

US Detections of H5N1 in Dairy Cattle Biosecurity Recommendations for Canadian Dairy Herds

Updated: April 4, 2024

As of April 4, 2024, there have been no reports of H5N1 virus detections in dairy cattle in Canada. The Canadian Animal Health Surveillance System (CAHSS) is communicating closely with government, industry, regional/national surveillance partners, and laboratorians, and will continue to share updates and relevant resources as they become available. Please visit our website, <https://cahss.ca/cahss-networks/dairy> for updates or email us at cahss@animalhealthcanada.ca if you have any inquiries.

Highly pathogenic avian influenza (HPAI), influenza A H5N1 virus, and bird flu have been used interchangeably to describe the disease events of dairy cattle in the US. This document will use the term H5N1 virus detections in bovine-origin samples associated with illness.

Summary of events in the US

- March 25, 2024, the agencies confirmed the detection of H5N1 virus in two dairy herds in Texas and two dairy herds in Kansas with cattle exhibiting symptoms including production losses, anorexia, and a colostrum-like appearance to the milk, changes in manure consistency, and other secondary infections.
- March 26, 2024: The World Organization for Animal Health (WOAH) report from March 26, 2024, reported that samples collected from clinical dairy cattle from at least one dairy farm in Kansas and one dairy farm in Texas were identified as Highly Pathogenic Avian Influenza (HPAI) H5N1 Eurasian lineage goose/Guangdong clade 2.3.4.4b. At this time, no markers for mammalian adaptation nor antiviral resistance were observed. Federal and state agencies are working closely to monitor the situation in affected states.
- March 29, 2024: US Department of Agriculture (USDA) National Veterinary Services Laboratories (NVSL) has confirmed the presence of H5N1 in a Michigan dairy herd that had recently received cows from Texas. Presumptive positive test results have also been received for additional herds in New Mexico, Idaho, and Texas.
- April 1, 2024: US Department of Agriculture (USDA) Animal and Plant Health Inspection Service (APHIS) confirmed H5N1 detection in a dairy herd in New Mexico, and 5 additional dairy herds in Texas. To date, USDA has confirmed H5N1 detection in dairy herds in Texas (7)

Kansas (2), Michigan (1), and New Mexico (1). The presumptive positive test results for the Idaho herd are still pending analysis at NVSL. The Center for Disease Control (CDC) reported that an individual in Texas has tested positive for HPAI A (H5N1) virus, and has stated that the infection does not change the H5N1 bird flu human health risk assessment for the US general public.

- April 2, 2024: USDA has confirmed H5N1 detection in cattle in Idaho.

KEY POINTS

- H5N1 virus detections in dairy cattle have not been reported in Canada as April 5, 2024.
- Current testing performed on the cattle samples with H5N1 in the US does not indicate that it is more transmissible to humans.
- Canadian diagnostic laboratories are prepared and capable of detecting H5N1 in dairy cattle as needed.
- The Canadian dairy industry benefits from having a national quality assurance program with an existing strong biosecurity component to reduce the risk of introduction to herds.
- From the US FDA (Food and Drug Administration) ***“FDA’s longstanding position is that unpasteurized, raw milk can harbor dangerous microorganisms that can pose serious health risks to consumers, and FDA is reminding consumers of the risks associated with raw milk consumption in light of the HPAI detections.”***
- It is prohibited to ship abnormal milk in Canada.

Biosecurity Focus Areas

Biosecurity efforts to protect Canadian dairy cattle and people should focus on:

- Minimize and restrict access of wild birds to cattle and their environment.
- Restrict unnecessary movement of people and cattle onto the farm.
- Consider feeding pasteurized colostrum or milk to calves or using colostrum/milk replacers.
- Do not consume raw milk or feed it to other animals on farm.
- Do not house multiple species together in the same facility.

- Wear protective personal equipment (PPE) when handling sick cattle and sick/dead wild birds.
- Report any increased in sick/dead wild birds near the farm property to your veterinarian and the [Canadian Wildlife Health Cooperative](#).

