Canadian Swine Health Intelligence Network

Réseau canadien de surveillance de la santé porcine

CSHIN QUARTERLY PRODUCER REPORT

REPORT Q1 JAN-MAR 2025

HIGHLIGHTS FOR SWINE PRODUCERS

H5N1 Highly Pathogenic Avian Influenza in U.S. Dairy Cattle- Update for Swine Producers

Dr. Murray Gillies from the Canadian Animal Health Surveillance System (CAHSS) provided the CSHIN network with an update on H5N1 Highly Pathogenic Avian Influenza (HPAI) detections in dairy cattle in the U.S.A. This is an evolving situation in the U.S.A. As of March 25, 2025, there were 1065 case detections in livestock, involving 18 U.S. States. The USDA is reporting 42 new confirmed cases in cattle in the last 30 days with the majority of these case detections coming from Idaho. Naïve animals being brought into previously infected herds seem to spark new detections. It doesn't appear that there is a lot of herd immunity developed. California continues to be a state with many new cases being reported. It has been communicated that every dairy herd in California has now been infected with HPAI and milk production losses being reported in both California and Idaho are staggering. **California was reported to have lost 8% of their total milk production at their peak in HPAI cases, which is almost as much milk as the country of Canada produces.** Major swine production states have also declared detections in dairy e.g., Iowa. H5N1 has also been detected in humans, usually in those that have had close contact with infected animals including wild birds, dairy cattle, or poultry. There have been some human cases where there is no known human exposure to infected animals. In November 2024, the first human case of HPAI H5N1 in Canada was confirmed in a teenager in B.C. that had no known animal or bird connections. There has been 1 known death due to HPAI infection in a human in the U.S.A.

On February 13, 2025, the USDA and APHIS confirmed by whole genome sequencing a detection of HPAI H5N1 genotype D1.1 in dairy cattle in Arizona. This was the first confirmed wild bird similar genotype of HPAI in dairy cattle in the U.S.A. Until this detection all genotypes were of the B13.3 origin known in dairy cattle. This detection indicates that there may be multiple spill-over events that occurred from wild birds to cattle.

In Canada, we continue to test raw (unpasteurized milk) samples. As of May 8, 2025, 3498 samples for raw milk from trucks arriving at processing plants across Canada have been tested and all have tested negative for HPAI. The samples tested monthly include approximately 1500 dairy farms across Canada. This is a proactive surveillance measure to monitor Canadian dairy cattle for HPAI and helps detect the virus early if it is ever introduced to the national herd. **The below table summarizes the results of the Canada-wide testing of raw (unpasteurized) milk samples collected at processing plants to date.**

Area	Samples tested	HPAI test results (positive or negative)
Atlantic provinces	247	All negative
Ontario	970	All negative
Quebec	1258	All negative
Western provinces	1023	All negative

Dr. Egan Brockhoff reported that he continues to work, representing the Canadian Pork Council, along with the Canadian Meat Council, the CFIA, and with provincial CVO's on HPAI response efforts and planning.

H5N1 Highly Pathogenic Avian Influenza Detection- Update for Swine Producers continued…

Take Home Messages:

- **There have been no reported cases of H5N1 HPAI in dairy cattle, beef cattle or swine in Canada to date. Canadian herds with potential compatible clinical signs are being tested and all results have yielded negative results.**
- **Every effort must be made to keep HPAI H5N1 out of swine. The CSHIN network would like to remind all swine producers and veterinarians to continue with enhanced biosecurity measures. A few biosecurity tips include the following:**
  - **Avoid allowing swine to drink untreated surface water**
  - **Ensure bird-proofing in barns or swine housing areas**
  - **Restrict scavenger mammals and control deadstock bins with ensuring multiple and timely pick-ups**
  - **Don't' feed untreated milk or milk by-products to swine. Must ensure it has been pasteurized first.**
  - **Evaluate biosecurity risks poised from dairy operations e.g. shared workers, geographically close locations, shared equipment etc.**
- Those that work directly with swine should be encouraged to stay home whenever possible if sick or experiencing clinical symptoms of Influenza. People working with infected pigs need to ensure they follow good biosecurity practices and whenever possible, wear an N95 or equivalent mask, and wash their hands frequently. Any personnel that work with swine should be encouraged to get the "flu" shot for influenza yearly.

