

This report provides an update of the high pathogenicity avian influenza (HPAI) situation, according to the information submitted through the World Animal Health Information System of the World Organisation for Animal Health (WAHIS) between 28 April and 18 May 2022.

Seasonal trend

Using data reported to the World Organisation for Animal Health (WOAH) between 2005 and 2019 by 76 affected countries and territories for 18,620 outbreaks in poultry, we carried out a Seasonal and Trend decomposition using Loess (STL) analysis to determine the seasonal pattern of the disease (detailed methodology presented in Awada et al., 2018¹). Based on the data reported to WOAH, spread is lowest in September, begins to rise in October, and peaks in February. Figure 1 shows the global seasonal pattern of HPAI in poultry and the red rectangle indicates where we currently are in the cycle based on the period covered in “recent updates” below.

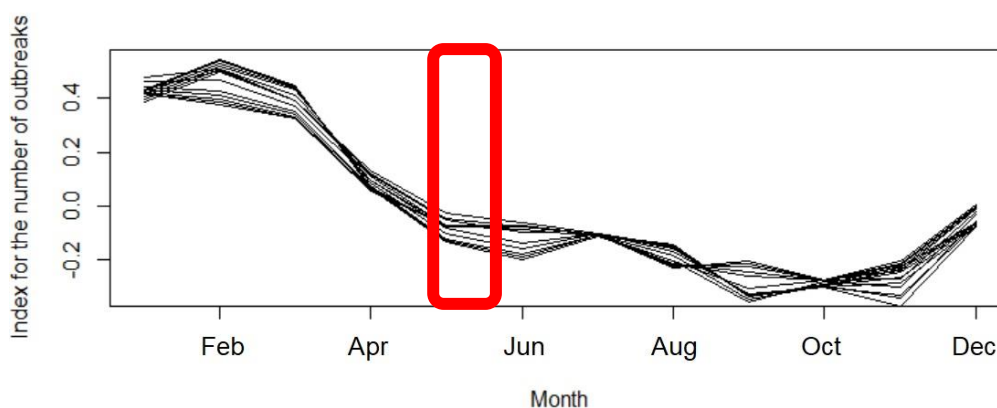


Figure 1. Seasonal trend in global HPAI incidence in poultry

Recent updates (28/04/2022 – 18/05/2022)

To describe the current disease situation of HPAI in poultry and in non-poultry birds, this section covers: (a) a list of new events² which started during the 3-week period (reported through immediate notifications); (b) information on events that started before the 3-week period but were still ongoing during that period; (c) the geographic distribution of new outbreaks³ that started during the 3-week period and d) events which started before the 3-week period but were reported during the 3-week period. The different subtypes of HPAI circulating during the 3-week period are also listed below. This information is based on the immediate notifications and follow-up reports received by the OIE.

HPAI in poultry

New events by world region (reported through immediate notifications)

Europe

Subtype unknown

The first occurrence of the disease in the area of Gabrovo started in Bulgaria on 4 May 2022.

The first occurrence of the disease in the area of Ungheni started in Moldova on 13 May 2022.

Subtype H5N1

A recurrence started in Hungary (Szabolcs-Szatmár-Bereg) on 10 May 2022.

Africa, Americas, Asia and Oceania

No new events reported

¹ Awada L, Tizzani P, Noh SM, Ducrot C, Ntsama F, Caceres P, Mapitse N and Chalvet-Monfray K, 2018. Global dynamics of highly pathogenic avian influenza outbreaks in poultry between 2005 and 2016—focus on distance and rate of spread. *Transboundary and Emerging Diseases*, 65, 2006–2016. <https://doi.org/10.1111/tbed.12986>

² As defined in [Article 1.1.2](#), of the OIE Terrestrial Animal Health Code, an “event” means a single outbreak or a group of epidemiologically related outbreaks of a given listed disease or emerging disease that is the subject of a notification. An event is specific to a pathogenic agent and strain, when appropriate, and includes all related outbreaks reported from the time of the initial notification through to the final report. Reports of an event include susceptible species, the number and geographical distribution of affected animals and epidemiological units.

