

Animal health update: Avian influenza

On February 3, 2022, highly pathogenic avian influenza (HPAI) subtype H5N1 Eurasian strain was confirmed by the Canadian Food Inspection Agency (CFIA) in a commercial turkey farm in Nova Scotia.

On February 1, 2022, the CFIA also confirmed the presence of HPAI, subtype H5N1, in a backyard flock in central Nova Scotia.

On January 9, 2022, and December 20, 2021, the CFIA confirmed the presence of HPAI, subtype H5N1, in two small flocks located on the Avalon Peninsula on the island portion of Newfoundland and Labrador.

This follows several confirmed detections of the same strain of avian influenza (AI) in wild birds in Newfoundland and Labrador and more recently in central Nova Scotia.

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 pathogenic (HPAI and LPAI, respectively) depending on the molecular characteristic of the virus and its ability to cause disease and mortality in chickens.

Both HPAI and LPAI can spread quickly through flocks. LPAI viruses can mutate into highly pathogenic strains, which is why it is important that outbreaks are managed promptly.

The incubation period of AI varies 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 H5N1 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](#).

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 prevent the introduction and spread of the disease. Producer and owner diligence is pivotal to select, implement and maintain specific, effective biosecurity measures.

AI 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.

AI 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).

AI is not a food safety or significant public health concern for healthy people if they are not in routine contact with infected birds. However, AI viruses can infect people when enough virus gets into a person's eyes, nose or mouth, or is inhaled through aerosols. AI infections in people may occur after unprotected contact with infected birds or contaminated surfaces.

Additional information is available at:

- [Avian Influenza - Canadian Food Inspection Agency](#)
- [Avian Influenza - Canadian Wildlife Health Cooperative](#)
- [Avian Influenza - OIE - World Organisation for Animal Health](#)