles (blisters) or erosions (results of ruptured vesicles) on a pig's snout, mouth, and/or feet where the hoof meets the skin. There have been reports of unexplained lameness, off-feed events and diarrhea in piglets prior to the emergence of vesicles or erosions in groups of pigs.

**What is the virus period or duration?**
Unfortunately, not a lot is known about Senecavirus A in terms of incubation period or duration. Clinical signs closely resemble Foot and Mouth disease and its incubation period in susceptible animals can range from two to eight days, but can be up to twenty-one days post infection with the virus. Infected animals can spread the virus one to two days prior to the onset of clinical signs and for seven to ten days after the presentation of clinical signs.

**How is Senecavirus A transmitted?**
The transmission route(s) for Senecavirus A are not well understood. Foot and Mouth is known to spread readily by direct contact with infected individuals, fomites, or exposure to aerosolized virus, but it is unknown if these same modes of transmission also apply to Senecavirus A.

As the virus is a member of the Picornaviradae family excretion of these viruses occurs in faeces, saliva and the presence of a viraemic stage means that blood, meat and meat products and other products of animal origin may be a source of virus with transmission pathways relating to ingestion or inhalation of these secretions, excretions or products, or to fomites contaminated with them. Therefore, although there are no proven transmission routes for Senecavirus A, a range of transmission pathways should be considered until further evidence is available.

Most cases of idiopathic vesicular disease, which is associated with Senecavirus A, seem to occur between spring and fall.

**Are there any public health concerns associated with Senecavirus A?**
Pork products are absolutely safe to eat. This disease is only infectious to swine and poses no threat to humans.

**How did the virus enter Canada?**
It is not it known how the virus arrived in Canada or how long it has been here. The first published case documents that in June of 2007, a ruptured vesicle, was noted on the snout of a pig from a trailer load of Canadian market hogs that arrived at a harvest facility in Minnesota from Manitoba.

In mid-September, 2016 pigs from Canada entered the U.S. with vesicular lesions and as a result were tested at the packing plant. They tested negative for a foreign animal disease. Subsequent loads were then checked at the border and sent back because of lesions. Since then, CFIA has commenced its own sampling and testing to verify that there is no threat of foreign animal disease. There were positive samples of Senecavirus A at assembly yards from Ontario. At this time, no farms have tested positive for Senecavirus A in Ontario or Quebec.

**What is the Canadian Food Inspection Agency doing to control the disease?**
CFIA has executed its foreign animal disease protocols when dealing with Senecavirus A as its symptoms resemble Foot and Mouth disease. The agency is testing animals that are showing signs of the virus. Samples are sent to the National Centre for Foreign Animal Disease (NCFAD), located in Winnipeg. It is working with all industry groups to establish protocols moving forward.

**How is Senecavirus A treated?**
Proven methods for prevention and control of Senecavirus A are lacking. Vaccination and elimination have been used to control FMD, which is caused by a similar virus.

- Common industry biosecurity practices should also be in place.
- Senecavirus A is a non-reportable disease in Ontario and Canada and there is no national surveillance program.

**What has been the industry's response to the outbreak?**
Assembly yards moving sows across the border into the U.S. are most impacted at this time. Federal processing plants are closely monitoring the situation as any symptomatic animals at the plant would result in an immediate temporary plant closure. The Canadian Food Inspection Agency are testing animals that are showing signs of the virus. The USDA is refusing loads of animals that they suspect may be infected.

**What are some of the biosecurity measures being implemented?**
Producers are encouraged to strengthen their on-farm biosecurity protocols that include measures addressing personnel, animal, and supply movements. Trucks, clothing, equipment, boots, and other tools should be thoroughly cleaned and disinfected before allowing them onto the premises.

***Cleaning and Disinfecting***
The efficacy of most disinfectants against Senecavirus A is not clearly known.

Because vesicular diseases are clinically indistinguishable, disinfection protocols for FMDV should be followed even if Senecavirus A is suspected. This includes use of: sodium hydroxide, sodium carbonate, 0.2% citric acid, aldehydes, and oxidizing disinfectants including sodium hypochlorite. In Canada, Virocid, Prevail, Synergize and Virkon are known disinfectants for FMDV.

