



CEZD Disease Signals of Interest from Q3

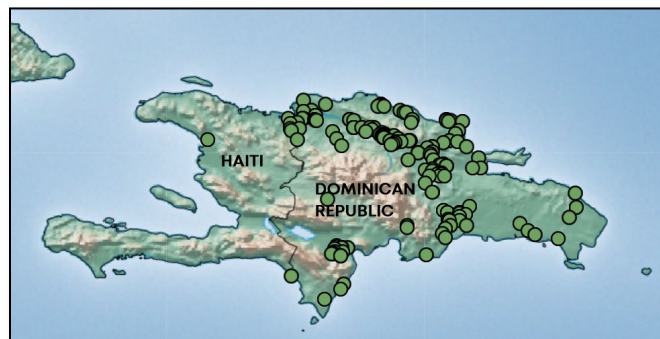
Dr. Andrea Osborn provided a review of disease signals that presented to the Community of Emerging and Zoonotic Disease (CEZD) over the past quarter.

African Swine Fever (ASF) Signals

ASF in Domestic Swine in Germany

- Germany announced detection of ASF cases in domestic swine located in Brandenburg in July of 2021. All infected animals were culled and there was no further spread of disease in domestic swine until Nov 2021.
- On Nov 16, 2021, Germany announced that a new case of ASF was found in domestic swine on a farm near Rostock in the state of Mecklenburg-Vorpommern. ASF had not been detected in this area to date in both domestic pigs and in wild boar. **This area is a considerable distance from the known ASF infected areas in Germany which is concerning.**
- Germany has detected ASF in >2000 detections in wild boar since this virus was first detected in this country.

ASF in the Dominican Republic and Haiti



This map above shows the locations of reported ASF cases in the Dominican Republic and in Haiti (Source: [Empres-i](https://empres-i.apps.fao.org/))
<https://empres-i.apps.fao.org/>

Dr. Andrea Osborn reported that ASF has continued to spread and mapping of the cases shows that virtually the entire island is affected. Haiti was originally reporting most of the ASF detections to the north, but cases have now been detected in the southern aspect of this country.

Porcine Epidemic Diarrhea Virus (PEDv)

CWSHIN (Western Provinces)

Dr. Glen Duizer reported that there is a new PEDv outbreak in the Southeastern area of Manitoba. This is the same region that had the previous outbreak of PED. The full epidemiological investigation is not complete yet, but findings to date have revealed that there were some potential transport biosecurity issues and that routine on-farm biosecurity protocols that were in place after the last PED outbreak have lessened over time. There have also been some findings of equipment being exposed to a PEDv positive premises not being effectively cleaned and disinfected. Thankfully this equipment was not taken to any other pig farms after unknowingly being in contact with an infected premises. Investigations have also revealed the potential for virus transmission even when loadout docks are not properly managed and normal load out protocols are followed. A component of the outbreak of PEDv was picked up via routine processor surveillance testing, indicating that this testing is working! Abattoir surveillance in Manitoba has been valuable in the outbreak investigation, providing information on the scope of the outbreak and the continued disease pressure on the sector.

PEDv has also been detected in another segregated area of Manitoba that has never had PEDv detections from previous outbreaks. Two farms have been confirmed to be positive that are linked through pig flow in this area. At this time there are no known epidemiological links between these 2 cases and the other PEDv positive area. Dr. Melissa Desrochers reported that the goal is to eradicate PEDv from these premises within 28 days.

The CSHIN Q3 team would like to congratulate Manitoba on how quickly their teams were able to mobilize for this new PEDv outbreak. This team works so well together and this can serve as a model for others. Jenelle Hamblin from Manitoba Pork is organizing weekly communication meetings with all swine veterinarians within the province keeping everyone up to date on this situation. Well done!

