



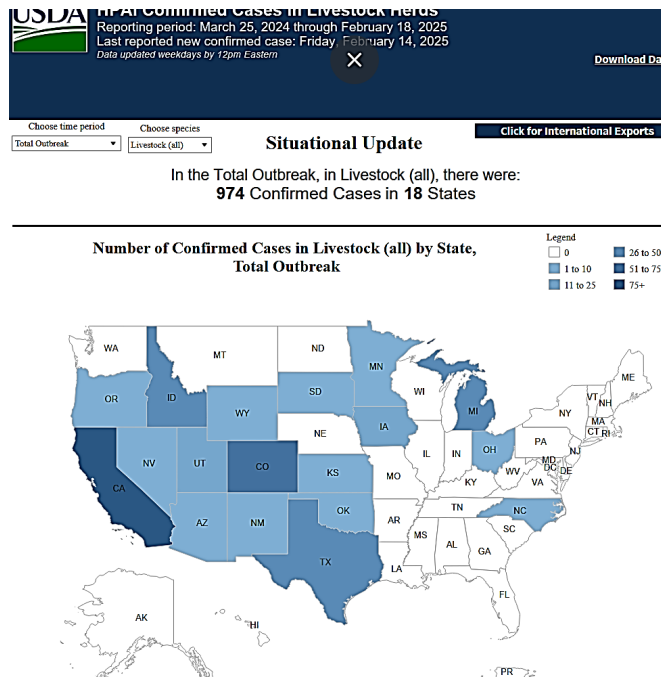
Canadian Swine Health Intelligence Network

Réseau canadien de surveillance de la santé porcine

H5N1 Highly Pathogenic Avian Influenza Detection in Dairy Cattle in the U.S.A- Update

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) detection in dairy cattle in the U.S.A. This is an evolving situation in the U.S.A. As of February 20, 2025, there were 974 case detections in livestock, involving 18 U.S. States (see map below, darker blue indicates more cases). 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.

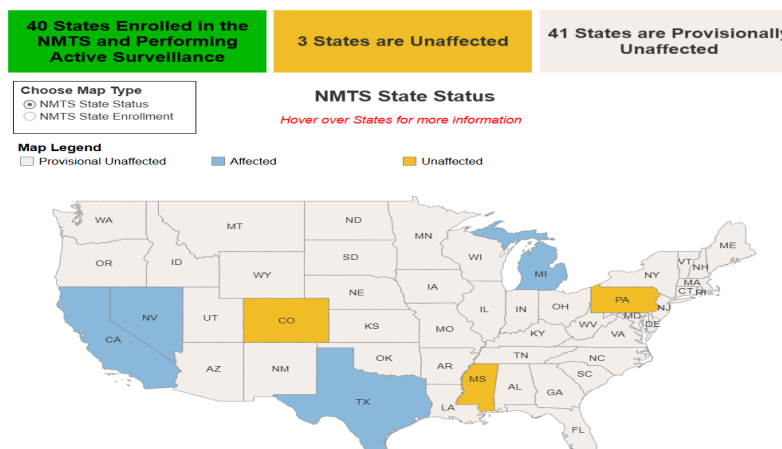
On February 13, 2025, the USDA and APHIS confirmed by whole genome sequencing a detection of HPAI H5N1 genotype D1.1 in dairy cattle in Arizona. This is the first confirmed wild bird similar genotype of HPAI in dairy cattle in the U.S.A. Until this detection all genotypes were of the B13.3 origin known in dairy cattle. This detection indicates that there may be multiple spill-over events that occurred from wild birds to cattle. Dr. Scott Weese from the University of Guelph summarized this finding well in his [Worms & Germs Blog](#), if D1.1 can move from birds to cattle in the U.S., then it could do that anywhere. He suggested that Canada must maintain a robust milk surveillance program to be able to identify early emergences of this virus. Canada must be ready, able, and willing to act decisively if/when H5N1 is identified in dairy cattle. This does not mean culling cattle but rather means using strict controls to prevent farm-farm spread and reduce the risks to humans on farms.



