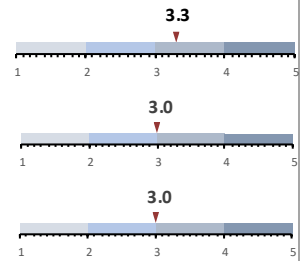


SUMMARY: RELEVANT SIGNALS (includes all signals rated ≥ 3.0)

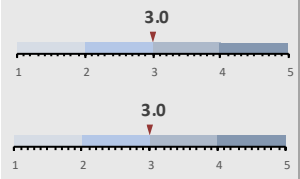
Influenza A (H5N1)

- ◆ **Colorado** has confirmed the 5th and 6th human cases of avian influenza H5N1 in poultry farm workers from the initial affected farm in **Weld County**; there is also a presumptive positive human case of avian influenza from a second affected poultry farm (also in **Weld County**) [Read More](#)
- ◆ Genetic analysis suggests that the virus in the **Colorado** poultry farm workers clusters among the B3.13 genotype affecting dairy cattle; heat has been implicated as a contributing factor in the farm worker infections, as high temperatures may have created challenges for proper PPE use [Read More](#)
- ◆ Preliminary **Michigan** seroprevalence investigation results have not detected any neutralizing antibodies specific to AI H5N1 in blood samples collected from 35 dairy farm workers in June 2024 [Read More](#)



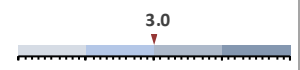
Highly Pathogenic Avian Influenza

- ◆ As of July 22, 2024, the USDA has reported influenza A H5N1 in a total of 169 dairy herds across 13 states: **Wyoming(1), North Carolina(1), Ohio(1), Oklahoma(2), Kansas(4), South Dakota(5), Minnesota(9), New Mexico(8), Iowa(13), Texas(22), Michigan(26), Idaho(30), and Colorado(47)** [Read More](#)
- ◆ As of July 16, 2024, CFIA laboratories have tested 911 retail milk samples from across **Canada**; all samples have tested negative for HPAI fragments [Read More](#)



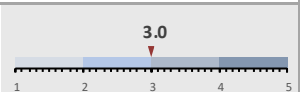
Peste petits des ruminants

- ◆ **Romania** has reported its first outbreak of PPR in a herd of 51,119 sheep (2028 cases) in **Tulcea** [Read More](#)

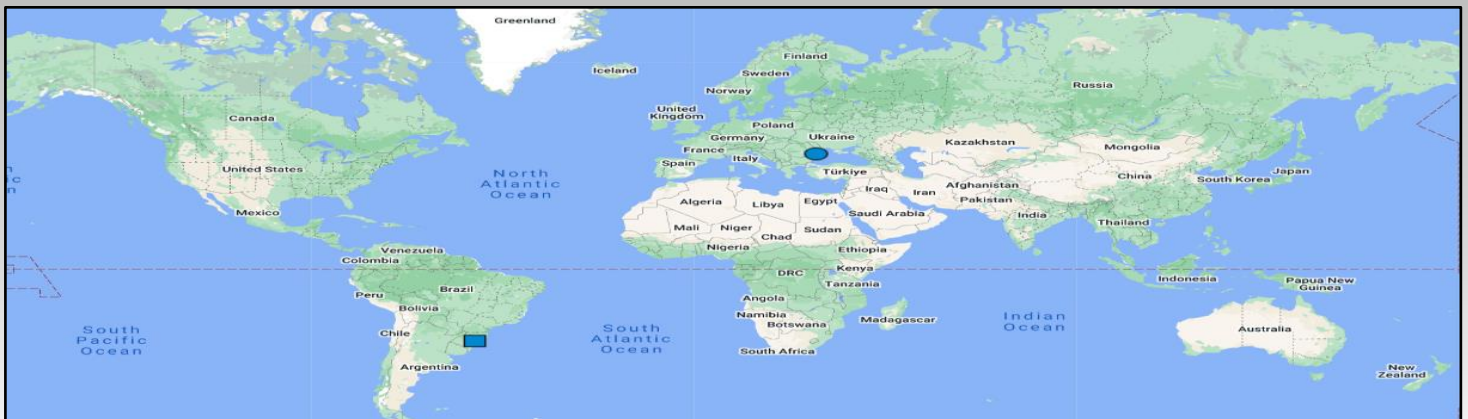


Rustrela virus

- ◆ Scientific finding: Rustrela Virus in Wild Mountain Lion (Puma concolor) with Staggering Disease, **Colorado, USA** [Read More](#)
 - A rustrela virus variant was identified in a wild mountain lion with signs of severe hind leg ataxia and paresis in **Colorado** in May 2023; this is the first report of the virus in North America



