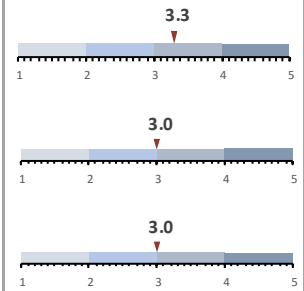


SUMMARY: RELEVANT SIGNALS (includes all signals rated ≥ 3.0)

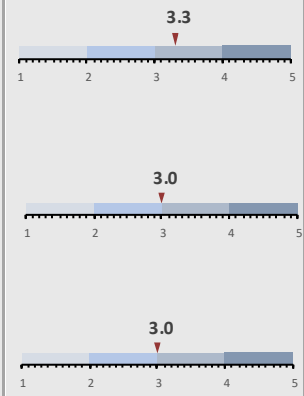
Influenza A (H5)

- ◆ On November 22, 2024, the CDC confirmed a human infection with avian influenza A(H5N1) in a child in **California**; this is the first reported avian influenza H5 virus infection in a child in the **USA** and an investigation into the source of exposure is ongoing [Read More](#)
- ◆ The CDC has updated their human influenza A (H5) case list, bringing the total number of H5 cases to 55 [Read More](#)
- ◆ Viral genome sequencing of samples from the teenager infected with avian influenza A(H5N1) in **British Columbia** has identified mutations that could enhance the virus's ability to infect human cells, as well as allow it to replicate more easily in human cells; however, these mutations may have evolved within the teenager over the course of the illness [Read More](#)



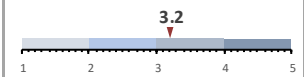
Highly Pathogenic Avian Influenza

- ◆ Over the last week, **Canada** reported additional outbreaks of HPAI in commercial poultry in: **British Columbia**(11) and **Quebec**(1); and in non-commercial poultry in: **British Columbia**(2) and **Alberta**(1) [Read More](#)
- ◆ As of November 24, 2024, the USDA has reported influenza A(H5N1) in 650 dairy herds across 15 states; **Wyoming**(1), **North Carolina**(1), **Ohio**(1), **Oklahoma**(2), **Kansas**(4), **South Dakota**(7), **Minnesota**(9), **New Mexico**(9), **Iowa**(13), **Utah**(13), **Texas**(26), **Michigan**(29), **Idaho**(35), **Colorado**(64), and **California**(436) [Read More](#)
 - All of the recent outbreaks were reported from **California**
- ◆ Over the last week, the USDA has reported outbreaks of HPAI in commercial poultry in: **California**(6) and **Utah**(1); in WOAHP poultry in: **Illinois**(1); and in WOAHP non-poultry in: **Minnesota**(2), **Alaska**(1), **Hawaii**(1), **Arizona**(1), **Oklahoma**(1), **Washington**(1), **Idaho**(1), **California**(1), and **South Dakota**(1) [Read More](#)



Mpox

- ◆ On November 22, 2024, the Public Health Agency of Canada confirmed the first case of clade I mpox in **Canada** in an individual in **Manitoba**; this travel-related case is associated with the ongoing outbreak of clade I mpox in central and eastern **Africa** [Read More](#)

