# Seneca Valley Virus (SVA)- The difficulties that arise from a ban on U.S.A exports from a Canadian Assembly Yard

## CWSHIN (Western Provinces)

Dr. Jette Christensen reported that CWSHIN had a surveillance signal generated that stimulated the network to discuss SVA in Q2. An environmental sample taken from an assembly yard in Manitoba tested positive for SVA. In Q2, there were some SVA tracebacks from slaughter plants in the U.S.A that closed some assembly yards located in Manitoba to export. The United States Department of Agriculture (USDA) is responsible for SVA detections, follow-ups, and associated decisions. SVA does not seem to be a concern for swine practitioners or producers in the U.S.A. but is a big issue for the USDA as follow-up investigations are required.

Dr. Glen Duizer provided more specific details on this assembly yard case. SVA was detected in a single assembly yard company in Manitoba that has 2 assembly yards. Due to the USDA decision to suspend exports, this company lost the ability to export cull breeding stock for just under 3 weeks. In order to become operational again, a full cleaning and disinfection was required for virus debulking reasons on these sites. In 2015, this assembly yard received similar reports of exported sows showing clinical signs of SVA when they arrived at assembly yards in the U.S.A. This is the first time that SVA surveillance was conducted at this assembly yard since 2015. Manitoba Agriculture is working with this assembly yard to develop a long-term plan to mitigate the risk of animals showing clinical signs of SVA and the associated impacts. It is important to note that this assembly yard handles approximately 200,000 sows per year from all the western provinces.
**Take Home Messages: SVA is still present in assembly yard environments even years after the last clinical signs of disease were noted. This situation has provided a lot of insights into the challenges that surface when attempting to cleaning and disinfect a high through-put and high-traffic facility and how to deal with turning off the tap for 3 weeks on the movement of cull breeding stock into this assembly yard. This had a huge effect on producers and affected a large number of animals in the western provinces.**

Dr. Rajiv Arora from the Canadian Food Inspection Agency (CFIA) reported that there was a lot of work that was completed by the CFIA to assist with this case. CFIA is now able to classify the difference between cleaning and disinfection for debulking reasons vs. virus elimination reasons and was able to have these conversations with the USDA.

# *Brachyspira hampsonii*- Swine Dysentery

## RAIZO (Quebec)

Dr. Claudia Gagné-Fortin reported that in Q1 Quebec had two small outbreaks of *B. hampsonii,* a type of the bacteria that causes swine dysentery. In Q2 Quebec reported that they saw a large outbreak with this pathogen that began on May 31, 2022 and continued into July. There are no known links between these 3 outbreaks. The first cases detected had associated clinical signs and tested positive. Further traceback investigations were completed and barns without showing associated clinical signs of this disease tested positive. In total 27 sites have tested positive for this pathogen in the last outbreak in Quebec and include: 18 finishers, 8 nurseries and 1 farrowing operation. Those cases were detected in 5 regions throughout Quebec.

The RAIZO team reported that it is unclear on how this pathogen got into the farrowing operation as the gilt developer unit associated with this operation tested negative. They may be witnessing a delay between detection of the agent and clinical signs. Transport cleaning, disinfection and drying are critical for control. Quebec has reported that in 6 similar situations, trucks had transported contaminated pigs, were cleaned, disinfected, and dried, and then had transported negative pigs. In those 6 farms, the negative pigs tested positive 1 to 3 weeks after transportation. This is making some question whether the cleaning, disinfection and drying times were sufficient.

Dr. Egan Brockhoff commented that this is a frustrating disease! Over the years he has tried pathogen elimination projects on infected farms with minimal success. The observations that Quebec are reporting are consistent with his experiences. There are two main prevention items that he wanted to communicate: 1) Ensure there is enough fiber in the diet. 2) Prevent out-of-feed episodes as both can trigger the onset of clinical signs.