³ As defined in the [glossary](#) of the OIE Terrestrial Animal Health Code, an “outbreak” means the occurrence of one or more cases in an epidemiological unit.

On-going events for which there were new reported outbreaks, by world region (reported through follow-up reports):**Americas**Subtype H5N1

Canada, United States of America

AsiaSubtype H5N1

Japan, Nepal

EuropeSubtype unknown

Bulgaria

Subtype H5N1

France, Hungary, Netherlands, United Kingdom

Africa and Oceania

No new outbreaks reported in the on-going events, or no on-going events

New outbreaks and associated subtypes

During the period covered by this report, a total of 139 new outbreaks in poultry were reported by 10 countries (Bulgaria, Canada, France, Hungary, Japan, Moldova, Nepal, Netherlands, United Kingdom, and United States of America). Details are presented in Figures 2 and 3.

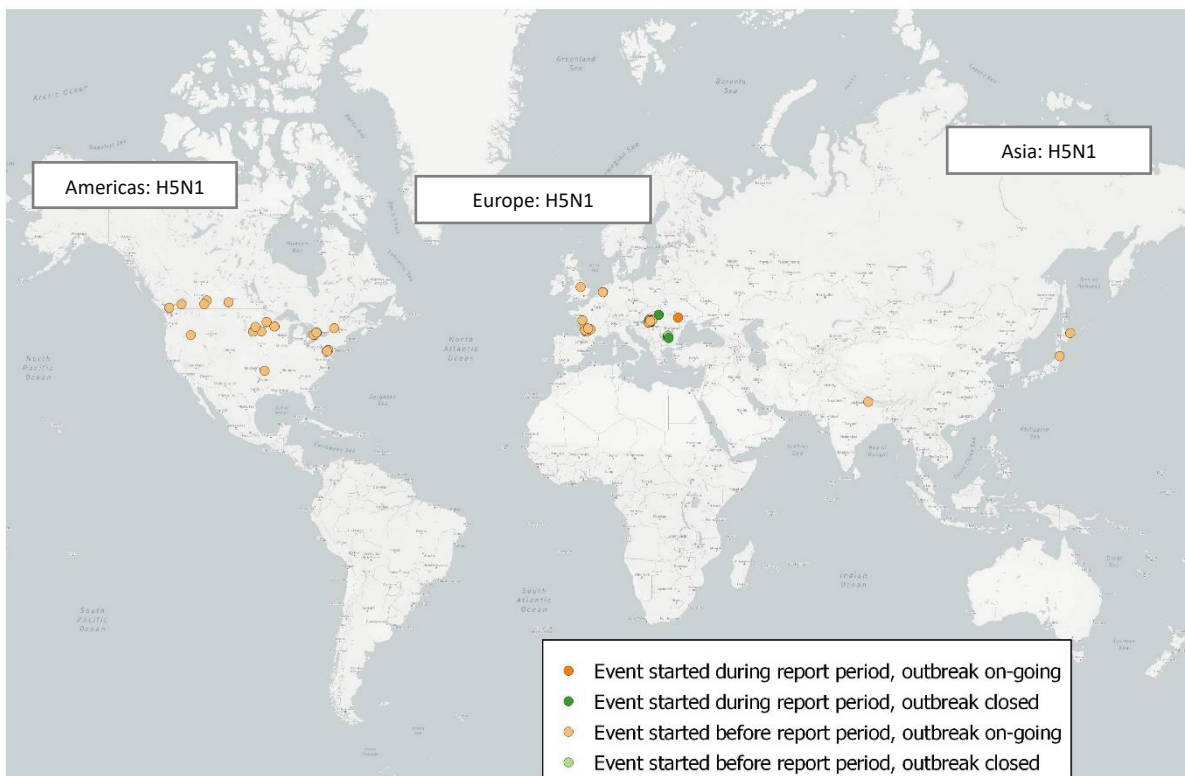


Figure 2. Distribution of HPAI new outbreaks in poultry, and corresponding subtypes