Porcine Epidemic Diarrhea (PED) and Porcine Deltacoronavirus (PDCoV)

OAHN (Ontario)

Jessica Fox from Swine Health Ontario (SHO) provided an update to the OAHN swine network for 2025 Q1 on the status of Porcine Epidemic Diarrhea (PED) and Porcine Deltacoronavirus (PDCoV) cases in Ontario. In Q1 of 2025, 20 new cases of PED and 18 new cases of PDCoV were reported in Ontario. Most of these cases occurred in January (at the start of this quarter). **This is the worst quarter seen in Ontario since PED was initially detected in 2014**. SHO continues to spread awareness with the goal to reduce transmission of these viruses. Jessica and other industry members have been meeting with various industry sectors to discuss the importance of ongoing biosecurity, including pork producers, feed companies, transporters, and packing plants. At the start of Q2, SHO sent out a memo to remind industry members of the risks of PED/PDCoV movement associated with manure spreading. SHO reported that 21 previously detected cases resumed negative PED/PDCoV status in Q1. SHO's reporting website is constantly being updated due to this. Moving forward, SHO continues to urge industry stakeholders to remain as vigilant as possible in the face of these viruses, as new detections continue to be reported in Q2.
Swine Health Ontario (SHO) has also sent out multiple notices to all Ontario swine producers and industry members that encourage the industry to be vigilant in the face of this outbreak and to continue to support virus elimination strategy, as this remains the best approach for disease control. Veterinarians continue to be encouraged to test for coronaviruses in all gastrointestinal cases, as PDCoV in particular can present with extremely mild clinical signs. Timely diagnosis of these cases can help limit widespread contamination and potential disease spread to other sites.

Ontario swine producers continue to be encouraged to enroll in the Swine Health Area Regional Control (SHARC) program so that they can stay aware of current positive sites in their proximity allowing them to make informed decisions about what transportation routes are best. Choosing a transportation route with less known outbreaks can decrease the risk of further

transmission of disease. The PED and PDCoV tracking map is available on the Swine Health Ontario website and shows current and annual cases by county. http://www.swinehealthontario.ca/Disease-Information/PED-PDCoV-Tracking-Map

CWSHIN (Western Provinces)

Dr. Jette Christensen reported that in April 2025, the western provinces have detected 2 new cases of PED in Manitoba. These two premises are linked through pig movements with one being a nursery and the other being a downstream finishing barn. No other swine farms are located within the two buffer areas. No other epidemiological links have been discovered between these farms. Both herds are working on virus elimination.

CWSHIN also reported that in Q1 2025 they saw the highest number of PDCoV positive lab-cases from environmental samples on record. In Q1 there were 241 positive tests for PED or PDCoV in Manitoba. The positive tests originated from 3 high traffic sites and 2 known premises confirmed positive for PDCoV. Saskatchewan reported no positive tests from high traffic sites were found. High traffic sites include rest stops, assembly yards, docks at processors etc. Often these high traffic sites are noted to be impossible to thoroughly clean and disinfect. Manure spreading season is here and with this comes more risks for PED, PDCoV and other virus movements.

RAIZO (Quebec)

Dr. Roxann Hart reported that Quebec had 5 new cases of PDCoV detected in Q1 2025. The first three cases of PDCoV occurred in finishing pigs belonging to the same region of Chaudière-Appalaches in Quebec. This region is known to be quite dense in swine farms. The first case of PDCoV was detected on March 8th. Some of the pigs presented with grey coloured, liquid diarrhea. The biosecurity on these sites saw room for improvement. The owner collaborated well with MAPAQ, the veterinarian and l'Équipe québécoise en santé porcine (EQSP). The second case of PDCoV was detected on March 14th, and the third case was detected on April 4th. Each positive site completed the epidemiologic survey. It is still unknown what the source of these infections were, but two options that are being considered include contamination from a cull sow assembly point or from a processing dock. Near the end of March and at the beginning of April, there were many positive results for PDCoV at processing docks. Tracing activities showed that these results were not linked to the above 3 cases of PDCoV. Producers, transporters, and veterinarians identified in the tracing activities were contacted.

There were two other PDCoV cases in Quebec that were detected in Q1 through traceback activities. Both sites were identified to be PDCoV positive on April 16th. Both were closed finishing herd in the same region as the first three cases in Quebec. Biosecurity at these sites also had room for improvements. A hypothesis of a source of contamination for these two closed herds includes transportation due to there being a high volume of transport vehicles in this area. The producer is working with the veterinarian, the EQSP and the MAPAQ.

Atlantic (Atlantic Provinces)

Dr. Dan Hurnik mentioned that the Atlantic provinces are aware of the increase in PED/PDCoV cases seen in both Ontario and Quebec. Swine farms in the east have enhanced their biosecurity practices due to this, especially with trucks and transportation biosecurity.

Take Home Messages: PED and PDCoV detections were at an all time high during Q1 in Ontario. Enhanced biosecurity measures need to be taken by all swine producers, veterinarians and swine industry members during these high-risk periods. All assembly yards, animal resting locations and processing docks should be assumed to be positive for various infectious agents such as PED/PDCoV, PRRS, Influenza etc. Care must be taken to avoid contamination of trailers, footwear and clothing when visiting these high-risk sites.