Dr. Kurt Preugschas and Dr. Tony Nikkel agreed with Egan in that feed particle size is important. Course particle size and changes in diets will often trigger this pathogen. Even a small amount of antibiotics in the feed or water can completely mask clinicals signs. ***Brachyspira hampsonii* acts as an obstacle to decreasing antimicrobial usage and there is no commercially available preventative vaccine**.

The RAIZO team reported that Quebec conducted some trailer surveillance monitoring for this pathogen by sampling loading docks at slaughter plants for 1 week's duration. During this time, they found lots of trucks that tested positive for *Brachyspira hampsonii* from Quebec as well as some trucks that originated from Ontario. It is believed that this pathogen is more prevalent than many veterinarians think. At this period of time there is no economic impact in pigs that test positive, but do not show clinical signs of disease. This is making it difficult to convince producers to eradicate this pathogen and some are also reluctant to test due to the same reasons.

## OAHN (Ontario)

Dr. George Charbonneau from OAHN reported that this pathogen has not been detected in Ontario since September 2020, but laboratories have this on their radar and are looking for it.

Dr. Christa Arsenault from OAHN provided an update that an OAHN Swine Network awareness notice will be created and disseminated to Ontario swine veterinarians asking them to be aware of the development of these outbreaks in Quebec and asking practitioners to submit testing for any case that is exhibiting compatible clinical signs of Swine Dysentery.

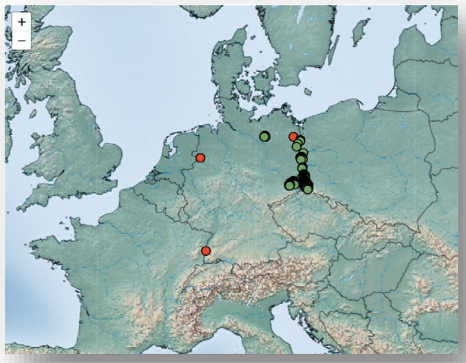
# CEZD Disease Signals of Interest from Q2

Dr. Andrea Osborn provided a review of disease signals that presented to the Community of Emerging and Zoonotic Disease (CEZD) over the past quarter.

## African Swine Fever (ASF) Signals

- ASF is still a global threat and outbreaks are ongoing. During Q2 of 2022 there were over 1057 cases reported to the World Animal Health Organisation (OIE) and so far in Q3 there have been greater than 360 cases reported. (source Empress i FAO website)
- There is now a case in Germany along the border with France as of May 24, 2022. This is a small outdoor farm with 35 pigs and reportedly very good biosecurity. The source of infection was thought to be contaminated food. An interesting confounding factor is that this site also has 140 casual and seasonal workers picking fruit and vegetables making biosecurity more difficult.
- There are now cases that border between Germany and the Netherlands as of July 1, 2022, that involve 1800 animals. These are the first reported cases in this region and this region has a high level of pork production.

**ASF Spread in Germany**



This map demonstrates the locations of reported ASF cases in in Germany over the last 6 months. (Source: Empress-i)

## Foot and Mouth Disease in Indonesia (FMD)

Dr. Andrea Osborn provided an overview on the FMD situation in Indonesia. This country has seen a very rapid spread of disease. FMD was first reported in May in backyard beef and dairy farms that were located a great distance apart from one another. By July it had spread across most of the country. A high number of animal movements were happening during this time period due to EID (Muslim holiday) July 9-12 that is thought to be a risk factor for disease spread. A total of 18/24 provinces have active cases with >495,000 animals affected as of August 19. To date >1.5M animals have been vaccinated for FMD. Mostly affecting beef and dairy cattle, but also affecting pigs as well. Australia is on high alert due to geographic proximity to Indonesia.

