

SUMMARY: RELEVANT SIGNALS (includes all signals rated ≥3.0)

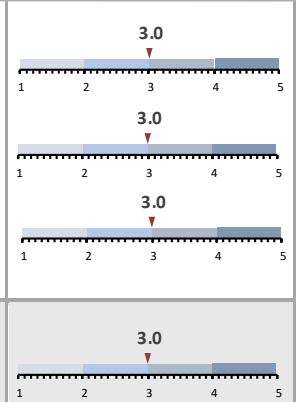
Highly Pathogenic Avian Influenza

- Over the last two weeks, **Canada** has reported outbreaks of HPAI H5N1 in commercial poultry in **British Columbia(6)** and **Ontario(1)**; and in non-commercial poultry in: **British Columbia(2)**
- Surveillance of wild birds has turned up an instance of HPAI H5N6 in a wild blue-winged teal in **Winnipeg, Manitoba**, that was tested in August; aside from this finding, all cases of HPAI in Canada have been reported as being subtype H5N1
- WHO has released a rapid risk assessment on H5N1 clade 2.3.4.4b, identifying that the human cases of H5N1 in **China(1)** and **Vietnam(1)** belonged to the same clade and concluding that the risk of infection for humans remains low

[Read More](#)

[Read More](#)

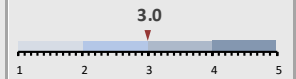
[Read More](#)



Asian Longhorned Tick

- The ALHT has now been found in northern **Missouri** (August 2022); in 2021 it was initially found in the southern part of the state

[Read More](#)



NEW EVENTS: (events rated > 2)



Echinococcus granulosus in New Hampshire

Pathogen: Parasite; **Transmission:** Ingestion; **Species affected in event:** Human

Two confirmed cases of human pulmonary *Echinococcus granulosus* causing cystic echinococcosis have been reported in New Hampshire. Both patients likely acquired the infection in northern New Hampshire and reported the epidemiologic risk of dressing locally hunted moose and exposure to dogs, which can serve as a definitive host. These are the 1st identified cases of locally-acquired Echinococcus in the state of New Hampshire. There is emerging evidence that moose in northern New England carry this parasitic tapeworm and transmit the infection to dogs and other canids through ingestion of cysts from consumption of raw organs/meat of infected animals. [Read More](#)

Avg. Rating	2.4 - 2.8
No. of Signal	3
No. of Ratings	5 - 7

Highly Pathogenic Avian Influenza H5N1 in Panama

Pathogen: Virus; **Transmission:** Direct contact, aerosol, fomite; **Species affected in event:** Wild bird

Panama has issued a sanitary alert due to the occurrence of HPAI H5N1 in a wild bird. An alert was established for 90 days, with the aim to avoid the spread of avian influenza into poultry. All veterinarians and field technical staff have been asked to intensify surveillance efforts in wild and domestic birds. [Read More](#)

Avg. Rating	2.5
No. of Signal	1
No. of Ratings	2

Suspected Aujeszky's disease in dogs in France

Pathogen: Virus; **Transmission:** Direct contact, fomite, aerosol; **Species affected in event:** Canine

In France, in recent weeks, several cases of hunting dog mortalities have been reported in the days following wild boar hunts in an area located at the crossroads of the Dordogne, Lot-et-Garonne and Gironde departments. Clinical signs suggest that Aujeszky's disease is the cause of the death of these animals. Analyses are still ongoing. [Read More](#)

Avg. Rating	2.5
No. of Signal	1
No. of Ratings	2

Aujeszky's disease in Brazil

Pathogen: Virus; **Transmission:** Direct contact, fomite, aerosol; **Species affected in event:** Swine

After almost 20 years without detecting Aujeszky's disease, Rio Grande do Sul again registered the disease. The outbreak was identified in a subsistence pig farm, located in São Gabriel. Confirmation arrived on December 23, 2022, when the National Laboratory for Agricultural Defense in Minas Gerais found the disease in one of the 46 specimens in the herd. [Read More](#)

Avg. Rating	2.5
No. of Signal	1
No. of Ratings	2

NEW EVENTS CONTINUED: (events rated > 2)

🕒 African Horse Sickness in Nigeria

Pathogen: Virus ; **Transmission:** Vector-borne; **Species affected in event:** Equine

① Nigeria has reported a recurrence of AHS among horses in Lagos. Though local species of horses were present with clinical signs observed, mortality was recorded solely among the Argentine species. The last time AHS was reported in Nigeria was 2007, however there was no indication of disease eradication and active surveillance has not been done.