Salmonella

CWSHIN (Western provinces)

Dr. Cordell Young provided an overview on how he managed recent cases he encountered with *Salmonella*. This farm was raising early weaned pigs at 18 days of age. In this case there was no scour seen in the farrowing rooms, rather the scour started within 4-5 days of weaning. Compatible lesions were seen, and *Salmonella derby* was cultured. Low levels of Rotavirus A & C were also found. He didn't run Sapovirus testing for this case. The decision was made to run Neomycin in the water first. Wanted to use Neomycin for a very short duration not wanting to cause antimicrobial resistance. Administered an oral vaccine pre-weaning that had *Salmonella typhurmurium* in it (not *Salmonella derby*), that seemed to be effective.

Take Home Message: Young piglet diarrhea cases are often caused by *Salmonella spp*., Rotavirus A, B, C, *E.Coli* and any combination thereof. The potential role of Sapovirus in these cases is still associated with a lot of unknowns.

CEZD Foot and Mouth Disease (FMD) Update

Dr. Andrea Osborn provided an overview on the Foot and Mouth Disease (FMD) cases seen thus far in her role with the Community of Emerging and Zoonotic Disease (CEZD). This report was compiled as of May 21, 2025.

Germany

Germany reported its first case of FMD in water buffalo in Brandenburg on Jan 10, 2025. This is the first occurrence of FMD in Germany since 1988.

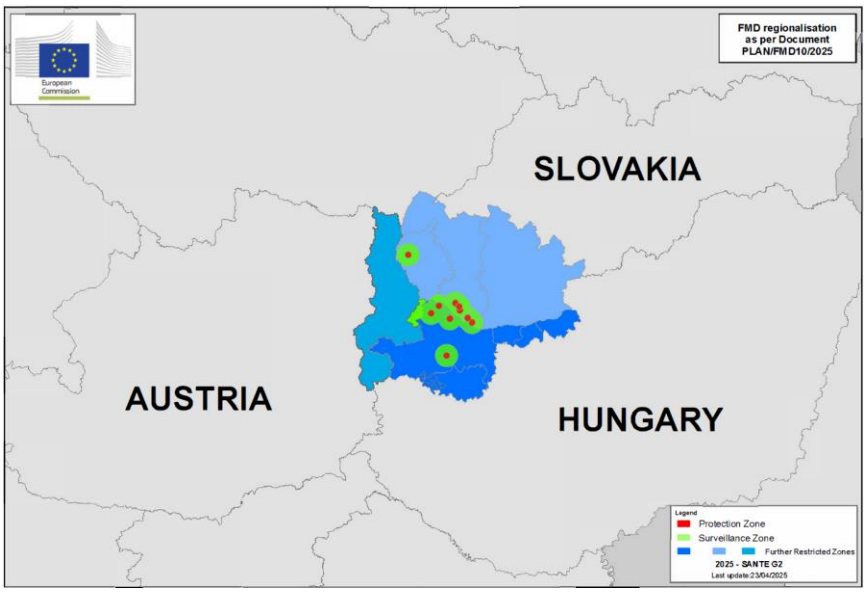
- Three water buffalo died, and the rest of the herd (11) have been culled.
- Identified serotype O. The closest isolate similar known is from Türkiye.
- There was no trade from this herd within epidemiologically significant period.
- **The source of this infection is still unknown**. The assumption is that this was caused by human wrongdoing.
- This infection resulted in no spread of the virus to other establishments. The role of wildlife still under investigation.
- **Germany has regained freedom, without vaccination,** as of April 14, 2025, for the entire country. Import restrictions remain in place for Canada and many other countries. Reference: Disease Freedom from FMD

Hungary

- FMD Type O was first reported in Hungary on March 6, 2025. Since this date 3095 cattle, 859 sheep and 46 pigs have been found to be positive for FMD. This strain is most closely related to an FMD strain isolated in Pakistan in 2017-18.
- On March 26, 2025, Hungary detected its second case of FMD in 3028 dairy cows. Vaccination was used to control further spread of disease on March 26, 2025. This case overlaps on the border with Austria.
- On April 2, 2025, 2 new FMD cases were detected in Hungary.
- On April 17, 2025, the fifth case of FMD was confirmed in Hungary.

Slovakia

- Slovakia first detected FMD on March 25, 2025. Since this date a total of 4 detections have been confirmed that involve 279 animals.
- On March 25, 2025, Slovakia detected its 5th case of FMD involving 3847 animals. Vaccination was given same day to help control further spread of disease. There was an epidemiological determined link to the 2nd farm detected in Hungary with this case. **The owner of this farm visited that farm in Hungary.**
- On April 4, 2025, the 6th case of FMD was detected in 874 dairy cattle in Slovakia.



Take Home Messages: The FMD situation in Hungary in and Slovakia was moving very quickly. The good news is that there have been no new outbreaks detected of FMD in these countries since April 17, 2025.
The Swine Health Information Center (SHIC) hosted a webinar entitled "FMDV Incursions in the EU: Situation Update and Considerations for the U.S." that is an excellent webinar and can be reference here.

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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