NEW EVENTS: (events rated > 2)



● Peste des petits ruminants in Romania

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

Ⓛ Romania has reported its first outbreak of PPR. One outbreak was reported in a large sheep herd of 51,119 animal; with 2028 cases. Greece reported its first occurrence of the disease last week. It is unknown how the virus entered the country, but both Romania and Greece share borders with Bulgaria (initial outbreaks of PPR in 2018). [Read More](#)

Avg. Rating	3.0
No. of Signal	1
No. of Ratings	4

■ Newcastle disease in Brazil

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

Ⓛ Brazil has confirmed an outbreak of Newcastle disease in a commercial broiler farm in Rio Grande do Sul. Gene sequencing identified virulent Newcastle disease virus, with amino acid sequence 112R-R-Q-K-R116 at the C-terminal end of the F2 protein and an F (phenylalanine) residue at position 117 at the N-terminal end of the F protein. The nucleotide sequence obtained for the F gene showed 95.15% identity with the Pigeon paramyxovirus 1 (PPMV-1) sequence deposited in GenBank under KX097024.1. This is a reoccurrence of the disease after ~17 years, with the last cases in Brazil reported in 2006. [Read More](#)

Avg. Rating	2.5
No. of Signal	1
No. of Ratings	4

CONTINUED EVENTS: (events rated ≥ 2.4)

Influenza A(H5N1) in the United States

No. of Signals: 09 **No. of weeks in report: 16** **Avg. Rating: 2.3 - 3.3**

- [Colorado](#) has confirmed the 5th and 6th human cases of avian influenza H5N1 in poultry farm workers from the initial affected farm in Weld County; there is also a presumptive positive human case of avian influenza from a second affected poultry farm (also in Weld County)
- [Genetic analysis](#) suggests that the virus in the Colorado poultry farm workers clusters among the B3.13 genotype affecting dairy cattle; [heat](#) has been implicated as a contributing factor in the farm worker infections, as high temperatures may have created challenges with proper PPE use
- Preliminary [Michigan seroprevalence investigation](#) results have not detected any neutralizing antibodies specific to AI H5N1 in blood samples collected from 35 dairy farm workers in June 2024

Highly Pathogenic Avian Influenza in North America

No. of Signals: 08 **No. of weeks in report: 125** **Avg. Rating: 1.6 - 3.0**

- [Canada](#) has not reported any outbreaks of HPAI in domestic poultry over the last week
- As of July 16, 2024, CFIA laboratories have tested 911 retail milk samples from across [Canada](#); all samples have tested negative for HPAI fragments
- Over the last week, the [USDA](#) has reported outbreaks of HPAI in commercial poultry in: Colorado(2); and in live bird markets in: Florida(3)
- As of July 22, 2024, the [USDA](#) has reported influenza A H5N1 in a total of 169 dairy herds across 13 states: Wyoming(1), North Carolina(1), Ohio(1), Oklahoma(2), Kansas(4), South Dakota(5), [Minnesota](#)(9), New Mexico(8), Iowa(13), Texas(22), [Michigan](#)(26), Idaho(30), and [Colorado](#)(47)
- [Colorado](#) has issued an order requiring all CDPHE-licensed dairy cow farms in the state to submit weekly bulk-tank samples for testing
- The [USDA](#) has added nine additional house mice, all from New Mexico (tested in May), to its H5N1 in mammals list, bringing the total cases in mice to 75
- The [CDC](#) has released an additional week of Influenza A (not strain specific) wastewater surveillance data on its dashboard
- Stanford University's [WastewaterSCAN](#) dashboard has additional information on H5 wastewater sampling