Biosecurity Recommendations

The spread of the H5N1 virus could be through wild birds or cow to cow (infected cattle).

- **Wild birds** could shed the virus in oral, nasal, or fecal secretions. People can carry the virus on their shoes, clothes, equipment, and vehicle. The exact route of H5N1 virus spread from wild birds to cattle is currently unknown.
- **Infected cattle** could shed the virus cow to cow in unpasteurized (raw) milk, or from saliva, respiratory, or fecal secretions. The exact route of H5N1 virus spread between cattle is currently unknown.

In Canada, the dairy quality assurance program proAction™ includes guidance on biosecurity which could help mitigate risk of H5N1 virus introduction. Link [HERE](#).

When to Implement	Transmission Route	Risk Mitigation	Refer to proAction Section
Now	Wild birds	Remove exposure to potentially contaminated water	
		- Clean and disinfect watering devices	New
		- Require all animal care/veterinary personnel use footbaths, overshoes, or disposable boots.	proAction Bio 6 - Establish and implement an SOP, in consultation with your veterinarian, to prevent the introduction of infectious diseases by family, employees, farm visitors, and service providers
		- Require all animal care/veterinary personnel wear disposable coveralls, and gloves.	
		- Maintain good handwashing practices.	
		- Where possible drain/eliminate standing water in proximity.	New
Isolate mortalities from wild birds/rodents. Handle dead wild birds/rodents with personal protective equipment (PPE).	New		
Report increases in wild bird illnesses and deaths to your veterinarian and the Canadian Wildlife Health Cooperative .	New		

		Restrict bird access to feed sources. Clean up loose feed.	New
Now	Cow to cow	Consider pasteurizing colostrum and milk to be fed to calves or use colostrum and/or milk replacers.	New
		Minimize introductions of cattle onto farm and know the health status of replacement animals	<u>proAction Bio 4</u> - Establish and implement an SOP, in consultation with your veterinarian, to prevent the introduction of infectious diseases when bringing new cattle into your facilities from other herds
		If introductions are impossible to suspend, quarantine cattle.	<u>proAction Bio 4</u> - Establish and implement an SOP, in consultation with your veterinarian, to prevent the introduction of infectious diseases when bringing new cattle into your facilities from other herds
		Immediately identify and isolate sick calves/cattle.	<u>proAction Bio 4</u> - Establish and implement an SOP, in consultation with your veterinarian, to prevent the introduction of infectious diseases when bringing new cattle into your facilities from other herds
		Develop and implement an SOP for cattle returning to the farm.	<u>proAction Bio 5</u> - Establish and implement an SOP, in consultation with your veterinarian, to prevent the introduction of infectious diseases by cattle returning to your facilities from other herds, cattle shows, etc.
		Test cattle for specific diseases prior to entry into the herd.	<u>proAction Bio 4</u> - Establish and implement an SOP, in consultation with your veterinarian, to prevent the introduction of infectious diseases when bringing new cattle into your facilities from other herds

		<ul style="list-style-type: none"> - If applicable, consider testing replacement animals for influenza A – your herd veterinarian can contact the local CFIA animal health office for more information. Information on laboratory testing to be determined. 	New
Now	Both (wild birds and cow to cow)	Eliminate non-essential human traffic.	proAction Bio 6 - Establish and implement an SOP, in consultation with your veterinarian, to prevent the introduction of infectious diseases by family, employees, farm visitors, and service providers
		Post clear biosecurity signage at major access point to the farm and is visible from the main parking area.	proAction Bio 7 - Have visible biosecurity signage at major access point
		Segregate infected and uninfected barns and keep strict biosecurity between facilities.	proAction Bio 6 - Establish and implement an SOP, in consultation with your veterinarian, to prevent the introduction of infectious diseases by family, employees, farm visitors, and service providers
Next herd visit	Both (wild birds and cow to cow)	Review disease management protocols with veterinarian.	
		<ul style="list-style-type: none"> - Ensure vaccine protocols are kept up to the in line with Herd Health Management Plan to control the spread of diseases of concern other than influenza A. 	proAction Bio 3 - Establish and implement a Standard Operating Procedure (SOP), in consultation with your veterinarian, for vaccinating against specific diseases of concern
		<ul style="list-style-type: none"> - Risk assessment with biosecurity risk areas identified with discussion on how to reduce, eliminate, or manage risks. 	proAction Bio 1 - Conduct the Biosecurity Risk Assessment (RAQ) with your veterinarian once every 2 years
		<ul style="list-style-type: none"> - Record all sick calves/cattle and treatments used. 	proAction Bio 2 - Record specific disease events for cows and calves