# Porcine Epidemic Diarrhea Virus (PED) / Porcine Delta Coronavirus (PDCoV)

## CWSHIN (Western Provinces)

Dr. Jette Christensen from CWSHIN reminded the CSHIN team that Manitoba Agriculture continues to send out a report weekly on the current PED outbreak that includes a map of the affected area with the outline of buffer zones. As of Aug 23, 2022, there were 122 total premises that have been declared infected with PED in Manitoba since the end of October of 2021. Recovered pigs are now moving into finishing operations and further onto processors. **The total number of positive and active cases is declining which is good news. The outbreak seems to be contained within the high-risk buffer area.**

The western provinces had one detection of PDCoV in May 2022 in a sow operation that ships iso-weans to the U.S.A. The source of infection was suspected to be a truck wash station in the U.S.A. This is the first case of PDCoV that has been detected in the western provinces in an extended period. Clinically, this case saw clinical signs milder than PED with pre-weaning mortality rates of 20-30% and sows off feed.

## OAHN (Ontario)

Dr. George Charbonneau reported that Q2 was a busy quarter for PED and PDCoV cases in Ontario. Ontario is seeing more and more PDCoV cases where the ration used to be approximately 50:50 PED: PDCoV. Most new sites infected were finisher sites. From April 1$^{st}$ -June 30$^{th}$ Ontario had 6 cases of PED and 5 cases of PDCoV detected. One further case of PED has been reported in Q3 thus far. Swine Health Ontario (SHO) continues to record and track for new cases at the county level in Ontario. The map can be referenced via the following link.

## RAIZO (Quebec)

Dr. Claudia Gagné-Fortin reported that Quebec had no issues with PED or PDCoV during this reporting period. RAIZO reported that they still have 1 site positive for both PED and PDCoV, but this site is very close to regaining negative status. Quebec continues to conduct surveillance for both pathogens at slaughter plant loading docks and remind producers and stakeholders to apply rigorous biosecurity measures during pig transportation in order to continue having a low incidence of those virus in the province.

# CanSpotASF Surveillance Q2 Update

**CSHIN is excited to announce that as of April 2022 CanSpotASF was launched in federally inspected and licensed abattoirs across Canada. CanSpotASF has received full support from the Canadian Meat Council (CMC) and its associated membership on this initiative leading to a flawless launch of this project.** The main objective for CanSpotASF is to enhance early detection of this virus and therefore limit its spread if ASF is ever detected in Canada.

**Abattoir CanSpotASF Testing- 2022 Quarter 2 (Apr 1 to Jun 30)**

| Province/Region | Number tested in federal abattoirs | Number of negative cases | Number of positive cases |
|---|---|---|---|
| Maritimes | 0 | 0 | 0 |

| | | | |
|---|---|---|---|
| **Quebec** | 13 | 13 | 0 |
| **Ontario** | 9 | 9 | 0 |
| **Western Provinces** | 57 | 57 | 0 |

**Laboratory CanSpotASF Testing- 2022 Quarter 2 (Apr 1-Jun 30) & Cumulative # of Negative Tests Completed**

| Province/Region | Number of eligible cases | Number of negative cases | Number of positive cases | Cumulative number of Negative Tests Completed (since the launch of CanSpot ASF in Aug 2020) |
|---|---|---|---|---|
| **Maritimes** | 4 | 2 | 0 | 21 |
| **Quebec** | 43 | 28 | 0 | 193 |
| **Ontario** | 72 | 35 | 0 | 91 |
| **Western Provinces** | 34 | 43 | 0 | 292 |

**It is important to note that all testing conducted to date has yielded negative ASF results. Soon, CanSpotASF surveillance will expand to include testing at provincially inspected and licensed processing plants. More information will be included in the CSHIN Q3 reports.**

*This information is a professional communication for swine producers. This information is not validated and may not reflect the entire clinical situation. Your judgment is required in the interpretation and use of it. It is the intent of CSHIN to improve the health of the national swine herd. CSHIN is funded by the Canadian Association of Swine Veterinarians (CASV), The Canadian Pork Council (CPC) and The Canadian Animal Health Surveillance System (CAHSS).*

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