



Canadian Swine Health
Intelligence Network

Réseau canadien de
surveillance de la santé porcine

CSHIN QUARTERLY PRODUCER REPORT

REPORT #1 APRIL-JUNE 2018

Participation: 45 veterinarians (13 Québec, 14 Ontario and 18 Western Canada)

HIGHLIGHTS FOR SWINE PRODUCERS

African Swine Fever (ASF) - China & Europe

China confirmed its first case of African Swine Fever (ASF) on Aug 3, 2018, on a small farm (Case 1). The producer reported that he purchased piglets from a farm (source) in another district on March 24, 2018. In April some of the pigs on the source farm became sick and further died. The owner of the source farm did not report these health concerns at this time and rather sold the remaining live pigs. Trace backs have been conducted and all of the pigs from the source farm have been located and culled.

China confirmed its second case of ASF on Aug 16, 2018, at a processing plant. The source of these pigs was 500 miles from the location of the first reported case.

China confirmed its third case of ASF on Aug 20, 2018, on a farm. This farm is located approximately 350 miles from the second reported case. The producer reported that these pigs started to show clinical sign and had an increased mortality on Aug 15, 2018.

There has now been 3 cases of ASF reported in 3 provinces in China. "These reported incidents have occurred over a large swath of China, containing tens of millions of pigs". *Source: Swine Health Information Center: Swine Global Disease Surveillance Report, 2018-08-16, 2018-08-20.*

Countries in Europe including Russia, Poland, Ukraine and Czech Republic have also reported ASF detections at an increased frequency in wild boar populations. ASF is detected in wild pigs in Eastern Europe and spill over occurs with the domestic swine population.

A research project recently completed by Dr. Scott Dee studied virus transmission in feed ingredients. This research used a model that simulated cross Atlantic shipments and found that several viruses including ASF were able to survive this trip in common swine feed ingredients including soya meal, lysine, Vit D and pork sausage casing.

Other possible routes of ASF transmission include people and animals that travel to countries where ASF has been detected and that come into contact with swine. Also, transmission of ASF can occur with illegally imported meat products that could be fed to swine.

Clinical signs of ASF include: Fever (40.5-42 degrees C), loss of appetite, skin hemorrhages, vomiting and diarrhea, abortions in pregnant sows and high mortality usually noticeable within 10 days of the onset of clinical signs.

Source: 8th Edition of Diseases of Swine textbook B.E. Straw et al., CFIA- ASF fact sheet: <http://www.inspection.gc.ca/animals/terrestrial-animals/diseases/reportable/african-swine-fever/fact-sheet/eng/1306993248674/1306993787261>

The following is a link to a YouTube video that demonstrates how ASF is spread and the clinical signs that can be seen with infection: <https://www.youtube.com/watch?v=eyQ4t1wHl2M&feature=youtu.be>

Source: European Food Safety Authority



Source: Makerere University Uganda- ASF Transmission

What can you do to prevent the introduction of ASF to Canada and actions you can take if you suspect your pigs are sick...

Prevention

- 1) **When visiting other countries known to be infected with ASF: DO NOT** bring back any meat products into Canada (this is illegal). Do not feed swine any human food waste. Wash all clothing and footwear immediately after use in other countries.
- 2) **Routinely review biosecurity protocols with farm staff and visitors:** Ensure that farm staff and visitors have not had contact with swine in other countries where ASF infections have been detected **BEFORE** you allow them entry into your swine herd. Ensure that all visitors and staff understand how to properly abide by your on-farm biosecurity protocols e.g. proper use of a Danish entry system, required downtime, etc.

If you suspect your herd is sick

- 3) **Contact your herd veterinarian immediately:** If you see any clinical signs in pigs on your farm that could be associated with ASF infection.
- 4) **Stop all pig movements:** Never move, sell or send to livestock auctions/yards sick or compromised pigs from your farm. This will prevent further spread of infections.
- 5) **Implement a self-quarantine on all animals, feed and equipment** until you know the cause of the illness.

Porcine Epidemic Diarrhea Virus (PEDV) & Porcine Delta corona Virus (PDCoV) Update

CWSHIN (Western Provinces)

The Canadian West Swine Health Intelligence Network (CWSHIN) reported that the first case this year of PEDV was detected on a Manitoba swine farm on May 15, 2018. Since this date 12 premises have tested positive for PEDV located in 4 different buffer zone locations. Since the last CSHIN PEDV update, 2 new farms tested positive for PEDV and one was located in the newly created buffer zone 4. Control of the virus is progressing well in buffer zones 1 & 2. There have been no new cases in these buffer zones since June 3, 2018. The goal is PEDV elimination from all infected farms, but animal movement is the most complicating factor in achieving this goal. It was reported that producers, veterinarians, associated swine industry and government are all working together. The importance of trace back investigations was emphasized with the goal of determining linkages between sites and the possibility of determining where the initial infection originated from.