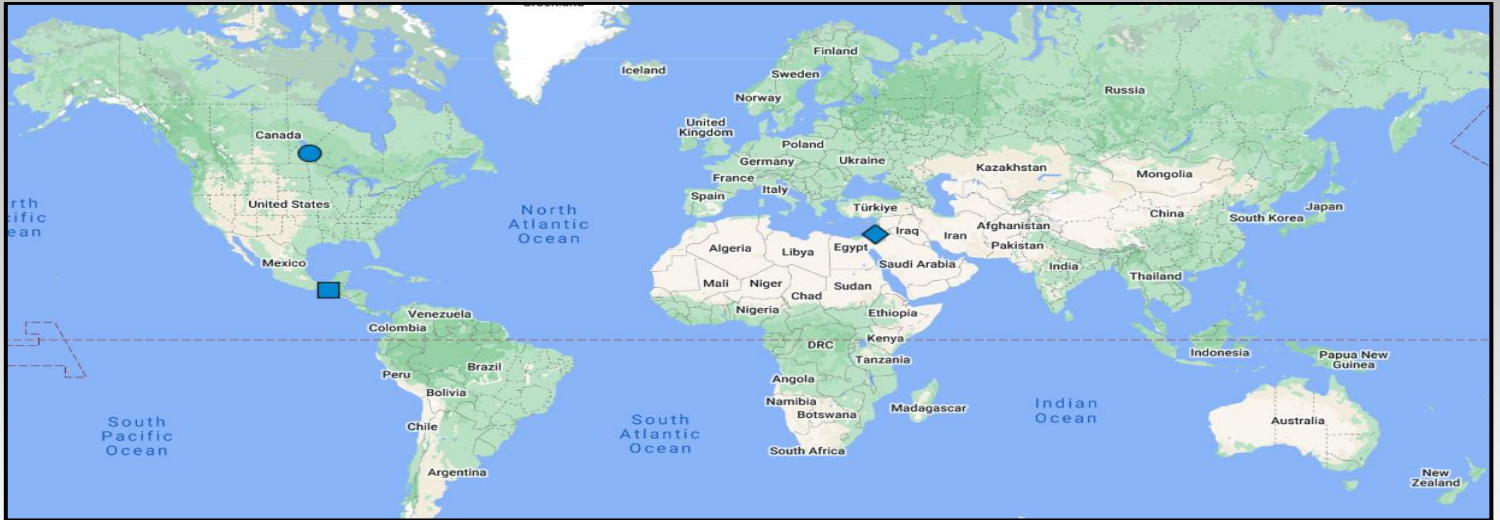


New World Screwworm

- ◆ On November 22, 2024, the Chief Veterinary Officer of **Mexico** notified the USA of a positive detection of New World screwworm (NWS) in **Mexico**; the NWS was found in a cow in the southern Mexican state of **Chiapas**, at an inspection checkpoint close to the border with **Guatemala** [Read More](#)



NEW EVENTS: (events rated > 2)



● Mpx clade I in Manitoba

Pathogen: virus; **Transmission:** direct contact, fomite; **Species affected in event:** human

① On November 22, 2024, the Public Health Agency of Canada (PHAC) confirmed the first case of clade I mpox in Canada in an individual in Manitoba. This travel-related case is associated with an ongoing outbreak of clade I mpox in central and eastern Africa. The individual sought medical care for mpox symptoms in Canada shortly after their return and is currently isolating. A public health investigation, including contact tracing, is ongoing. [Read More](#)

Avg. Rating	3.2
No. of Signal	1
No. of Ratings	5

■ New World Screwworm in Mexico

Pathogen: parasitic fly larva; **Transmission:** wound myiasis; **Species affected in event:** cattle

① On November 22, 2024, the Chief Veterinary Officer of Mexico notified the USDA of a positive detection of NWS in Mexico. The NWS was found in a cow in the southern Mexican state of Chiapas, at an inspection checkpoint close to the border with Guatemala. Given the severity of the threat from NWS, APHIS is restricting the importation of animal commodities originating from or transiting Mexico effective immediately and pending further information from Mexican veterinary authorities on the size and scope of the infestation.

[Read More](#)

Avg. Rating	3.0
No. of Signal	1
No. of Ratings	5

◆ Foot and Mouth Disease in Palestine

Pathogen: virus; **Transmission:** direct contact, aerosol, fomite; **Species affected in event:** sheep

① Palestine has reported an outbreak of FMD serotype O in sheep flocks in the West Bank. Due to the current security situation, the Israel occupation army is preventing Palestinian veterinary services from completing FMD vaccination campaigns resulting in decreased vaccination coverage in many areas. The source of the infection may be contact with infected animals at grazing/watering areas as wild boar have been reported near the affected area.

[Read More](#)

Avg. Rating	2.6
No. of Signal	1
No. of Ratings	5

CONTINUED EVENTS: (events rated ≥ 2.4)