[Read More](#)

Avg. Rating	2.1
No. of Signal	1
No. of Ratings	5

CONTINUED EVENTS: (events rated ≥ 2.4)

Highly Pathogenic Avian Influenza in North America **No. of Signals: 11** **No. of weeks in report: 50** **Avg. Rating: 2.0 - 3.0**

- Over the last two weeks, [Canada](#) has reported outbreaks of HPAI H5N1 in commercial poultry in: British Columbia(6) and Ontario(1); and in non-commercial poultry in: British Columbia(2)
- Surveillance of wild birds has turned up an instance of HPAI H5N6 in a wild blue-winged teal in Winnipeg, [Manitoba](#), that was tested in August; aside from that finding all cases of HPAI in Canada have been reported as being subtype H5N1
- Over the last two weeks, the [USDA](#) has reported outbreaks of HPAI H5N1 in commercial poultry in: South Dakota, Colorado, California, and Tennessee; in WOAH poultry in: Tennessee; and in WOAH non-poultry in: California, Idaho, Oregon, Missouri, Illinois, and Kansas
- [Mexico](#) has already slaughtered 5.5 million birds, mainly laying hens, infected with HPAI H5N1, with the most recent cases reported across Mexico City farms

African Swine Fever in the Caribbean **No. of Signals: 01** **No. of weeks in report: 18** **Avg. Rating: 2.8**

- Changes observed in the [Dominican Republic](#) indicate the virus responsible for the ASF outbreak there is becoming less virulent and could become more difficult to detect

Highly Pathogenic Avian Influenza in South America **No. of Signals: 04** **No. of weeks in report: 07** **Avg. Rating: 2.0 - 2.8**

- [Peru](#) has reported four additional outbreaks of HPAI H5N1 in domestic poultry, all from late November 2022
- As of December 19, 2022, [Colombia](#) has reported a total of 27 outbreaks of HPAI H5N1 in backyard premises and wild birds
- [Chile](#) has confirmed the presence of HPAI H5N1 in a pelican from the Atacama region, confirming that the virus continues to move to the south of the country in wild birds

Highly Pathogenic Avian Influenza in Europe **No. of Signals: 15** **No. of weeks in report: 106** **Avg. Rating: 2.0 - 2.5**

- [France](#) has reported a case of HPAI H5N1 in a cat that was present on a poultry farm which experienced an HPAI H5N1 outbreak; the cat was euthanized on December 23, 2022
- [France](#), [Poland](#), [Hungary](#), [Denmark](#), and [Spain](#) have reported outbreaks of HPAI H5N1 in domestic poultry
- [Norway](#) and [Italy](#) have reported HPAI H5N1 in wild birds
- A summary of the overall HPAI situation in Europe is available [here](#)

Highly Pathogenic Avian Influenza in Asia **No. of Signals: 08** **No. of weeks in report: 83** **Avg. Rating: 2.0**

- [Israel](#) has reported two outbreaks of HPAI H5N1 in turkey farms in southern Israel
- [South Korea](#) has reported a suspected case of HPAI H5 in Seongju County, North Gyeongsang Province; confirmation tests are underway
- [Japan](#) and [Taiwan](#) have reported outbreaks of HPAI H5N1 in domestic poultry
- [Japan](#), [Israel](#), and [Kazakhstan](#) have reported HPAI in wild birds

Highly Pathogenic Avian Influenza in Africa **No. of Signals: 01** **No. of weeks in report: 38** **Avg. Rating: 2.0**

- [Niger](#) has reported an outbreak of HPAI H5N1 in domestic poultry in Tahoua

SCIENTIFIC FINDINGS & REPORTS:

Influenza

- ◆ Pre-print: Investigating the genetic diversity of H5 avian influenza in the UK 2020-2022 [Read More](#)
- ◆ Key amino acid position 272 in neuraminidase determines the replication and virulence of H5N6 avian influenza virus in mammals [Read More](#)
- ◆ Detection of Clade 2.3.4.4b Avian Influenza A(H5N8) Virus in Cambodia, 2021 [Read More](#)
- ◆ Human Immunity and Susceptibility to Influenza A(H3) Viruses of Avian, Equine, and Swine Origin [Read More](#)
- ◆ Development of a prototype early warning system for avian influenza in the EU based on risk-mapping [Read More](#)
- ◆ WHO - Assessment of risk associated with recent influenza A(H5N1) clade 2.3.4.4b viruses [Read More](#)
- ◆ UKHSA - Investigation into the risk to human health of avian influenza (influenza A H5N1) in England: technical briefing 1 [Read More](#)
- ◆ ECDC - Avian influenza overview September – December 2022 [Read More](#)

Vectors & Vector-borne Diseases

- ◆ Asian Longhorned Tick found in northern Missouri (August 2022) [Read More](#)
- ◆ Bourbon Virus Transmission, New York, USA [Read More](#)
- ◆ Discovery of super-insecticide-resistant dengue mosquitoes in Asia: Threats of concomitant knockdown resistance mutations [Read More](#)

Other

- ◆ A Role for Early-Phase Transmission in the Enzootic Maintenance of Plague [Read More](#)
- ◆ Hantavirus Brno loanvirus is highly specific to the common noctule bat (*Nyctalus noctula*) and widespread in Central Europe [Read More](#)
- ◆ SHIC Follows-Up On APP15 Outbreak And Finds Unique Results [Read More](#)

Disclaimer

This intelligence report is intended to provide information to risk managers about emerging and zoonotic disease events that could pose a threat to Canada. It is based on information signals acquired and selected from twenty-one distinct disease surveillance sources via the Knowledge Integration using Web-based Intelligence (KIWI) tool hosted on the Canadian Network for Public Health Intelligence (CNPHI) informatics platform. The report is based on the activities of the CEZD Community of Practice and subject to change based on evolving user needs.