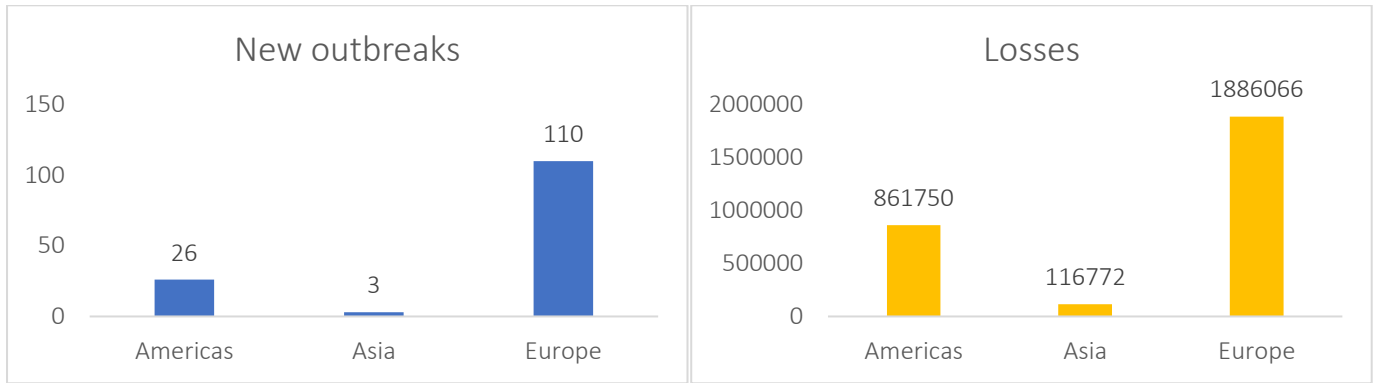


Figure 3. Number of new outbreaks and associated losses by geographical region (losses include animals dead and killed and disposed of)

Events which started before the 3-week period but were reported during the 3-week period (reported through immediate notifications)

Africa

Subtype H5N1

The first occurrence of HPAI started in Gabon on 13 April 2022 (first occurrence in the country).

Europe

Subtype unknown

Two recurrences started in Bulgaria:

- In Stara Zagora on 21 April 2022
- In Pleven on 27 April 2022.

Subtype H5N1

A recurrence started in Czech Republic (Jihočeský) on 3 January 2022.

Americas, Asia, and Oceania

No events reported

HPAI in non-poultry

New events by world region (reported through immediate notifications)

Africa, Americas, Asia, Europe and Oceania

No new events reported

On-going events for which there were new reported outbreaks, by world region (reported through follow-up reports):

Americas

Subtype H5N1

Canada, United States of America

Asia

Subtype H5N8

Israel

Europe

Subtype H5N1

Germany, Spain, United Kingdom

Africa and Oceania

No new outbreaks reported in the on-going events, or no on-going events.

New outbreaks

During the period covered by this report, a total of 38 outbreaks in non-poultry were reported by 6 countries (Canada, Germany, Israel, Spain, United Kingdom, United States of America). Details are presented in Figures 4 and 5.