H5N1 Highly Pathogenic Avian Influenza Detection in Dairy Cattle in the U.S. and in Poultry Flocks- Update

On October 30, 2024, the USDA/ APHIS reported the first detection of HPAI H5N1 in a backyard small holder pig in Oregon, U.S.A. On November 7, 2024, the USDA confirmed a second pig on this same Oregon farm also tested positive for HPAI H5N1. This smallholder farm also had sick waterfowl that developed neurological symptoms and then would die after 3 days.

In December of 2024, the U.S.A. rolled out mandatory bulk milk surveillance sampling for HPAI in dairy cattle. The goal of this surveillance was for early detection of virus in dairy herds and to get a better idea on the spread of the virus within U.S. dairy cattle populations. To date 40 states are enrolled and performing active surveillance. The map indicates that 41 states are labelled as “provisionally unaffected”, and 3 states remain uninfected. The information on this is changing rapidly so please refer to this [link](#) for more up to date information.



The U.S.A is also experiencing their worst recorded outbreak of HPAI H5N1 in poultry. Over 23.32 million birds have been infected to date and the price of a dozen eggs in the U.S. has skyrocketed to over \$8 US dollars now on average. Moving forward the U.S. may begin to not depopulate infected flocks of birds and instead look to the use of a recently provisionally approved HPAI vaccine. The issue with this vaccine is it is only in the injectable form as of the date of this report which will make vaccinating large flocks very difficult.

Canada has not seen the same number of HPAI H5N1 cases in poultry reporting that 14.5 million birds have now been infected with 31 infected premises still in place as of February 23, 2025 (19 BC, 1 AB, 9 ON, 1 QC, 1 NFLD). Up to date HPAI in poultry cases can be viewed via this [link](#).

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 veterinarians and producers 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 2024 Q4 on the status of Porcine Epidemic Diarrhea (PED) and Porcine Deltacoronavirus (PDCoV) cases from a recent outbreak in Ontario. In Q4 of 2024, 4 new cases of PED and/or PDCoV were reported in Ontario. In 2025 Q1 this situation changed drastically with 31 new reported cases in Ontario. Cases were a mix of PED and/or PDCoV. Most cases occurred in nurseries and finishing herds, but some sow herds have also been affected.

SHO is spreading awareness to all swine farmers, veterinarians and associated swine industry organizations within Ontario including livestock transporters. SHO is focussing on providing training to livestock transport companies and to drivers on how to ensure their trucks are cleaned and disinfected appropriately. The turnover of livestock truck drivers is high so routine educational/training material is being developed.

The CSHIN Q4 team discussed that the Canadian requirement under the [Health of Animals Regulation](#) subsection 106, for the cleaning and disinfection of livestock transportation trucks that have hauled swine into the U.S. before they can cross back into Canada, needs to be revisited by the Canadian government. **Most of the wash stations on the U.S. side of the border use recycled water which further infects the inside of these trucks with pathogens. This is not helping with further disease spread. It is important to note that there is an exemption for swine trucks of Canadian origin that have hauled Canadian swine to a U.S. slaughter facility and are coming straight back to Canada, these trucks are only required to be scraped.**

After the CSHIN meeting, clarification was sought and **the CFIA has proposed updates to the *Health of Animals Act and Regulations* which will allow for the Canadian swine industry to develop CFIA-approved programs for cleaning and disinfecting returning Canadian-origin swine trucks to Canada. The proposal is published in the [CFIA Forward Regulatory Plan: 2024 to 2026-inspection.canada.ca](#). Due to the upcoming election the future of the proposal is uncertain.**

Swine Health Ontario (SHO) has 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.

