

# Animal health update: Avian influenza

## (February 17, 2023)

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### Current situation

As per the Canadian Food Inspection Agency (CFIA), there are currently no new poultry premises confirming the presence of highly pathogenic avian influenza (HPAI) in Ontario. The last confirmed case of HPAI was a commercial flock located in the Municipality of Lambton Shores on December 21, 2022.

Avian influenza (AI) is a federally reportable disease under the *Health of Animals Act*. Attending veterinarians and owners are encouraged to report suspect cases of AI by contacting their [local district CFIA office](#).

AI is not a threat to food safety and Ontario poultry and eggs are safe to eat, when proper handling and cooking takes place. The World Health organization (WHO) continues to characterize the risk of human infection as low, and no sustained human-to-human transmission has been reported. On very rare occasions, AI may infect people who have had consistent, close contact with infected birds. People working with poultry are strongly encouraged to follow all public health guidelines and maintain strict biosecurity.

### Domestic flocks

Outbreaks of HPAI continue to be reported in commercial poultry flocks in Canada, but the number of outbreaks has decreased in the past two months. The most recent detections were reported in:

- Quebec (seven commercial flocks from January 31-February 13)

- New Brunswick (one non-commercial flock on January 11)
- British Columbia (six commercial and two non-commercial flocks from January 6-22)

As of February 13, 2023, nine provinces have reported cases of HPAI in domestic poultry affecting 299 premises and 7,154,000 domestic birds with 101 active infected premises. For more information, please visit [the CFIA's Status of ongoing avian influenza response by province](#).

Between January 13, 2022 and February 13, 2023, the USA has reported a total of 758 outbreaks, 317 in commercial flocks and 441 in small flocks, affecting 59.39 million birds. To learn more, see the USDA's [2022 Confirmations of HPAI in Commercial and Backyard Flocks](#).

HPAI continues to spread globally, with an estimated loss of more than 140 million domestic birds. Outbreaks have been reported for the first time in South America, posing a potential risk to both farmed and wild birds.

## **Wild birds**

On February 13, 2023, Canada reported a total of 1,751 suspect and confirmed positive HPAI samples in wild birds in all provinces and territories except the Northwest Territories. [See the status of wild birds confirmed positive](#).

Individuals are encouraged to report findings of dead waterfowl and shorebirds to the [Canadian Wildlife Health Cooperative](#).

## **Other mammalian infection**

HPAI H5N1 has also been found in 106 individual mammals of 12 different species indicating some potential for inter-species transmission. The significance of these findings in relation to the spread of the virus is unknown at this time.

## **Clinical signs**

AI is caused by an influenza type A virus, which can infect poultry (such as chickens, turkeys, pheasants, quail, domestic ducks, geese and guinea fowl), and is carried by free-flying waterfowl (such as ducks, geese and shorebirds).

AI viruses are divided into subtypes based on the combination of two proteins: hemagglutinin or “H” proteins (H1–H16) and neuraminidase or “N” proteins (N1–N9). AI viruses are either high or low pathogenicity (HPAI and LPAI respectively), depending on the molecular characteristic of the virus and its ability to cause disease and mortality in domestic poultry.

While both HPAI and LPAI can spread quickly through flocks, LPAI viruses can mutate into highly pathogenic strains, which is why it is important to manage outbreaks promptly.

Birds become infected with AI when they have direct contact with diseased or carrier birds. Infected birds may shed the virus in their feces, contaminating the environment. The virus can survive for days in litter, feed, water, soil, dead birds, eggs and feathers. The disease spreads rapidly among birds in close confinement. AI can be brought into a poultry barn by breaches in biosecurity and is most often transmitted from one infected flock to another by movement of infected birds or contaminated equipment or people.

The incubation period of AI can range between 2 and 14 days.

Clinical signs of infected birds may include:

- decrease in feed and water consumption
- extreme depression
- drop in egg production (many of which are soft-shelled or shell-less)
- high and sudden morbidity and mortality rate
- signs of septicemia:
  - hemorrhages on the hocks
  - severe edema of eyelids, wattle and combs
  - hemorrhagic enteritis

## **Biosecurity and prevention**

Currently, there are no vaccines available in Canada. Implementing and adhering to biosecurity best management practices is critical to preventing the introduction and spread of the disease. Producer and owner diligence is critical to selecting, implementing and maintaining specific, effective biosecurity measures.

To reduce the probability of HPAI virus transmission from wild birds to domestic poultry, strict biosecurity measures should be implemented for all types of poultry holdings.

AI is also an immediately notifiable disease by laboratories to the Ministry of Agriculture, Food and Rural Affairs (OMAFRA) under Ontario's *Animal Health Act*. Attending veterinarians with questions related to poultry health may contact an OMAFRA veterinarian through the Agricultural Information Contact Centre at [1-877-424-1300](tel:1-877-424-1300).

Key steps to reduce the risk of infection in your flock include:

- ensuring adequate training of farm and company personnel in biosecurity and disease prevention
- requiring all people entering poultry barns, including farmers, employees and service providers to put on clean footwear and protective clothing and to follow all biosecurity protocols each time a barn is entered
- minimizing visits to other poultry production sites and **avoiding any commingling of birds or contact with outside/wild birds**
- avoiding exchanging and sharing equipment with other poultry production sites or farms
- ensuring all vehicles and farm equipment that access the barn vicinity are properly washed, disinfected and thoroughly dried before use
- ensuring that laneways are restricted and secured
- preventing wild bird and rodent entry to poultry barns and related facilities
- ensuring that bedding is free of contaminants (such as feces from wild animals)
- "heat treating" the barn/litter ahead of chick or poult placement (to 38°C for at least four days), if possible
- keeping all domestic poultry indoors during the high-risk period of spring and fall migration
- avoiding events where birds from different locations are brought together, including shows, fairs, swaps, sales and sporting events. Commingling birds from various locations increases the risk of disease spread, including diseases such as AI.

AI is not a food safety or significant public health concern for people who are not in routine contact with infected birds. However, AI viruses can infect people who come into contact with the virus via eyes, nose or mouth, or if the virus is inhaled through aerosol suspension. This is of concern for people who are in unprotected and

routine contact with infected birds or contaminated surfaces. Questions or concerns about human health should be directed to the local public health unit or a physician.

## **Additional information**

### **Canadian Food Inspection Agency**

[Avian Influenza - CFIA](#)

### **Canadian Wildlife Health Cooperative**

[Avian Influenza - Canadian Wildlife Health Cooperative](#)

### **World Organisation for Animal Health**

[Avian Influenza - World Organisation for Animal Health](#)

### **USA**

[2022-2023 Confirmations of Highly Pathogenic Avian Influenza in Commercial and Backyard Flocks](#)

### **European Union**

[Avian Flu Data Portal](#)

### **National Wildlife Health Center**

[Current distribution of HPAI cases across North America](#)

### **Bird Cast – United States**

[Live bird migration map](#)

### **Ministry of Health**

[Avian Influenza - Emergency Planning and Preparedness](#)