Below are EPA-approved disinfectants USDA lists effective for FMD. For all disinfectants, be sure to follow labeled directions:

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| **Foot-and-Mouth Disease**[6] | 1677-129 | Oxonia Active | Ecolab, Inc. | Hydrogen peroxide<br>Peroxyacetic acid |
| | 6836-86 | Lonza DC 101 | Lonza, Inc. | Alkyl dimethyl benzyl ammonium chloride<br>Didecyl dimethyl ammonium chloride<br>Octyl decyl dimethyl ammonium chloride<br>Dioctyl dimethyl ammonium chloride |
| | 10324-67 | Maquat MQ615-AS | Mason Chemical Company | Alkyl dimethyl benzyl ammonium chloride<br>Didecyl dimethyl ammonium chloride<br>Octyl decyl dimethyl ammonium chloride<br>Dioctyl dimethyl ammonium chloride |
| | 70060-19 | Aseptrol S10-TAB | BASF Catalysts, LLC | Sodium chlorite<br>Sodium dichloroisocyanurate dihydrate |
| | 70060-30 | Aseptrol FC-TAB | BASF Catalysts, LLC | Sodium chlorite<br>Sodium dichloroisocyanurate dihydrate |
| | 71654-6 | Virkon S | E.I. du Pont de Nemours & Company | Sodium chloride<br>Potassium peroxymonosulfate |

**Are there import/export issues?**
Senecavirus A 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.

**CFIA Offices:**

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|---|---|
| **Barrie**<br>500 Huronia Road, Unit 103<br>Barrie, Ontario L4N 8X3<br>Telephone: 705-739-0008<br>Facsimile: 705-739-0405 | **North Bay (Sudbury and Sault Ste. Marie)**<br>Canada Place<br>107 Shirreff Avenue, Suite 103<br>North Bay, Ontario P1B 7K8<br>Telephone: 705-495-5995<br>Facsimile: 705-495-5998 |
| **Belleville**<br>345 College Street East, Unit 6<br>Belleville, Ontario K8N 5S7<br>Telephone: 613-969-3320<br>Facsimile: 613-969-3721 | **Ottawa**<br>38 Auriga Drive, Unit 8<br>Ottawa, Ontario K2E 8A5<br>Telephone: 613-773-8660<br>Facsimile: 613-773-8672 |
| **Brockville**<br>300 Park Street<br>Brockville, Ontario K6V 2J1<br>Telephone: 613-342-3682 /2740<br>Facsimile: 613-342-3306 | **Peterborough**<br>163 Simcoe Street<br>Peterborough, Ontario K9H 2H6<br>Telephone: 705-742-6917<br>Facsimile: 705-742-8676 |

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| **Guelph**<br>259 Woodlawn Road West, Suite A<br>Guelph, Ontario N1H 8J1<br>Telephone: 226-217-1200<br>Facsimile: 226-217-1211 | **Port Perry**<br>60 Van Edward Drive, Unit 6<br>Port Perry, Ontario L9L 1G3<br>Telephone: 905-985-1870<br>Facsimile: 905-985-8915 |
| **Hamilton**<br>709 Main Street West, 1 Floor, Room 101<br>Hamilton, Ontario L8S 1A2<br>Telephone: 905-572-2201<br>Facsimile: 905-572-2197 | **Sarnia**<br>Blue Water Bridge Corporate Centre<br>1555 Venetian Blvd.<br>Point Edward, Ontario N7T 0Y9<br>Telephone: 519-332-3031<br>Facsimile: 519-332-3879 |
| **London**<br>1200 Commissioners Road East, Unit 19<br>London, Ontario N5Z 4R3<br>Telephone: 519-691-1300<br>Facsimile: 519-691-0148 | **Thunder Bay**<br>977 Alloy Drive<br>Thunder Bay, Ontario P7B 5Z8<br>Telephone: 807-683-4370<br>Facsimile: 807-683-4383 |
| **Markham**<br>145 Renfrew Drive, Unit 160<br>Markham, Ontario L3R 9R6<br>Telephone: 905-513-2850<br>Facsimile: 905-513-2852 | **Fort Frances**<br>301 Scott street<br>Post Office Box 456<br>Fort Frances, Ontario P9A 3M8<br>Telephone: 807-274-5214<br>Facsimile: 807-274-3803 |
| **Mississauga**<br>1050 Courtneypark Drive East, Suite 155<br>Mississauga, Ontario L5T 2R4<br>Telephone: 289-247-4098<br>Facsimile: 289-247-4039 | **Walkerton**<br>19 Ontario Road,<br>Walkerton, Ontario N0G 2V0<br>Telephone: 519-881-2431 |
| **Mitchell**<br>Post Office Box 520<br>154A Ontario Road<br>Mitchell, Ontario N0K 1N0<br>Telephone: 519-348-0433<br>Facsimile: 519-348-4605 | **Windsor**<br>2000 Continental Avenue<br>Windsor, Ontario N9E 3P1<br>Telephone: 519-969-2522<br>Facsimile: 519-969-8202 |
| **Niagara Falls**<br>350 Ontario Street<br>Unit 13, Post Office Box 9<br>St. Catharine's, Ontario L2R 5L8<br>Telephone: 905-937-7434<br>Facsimile: 905-937-8020 | **Woodstock**<br>Post Office Box 20064<br>1401 Dundas Street East<br>Woodstock, Ontario N4S 8X8<br>Telephone: 519-539-8505<br>Facsimile: 519-539-7694 |