- Highly Pathogenic Avian Influenza in North America** **No. of Signals: 14** **No. of weeks in report: 143** **Avg. Rating: 2.0 - 3.3**
- Over the last week, [Canada](#) reported additional outbreaks of HPAI in commercial poultry in: British Columbia(11) and Quebec(1); and in non-commercial poultry in: British Columbia(2) and Alberta(1)
 - Over the last week, the [USDA](#) has reported outbreaks of HPAI in commercial poultry in: California(6) and Utah(1); in WOAHP poultry in: Illinois(1); and in WOAHP non-poultry in: Minnesota(2), Alaska(1), Hawaii(1), Arizona(1), Oklahoma(1), Washington(1), Idaho(1), California(1), and South Dakota(1)
 - As of November 25, 2024, the [USDA](#) has reported influenza A (H5N1) in 650 dairy herds across 15 states; Wyoming(1), North Carolina(1), Ohio(1), Oklahoma(2), Kansas(4), South Dakota(7), [Minnesota](#)(9), New Mexico(9), Iowa(13), Utah(13), Texas(26), [Michigan](#)(29), Idaho(35), [Colorado](#)(64), and California(436); all of the recent outbreaks were reported from California
 - [California](#) is warning consumers not to drink one batch of cream top, whole raw milk from Raw Farm, LLC of Fresno County due to the detection of avian influenza virus
 - [Pennsylvania](#) is requiring precautionary bulk milk testing at processing plants as an added measure to prevent the spread of avian influenza; Colorado, Arkansas, Massachusetts and Oklahoma have also previously mandated regular bulk milk testing for the virus
 - Wastewater surveillance dashboards for influenza can be found at the [CDC](#) and Stanford University's [WastewaterSCAN](#)
- Influenza A (H5) in the USA** **No. of Signals: 10** **No. of weeks in report: 31** **Avg. Rating: 2.0 - 3.3**
- On November 22, 2024, the CDC confirmed a human infection with avian influenza A(H5N1) in a child in [California](#); this is the first reported avian influenza H5 virus infection in a child in the USA and the investigation into the source of exposure is ongoing
 - The [CDC](#) has updated their human influenza A(H5) case list, bringing the total number of H5 cases to 55
 - The results of [Hawaii's](#) investigation into human contacts of the infected H5N1 flocks have come back negative for avian influenza
- Influenza A (H5N1) in Canada** **No. of Signals: 03** **No. of weeks in report: 03** **Avg. Rating: 2.0 - 3.0**
- Viral genome sequencing of samples from the teenager infected with avian influenza A(H5N1) in [British Columbia](#) has identified mutations that could enhance the virus's ability to infect human cells, as well as allow it to replicate more easily in human cells; however, these mutations may have evolved within the teenager over the course of the illness
 - In [Ontario](#), hospitals are being asked to collect samples from those testing positive for seasonal influenza in an effort to test for avian influenza, and to also screen patients with flu-like symptoms for potential exposure to infected birds or mammals
- Highly Pathogenic Avian Influenza in Europe** **No. of Signals: 17** **No. of weeks in report: 200** **Avg. Rating: 2.0 - 2.4**
- The [UK](#), [Hungary](#), the [Czech Republic](#), the [Netherlands](#), [Germany](#), and [Italy](#) have reported outbreaks of HPAI H5N1 in domestic poultry
 - The [UK](#), [Poland](#), and [Hungary](#) have reported cases of HPAI H5N1 in wild birds
 - [Iceland](#) has reported HPAI H5N5 in a wild bird
 - The [Netherlands](#) have increased their risk assessment for HPAI, estimating the risk of avian influenza outbreaks to be moderate to high
 - A summary of the overall HPAI situation in Europe is available [here](#)
- Highly Pathogenic Avian Influenza in South America** **No. of Signals: 01** **No. of weeks in report: 78** **Avg. Rating: 2.2**
- A [review by the European Commission](#) found several weaknesses in Brazil's bird flu surveillance system, especially in early detection; Brazil has denied the accusations
- Highly Pathogenic Avian Influenza in Asia** **No. of Signals: 03** **No. of weeks in report: 164** **Avg. Rating: 2.0**
- [South Korea](#) has confirmed the season's third case of HPAI at a poultry farm west of Seoul

SCIENTIFIC FINDINGS, REPORTS, AND GUIDANCE:

Influenza

- ◆ Pre-print: Enhanced encephalitic tropism of bovine H5N1 compared to the Vietnam H5N1 isolate in mice [Read More](#)
- ◆ Protocol for enhanced human surveillance of avian influenza A(H5N1) on farms in Canada [Read More](#)
- ◆ Novel reassortant H2N2 low pathogenic avian influenza virus in live bird markets in the Northeastern United States, 2019 -2023 [Read More](#)
- ◆ Avian raptors are indicator species and victims of high pathogenicity avian influenza virus HPAIV H5N1 (clade 2.3.4.4b) in Germany [Read More](#)
- ◆ Mechanisms of MHC-II Binding by Novel Influenza A Viruses and Their Cross-Species Transmission Potential [Read More](#)
- ◆ First human infection with influenza A(H1N1) variant virus in Vietnam [Read More](#)

Mpox

- ◆ Pre-print: The Two-dose MVA-BN Mpox Vaccine Induces a Nondurable and Low Avidity MPXV-specific Antibody Response [Read More](#)

Vectors and Vector Borne Diseases

- ◆ Ticks without borders: microbiome of immature neotropical tick species parasitizing migratory songbirds along northern Gulf of Mexico [Read More](#)
- ◆ Retrospective epidemiologic and genomic surveillance of arboviruses in 2023 in Brazil reveals high co-circulation of chikungunya and dengue viruses [Read More](#)
- ◆ Tick-borne Disease with Yezo Virus and *Borrelia miyamotoi* Coinfection [Read More](#)

Other

- ◆ A case report of porcine circovirus 3 (PCV3) reproductive disease in Iberian semi-outdoor reared sows [Read More](#)
- ◆ Burden of Common Respiratory Pathogens Among Cats in China [Read More](#)
- ◆ France - Weekly Bulletin for International Animal Health Surveillance 26/11/2024 [Read More](#)
- ◆ ECDC - Communicable disease threats report, 16 - 22 November 2024, week 47 [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.