We encourage dairy producers to monitor their herds closely and to reach out to their veterinarian if their herd exhibits any abnormal symptoms:

- Fever
- Lethargy
- Sudden drop in feed intake
- Constipation or diarrhea
- Colostrum-like, thickened milk or no milk
- Sudden drop in herd level milk production

As a reminder, proAction prohibits the shipment of abnormal milk in Canada:

FS25: Have you established and implemented a Standard Operating Procedure to minimize the risk of shipping abnormal milk? (SOP 3)

Veterinarians from Manitoba and Saskatchewan have been asked to contact the provincial Chief Veterinary Officers (CVOs) directly so they can utilize their disease investigation programs to effectively respond.

Veterinarians are encouraged to contact their [local Canadian Food Inspection Agency \(CFIA\) animal health office](#) if there may be a suspicion of influenza in cattle. CFIA will follow up with some additional questions. At this time CFIA has not communicated that any further actions will be taken. CFIA's role for HPAI in cattle continues to be one of diagnostic support and international reporting. The CFIA is working with stakeholders including the veterinary community, industry, public health authorities and the provinces/territories to coordinate a national response and will continue to reassess its position as new information becomes available that may change the risk to animals, people or trade.

Please continue to visit our website <https://cahss.ca/cahss-networks/dairy> for updates and resources, or email us at cahss@animalhealthcanada.ca if you have any inquiries.

CAHSS is a distinct division of Animal Health Canada. We are an independent, member-driven network of networks with broad-based support from industry and governments. Working together across geographic regions, animal types, and health topics, we strive for effective, responsive, and integrated animal health in Canada.

Resources

- American Association of Bovine Practitioners (AABP) – Resource on dairy cow disease (members only) https://aabp.org/resources/dairy_cow_disease/
- Canadian Food Inspection Agency (CFIA) – Highly pathogenic avian influenza (HPAI) in livestock <https://inspection.canada.ca/animal-health/terrestrial-animals/diseases/reportable/avian-influenza/latest-bird-flu-situation/hpai-in-livestock/eng/1711895796746/1711895797730>
- Canadian Wildlife Health Cooperative (CWHC)– Information on HPAI in wildlife, including information on how to report sick and dead wildlife <https://www.cwhc-rscf.ca/index.php>
- Western Canadian Animal Health Network (WeCAHN) - HPAI in U.S. Dairy Cattle 2024 <https://wecahn.ca/wecahn-networks/dairy-network/dairy-hpai>
- ProAction – Biosecurity <https://www.dairyfarmers.ca/proaction/resources/biosecurity>
- ProAction – Biosecurity Quick Tips https://www.dairyfarmers.ca/Media/Files/proaction/Quick_Tips_Draft_5_Eng.pdf
- ProAction – Biosecurity for Canadian Dairy Farms National Standard <https://www.dairyfarmers.ca/Media/Files/proaction/Biosecurity-for-Canadian-Dairy-Farms.pdf>
- US Department of Agriculture (USDA) – USDA, FDA and CDC Share Update on HPAI Detections in Dairy Cattle <https://www.aphis.usda.gov/news/agency-announcements/usda-fda-cdc-share-update-hpai-detections-dairy-cattle>
- US Department of Agriculture (USDA) – Testing Recommendations for Influenza A in Cattle <https://www.aphis.usda.gov/sites/default/files/nvsl-hpai-dairy-testing-recommendations.pdf>