Highly Pathogenic Avian Influenza in Antarctica

No. of Signals: 01 **No. of weeks in report: 10** **Avg. Rating: 2.9**

- HPAI has been confirmed for the first time in marine mammals in [Antarctica](#); a group of Spanish researchers have discovered the virus in the carcass of an elephant seal in Antarctica

New World Screwworm in Central America

No. of Signals: 03 **No. of weeks in report: 10** **Avg. Rating: 1.7 - 2.4**

- As of July 13, 2024, [Panama](#) has reported 11,471 cases of New World Screwworm; Costa Rica has reported 3,888 cases; and Nicaragua has reported 1,121 cases
- The [Mexican government](#) has announced the early activation of the National Animal Health Emergency Device and the establishment of two sanitary barriers to prevent the spread of the fly through the cattle trade; they have also made an [agreement](#) with Guatemala to strengthen cooperation in order to prevent the entry of the screwworm into their territories

Highly Pathogenic Avian Influenza in South America

No. of Signals: 02 **No. of weeks in report: 72** **Avg. Rating: 2.0 - 2.1**

- [Peru](#) has reported additional cases of HPAI H5 in wild birds, as well as a recent outbreak in backyard domestic non-poultry birds in Lucre

SCIENTIFIC FINDINGS, REPORTS, AND GUIDANCE:

Coronavirus

- ◆ Pre-print: Virological characteristics of the SARS-CoV-2 KP.3.1.1 variant [Read More](#)

Influenza

- ◆ Multiple transatlantic incursions of highly pathogenic avian influenza clade 2.3.4.4b A(H5N5) virus into North America and spillover to mammals [Read More](#)
- ◆ Detection and characterization of H5N1 HPAIV in environmental samples from a dairy farm [Read More](#)
- ◆ Genomic Characterization of Highly Pathogenic Avian Influenza A H5N1 Virus Newly Emerged in Dairy Cattle [Read More](#)
- ◆ FAO – Empress watch - A(H5N1) influenza in dairy cattle in the United States of America [Read More](#)
- ◆ Avian influenza viruses in wild birds in Canada following incursions of highly pathogenic H5N1 virus from Eurasia in 2021–2022 [Read More](#)
- ◆ MHC class II proteins mediate sialic acid independent entry of human and avian H2N2 influenza A viruses [Read More](#)
- ◆ Licensed H5N1 vaccines generate cross-neutralizing antibodies against highly pathogenic H5N1 clade 2.3.4.4b influenza virus [Read More](#)
- ◆ Efficacy of commercial recombinant HVT vaccines against a North American clade 2.3.4.4b H5N1 highly pathogenic avian influenza virus in chickens [Read More](#)
- ◆ Antibodies to Influenza A Virus in Lesser (Aytha affinis) and Greater Scaup (Aytha marila) in the USA [Read More](#)
- ◆ The evolution, complexity, and diversity of swine influenza viruses in China: A hidden public health threat [Read More](#)
- ◆ Exploring Potential Intermediates in the Cross-Species Transmission of Influenza A Virus to Humans [Read More](#)

Vectors and Vector borne Diseases

- ◆ Widespread exposure to Francisella tularensis in Rangifer tarandus in Canada and Alaska [Read More](#)
- ◆ Ecological determinants of leishmaniasis vector, Lutzomyia spp.: A scoping review [Read More](#)

Other

- ◆ Prevalence and geographic distribution of Echinococcus genus in wild canids in southern Québec, Canada [Read More](#)
- ◆ Rustrela Virus in Wild Mountain Lion (Puma concolor) with Staggering Disease, Colorado, USA [Read More](#)
- ◆ Discovery and characterization of BRBV-sheep virus in nasal swabs from domestic sheep in China [Read More](#)
- ◆ Pan-drug resistance and hypervirulence in a human fungal pathogen are enabled by mutagenesis induced by mammalian body temperature [Read More](#)
- ◆ A global foresight report on planetary health and human wellbeing [Read More](#)
- ◆ A One Health framework for exploring zoonotic interactions demonstrated through a case study [Read More](#)
- ◆ Modelling wild boar abundance at high resolution [Read More](#)
- ◆ France - Weekly Bulletin for International Animal Health Surveillance 23/07/2024 [Read More](#)
- ◆ ECDC - Communicable disease threats report, 13 - 19 July 2024, week 29 [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.