

Animal health update: Avian influenza

March 27, 2022

On March 27, 2022, the Canadian Food Inspection Agency (CFIA) reported highly pathogenic avian influenza (HPAI), subtype H5N1, in a poultry flock located in southern Ontario.

Avian influenza is not a threat to food safety and Ontario poultry and eggs are safe to eat when proper handling and cooking takes place. Avian influenza is not a significant public health concern for healthy people that are not in routine contact with infected birds. People working with poultry are strongly encouraged to follow all public health guidelines and maintain strict biosecurity.

There are regular reports of HPAI in wild birds across North America, including in Nova Scotia, Newfoundland and Labrador, Prince Edward Island, New Brunswick, British Columbia, Ontario and numerous US States. HPAI, subtype H5N1 has also been previously reported in domestic poultry (both commercial and backyard flocks), in Nova Scotia and Newfoundland in late 2021 and early 2022.

Avian influenza 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).

Avian influenza viruses are either high pathogenicity (HPAI) or low pathogenicity (LPAI), 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.

Implementing and adhering to biosecurity best management practices is critical to preventing the introduction and spread of the disease. Producer and owner diligence is pivotal to select, implement and maintain specific, effective biosecurity measures.

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 production of eggs (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, wattles and comb; haemorrhagic enteritis

To reduce the probability of transmission of HPAI viruses from wild birds to domestic poultry, strict biosecurity measures should be implemented for all types of poultry holdings. Individuals are encouraged to report findings of dead waterfowl and shorebirds to the [Canadian Wildlife Health Cooperative](#).

Avian influenza is a federally reportable disease under the Health of Animals Act. Attending veterinarians concerned about possible cases of AI in poultry should contact their local district CFIA office for further guidance.

Avian influenza is also immediately notifiable by laboratories to 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).

Avian influenza is not a food safety or significant public health concern for healthy people that 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 aerosols and 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 physician.

Additional information is available at:

- [CFIA – Avian influenza: Fact Sheet](#)
- [CWHC – Avian influenza](#)
- [OIE – Avian influenza - World Organisation for Animal Health](#)
- [Wild bird monitoring – United States: WHISPerS](#)
- [Wild bird \(National Wildlife Health Center\) monitoring – North America: Current distribution of HPAI cases across North America](#)
- [Live bird migration map – United States](#)
- [Commercial flock outbreaks monitoring – North America: Track 2022 avian influenza outbreaks in North American poultry](#)