OAHN (Ontario)

Dr. George Charbonneau mentioned that Swine Health Ontario (SHO) has reported 1 new case of PEDv in Q3 that occurred in a nursery operation and there have been no new cases of Porcine Deltacoronavirus since January 15, 2021. Dr. Jim Fairles reported that the Animal Health Lab (AHL) is conducting a normal amount of testing for PEDv for this time of year, but there is a low incidence of positive tests. Dr. Fairles did mention that the AHL reported 2 new PEDv cases in the last 2 weeks corresponding with Q4. Dr. Christine Pelland mentioned that both of these new PEDv cases were in finishing barns. The most likely source of infection in these finishing barns is suspected to be through transport vehicles that had contact with the loading docks that were used for dropping off cull sows. Proper biosecurity was not maintained. Both herds plan to eradicate this virus. To view the SHO PEDv tracking please go to the following link: <http://www.swinehealthontario.ca/Disease-Information/PED-PDCoV-Tracking-Map>

RAIZO (Quebec)

Dr. Claudia Gagné-Fortin reported that Quebec has regained their negative status for PEDv since September 2, 2021 and Quebec is still free from Porcine Deltacoronavirus. **The threat is always present so this is a good reminder of the importance of biosecurity and maintaining vigilance in proper cleaning and disinfecting procedures.**

Streptococcus equi zooepidemicus (*Strep. zoo*)

OAHN (Ontario)

OAHN reported that there were 2 pathology cases with 2 separate isolates of *Strep. zoo* that were identified during Q3 in Ontario. There were no indications of these findings on the clinical impression survey from swine veterinarians. Both cases were reported into the OAHN through the Animal Health Lab (AHL). The first case was found in finisher pigs from the same herd that previously had detected this pathogen back in Q4 of 2020. This herd had attempted to eliminate this pathogen, but it appears to still be present in this population and was the cause of a significant increase in mortality in the finishing pigs. The clinical presentation and postmortem findings were consistent with septicemia.

CWSHIN (Western Provinces)

Dr. Jette Christensen reported that the project on *Streptococcus* laboratory investigations in the western provinces that began in April 2021 is still ongoing and all cases of *Strep. zoo.* would qualify for full genome sequencing through this project. **It is important to note that no new sites of *Strep. equi zooepidemicus* have been detected as part of this project.**

Porcine Circovirus (PCV-2 and PCV-3)

RAIZO (Quebec)

In Quebec 26% of veterinarians reported an increase in PCV-2 on the veterinary clinical impression survey for Q3. It is suspect that this may be attributed to a very bad year with PRRSv infections and/or associated with variations in vaccination protocols. Quebec reported 2 cases of PCV-3 in 2007 and 3 cases in 2019. No cases of PCV-3 have been reported lately, but practitioner questions on this pathogen have increased. It can be extremely difficult to observe clinical lesions for this virus in abortion cases so these numbers could be higher.

OAHN (Ontario)

OAHN reported that in Q2 veterinarians reported zero cases in the past year that they would attribute to PCV-3. This was in response to a specific question about frequency of PCV-3. Dr. Josepha DeLay continues to report pathology cases at the AHL that have clinical signs and pathology lesions that are PCV-3 positive on PCR. This pathogen should be on the surveillance radar as it has the potential to increase in frequency much the same as PCV-2 gradually became more widespread and clinically more severe over time. Sequencing for PCV-3 is available in Canada, however some tests known as IHC (Immunohistochemistry) and ISH (In situ hybridization) are currently sent to a lab in the U.S.A.

CWSHIN (Western Province)

The western provinces lab testing seems to be stable for PCV-2, but there is an increased detection of PCV-3 based on the lab data. This pathogen was not discussed on the CWSHIN Q3 call.

Prolapses

CWSHIN (Western Provinces)

Dr. Tony Nikkel reported that there seems to be an increased incidence of prolapses in both grow-finish pigs and in sows. This issue seems to be highly related to genetics and management but becomes a health issue for affected pigs. Female genetics have changed to favour longer, leaner and slower growing animals. These females tend to have a higher mortality risk and

issues with the ability to maintain body condition. Poor body condition is the number 1 risk factor for prolapses. It is now considered common to see an 8-9% sow mortality rate in these herds so management needs to be exceptional. Rectal prolapses appear often 2-3 weeks into the grower barns and these pigs have no obvious health issues. Prolapses are seen in the biggest, healthiest, fastest growing pigs. There seems to be a correlating link to feeding regimes. Some success has been obtained when rapid transitions to the next diet rations occur especially if pigs are entering with heavier weights.

Dr. Melissa Desrochers also mentioned a link to more prolapses being detected in the cooler weather especially if drafts are found or ventilation issues.

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 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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