OAHN (Ontario)

The Ontario Animal Health Swine Network (OAHN) reported that there were 6 new primary cases of PEDV in Ontario and 1 new primary case of PDCoV in Q2. 3/6 of these new cases have since met negative PEDV health status. Swine Health Ontario (SHO) reported to the OAHN Swine Network that 95% of the overall number of PEDV primary cases in Ontario have successfully eliminated PEDV and have confirmed a negative status. It is important to note that Ontario reports PEDV and PDCoV based on primary cases only (which is different than reporting in Manitoba where all cases are reported).

Ontario also reported that SHO completes regular loading dock surveillance for PEDV and PDCoV at a federal processing plant. When PEDV is detected on farms, a direct relationship is seen with more PEDV positive samples being detected from loading dock surveillance. The good news story is that more PEDV positive samples are detected on days when orderly marketing of known PEDV positive pigs are being sent to this establishment.

Take home message: Orderly marketing based on the PEDV health status seems to be working in Ontario.

Rotavirus

OAHN (Ontario)

Forty-five percent of responding practitioners in Ontario reported an increase in Rotavirus detections from Q1. Practitioner comments indicated several had ongoing cases of Rotavirus and one practitioner mentioned co-infection with other disease agents e.g. Salmonella. Another practitioner commented that they have an ongoing case of Rotavirus in a herd that is involved in organic pork marketing. This comment stimulated discussion amongst the CSHIN network members that co-infections are common with Rotavirus. **Take home message: It is important to test for multiple pathogens when Rotavirus is a possibility in your herd.**

RAIZO (Quebec)

RAIZO (Réseau d'alerte d'information zoosanitaire) reported that Rotavirus is seen more in nurseries as Type A & C. Even when there isn't an increase in mortality, rotavirus still causes growth delays. Type C is the type of Rotavirus hardest to control because it is not covered under commercially available vaccines.

There is a Canada-wide need for an effective rotavirus vaccine that provides protection against all known types. Isolating accurate types of Rotavirus is difficult in a laboratory setting. This leads to issues with vaccine development. Laboratory tests (that detect multiple pathogens and pathogen types) are excellent tests and are likely the reason that we detect this pathogen more frequently. **Take home message: There is a need for pharmaceutical companies to develop and license an effective vaccine for all types of Rotavirus in Canada.**

CWSHIN (Western Provinces)

In Q2 CWSHIN reported that Rotavirus was at the lowest reporting level by practitioners since 2015. The reason for this is unknown. Rotavirus vaccination can help with control in piglets. Drying agents are also commonly being used on most farms to aid with control of this pathogen. Some success is seen when oral or injectable antibiotics are used when piglet diarrhea is caused by multiple factors. Overall, on-farm environment sanitation practises have improved stimulated by PEDV in the western provinces. This may assist with the control of other pathogens e.g. Rotavirus.

Porcine Reproductive & Respiratory Syndrome (PRRS)

OAHN (Ontario)

Forty percent of reporting veterinarians in Ontario saw an increase in the frequency of PRRS cases detected in both breeding and growing herds. Swine Health Ontario (SHO) was able to support this by analyzing information on PRRS cases reported through the Sow Site Incidence Project. This report is compiled on a quarterly basis and includes an assessment of the clinical impact of the PRRS virus on the sow herd. Participating veterinary clinics provide the number of sows, RFLP type, clinical signs seen in the herd at 4 weeks as 8 weeks post outbreak that includes pre-weaning mortality, abortions, sow mortality, etc. Currently the new variation of 1-8-4 appears to be demonstrating more severe clinical impact while the 1-1-1 RFLP type appears to be milder in clinical presentation.

RAIZO (Quebec)

RAIZO reported that PRRS cases in Q2 were comparable to previous quarters and considered to be stable.

CSHIN Thank-you to Dr. Chris Byra

The CSHIN Network would like to formally thank Dr. Chris Byra for all of his hard work, vision and dedication to CSHIN. We wish Dr. Byra well with his retirement!

CSHIN Moving Forward

You will notice a few changes to the CSHIN reports including the launch of a new report format! CSHIN's goal moving forward will be to **highlight take-home messages throughout these reports**, but still provide details outlining CSHIN discussions. We realize that swine producers and veterinarians **need to see value in these reports** so we welcome swine producers & veterinarian feedback on how we can make continuous improvements. We are also investigating into different methods to present network data to allow us to better assess pathogen trends.

As the new CSHIN manager I look forward to getting to work with and develop relationships with Canadian swine producers & veterinarians. It is a privilege for me to get to work with this talented CSHIN team to ensure that the important role that CSHIN plays in piecing together swine health surveillance data and trends continues.

Christa Arsenault DVM, CSHIN Manager

This information is a professional communication for swine producers. The information was obtained from a survey of the clinical impressions of participating practising veterinarians with input from other swine health professionals. 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 jointly by the Canadian Association of Swine Veterinarians (CASV) and Canadian Pork Council (CPC).

MEET YOUR CSHIN Q2 NETWORK TEAM

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