Veterinarians continue to be encouraged to promote the use of the Swine Health Area Regional Control (SHARC) program to producers 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 the western provinces have only detected 1 PED case in Manitoba, in December 2024. This herd was already participating in routine PED/PDCoV herd surveillance and samples that tested positive were collected before the onset of clinical signs. This farm also determined the source of this infection to be equipment used around the manure storage and afterwards used on the yard. **Take home message: The manure was contaminated with PED more than 1 year and 8 months after the last infected pig left the premises! Surveillance was critical for early detection.**

RAIZO (Quebec)

Dr. Roxann Hart reported that Quebec detected a new case of PED & PDCoV on February 11, 2025. Clinical signs of diarrhea, anorexia and vomiting started in this herd on February 5, 2025. This is the first detection at this premises. This herd imports crossbred pigs from a PED/PDCoV-negative herd in Alberta. During the latest shipment of pigs from Alberta on January 31, 2025, the pigs were unloaded at a resting area in Ontario because the producer and the transport truck driver believed that it was a requirement under the *Health of Animal Act* to offload pigs in order for the animals to rest, and to provide feed and water due to long transport times. The producer sent his own trailer to pick up these pigs from the rest area in Ontario and transported them to his farm. Two days after their arrival on his farm, he observed clinical signs compatible with PED/PDCoV in these pigs. The source herd in Alberta remains negative for PED/PDCoV. Considering the outbreak of PED/PDCoV currently in Ontario, this rest site is the most potential source of contamination. It is interesting to note that this producer has three different sites and, each site has a different person looking after the pigs. Only one site was found to be positive for PED/PDCoV, while the other two sites were negative, based on tests conducted in the absence of any clinical signs.

This discussion sparked clarification to be sought out on the transport requirements regulated under the amendment to the federal *Health of Animals Act*, Part XII Transport of Animals, which came into effect on February 20, 2020. The feed, water and rest provisions are covered under section 152. The outcome based and prescriptive for transport time of greater than 28 hours, can be met by pigs either being offloaded at a rest stop **OR** being provided feed, water and rest while stopped and remaining on the conveyance (trailer). The *Health of Animals Act section 152.3 (a-g)* is the provision that outlines what requirements need to be met. Being able to provide feed and water and appropriately ensure there is enough space for the animals to lie down in the conveyance would be the factors that need to be considered. Not having to offload the pigs anywhere is the preferred option, especially when biosecurity is a concern. Another option is to use a “fully equipped conveyance”, and this is defined in the regulations under section 152.4 (1). If the conveyance meets all the requirements listed here, then it is not required to stop to provide feed, water and rest at the maximum transport interval of (28 hours). The CFIA also shared this [industry guidance document](#) that may be of assistance to producers and veterinarians.

Take Home Messages: All assembly yards and animal resting locations should be assumed to be positive for various infectious agents such as PED/PDCoV, PRRS, Influenza etc. Alternatives to offloading the pigs that meet the transportation of animals regulations should be considered to avoid potential contamination of trailers and disease spread to pigs. Farmers should ensure that they use a transport company/ suitable trailer that is able to provide feed, water and suitable space for all pigs on the truck to rest for the required times that meets the *Health of Animal Act* requirements.

Influenza A- H3N2- Clade 2010.1- Update on Quebec Swine Cases

RAIZO (Quebec)

Dr. Roxann Hart provided an update to the CSHIN Q4 team that since November 14, 2024, when Quebec detected for the first time Influenza H3N2 Clade 2010.1 strain in a commercial swine farm in eastern Quebec, they have had only 7 case detections. All detections are still in the same geographical region of Quebec. Clinical signs seen in infected herds look like any other type of Influenza normally detected in pigs. This is drastically different to what Ontario saw when this strain of Influenza was first detected in April 2023. In Ontario they witnessed rapid spread throughout swine herds. Clinical signs were also reported to be more severe, including fevers and abortions in positive herds, versus the clinical signs normally seen with routine Influenza strains commonly detected in swine.

Dr. Christian Klopfenstein from CDPQ in Quebec provide an update on use of autogenous Influenza A vaccination currently being used in Quebec. More than 800,000 doses of this vaccine have been sold in 2 years since it became available. Quebec is now beginning planning for year 3 of this autogenous vaccine by comparing the most commonly isolated Influenza A strains from Quebec swine to decide which should be added to this vaccine for next year. H3N2 clade 2010.1 will be added to this autogenous vaccine estimated timing is the fall of 2025.

CWSHIN (Western Provinces)

To date the western provinces still have not detected this H3N2 clade 2010.1 in swine, but laboratories are on the lookout for it in Influenza A positive submissions in swine.

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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