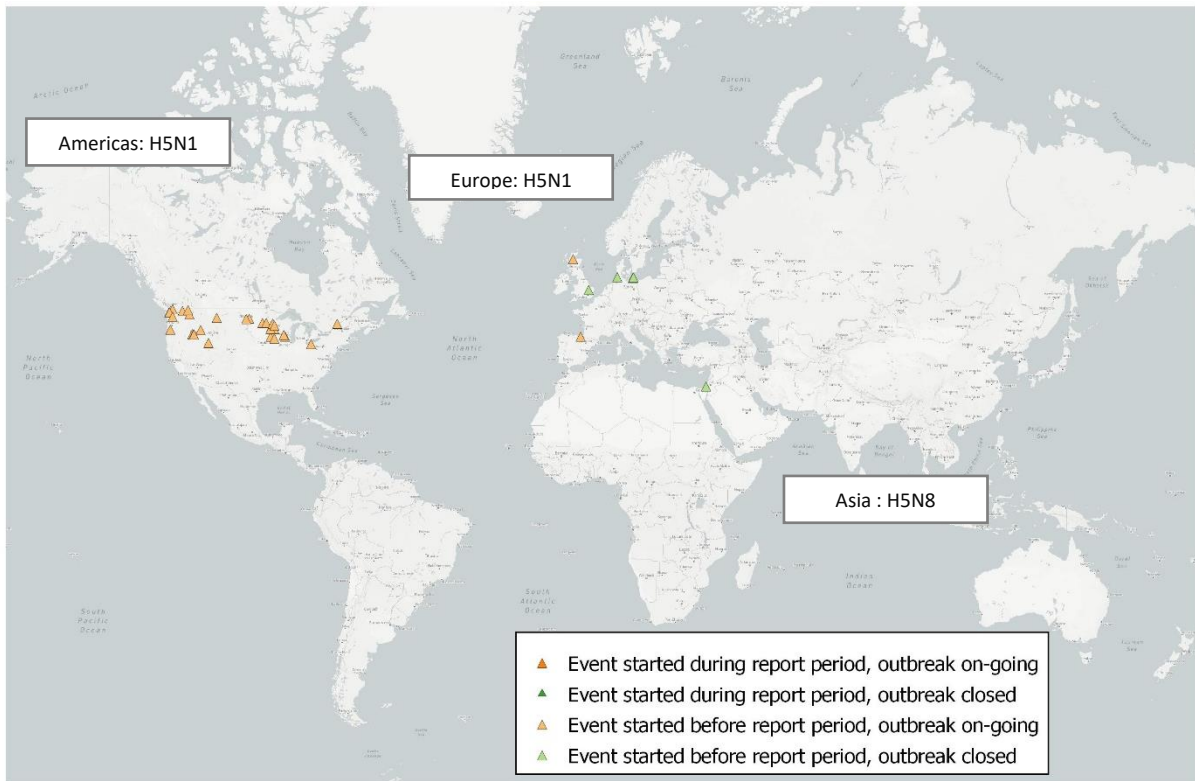


Figure 4. Distribution of HPAI new outbreaks in non-poultry birds, and corresponding subtypes.

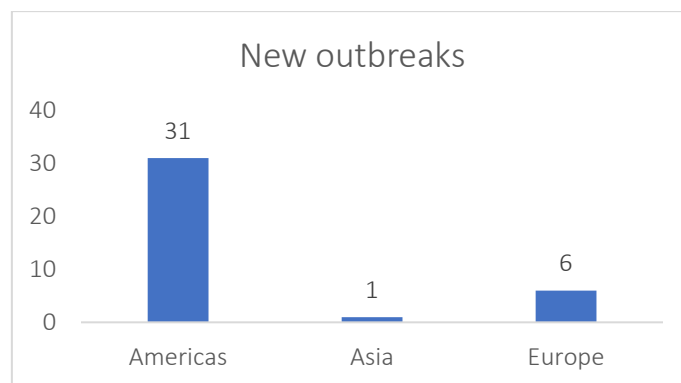


Figure 5. Number of new outbreaks by geographical region

Events which started before the 3-week period but were reported during the 3-week period (reported through immediate notifications)

Americas

Subtype H5N1

The occurrence of HPAI H5N1 was detected in Canada (Ontario) in an unusual host (red fox, *Vulpes vulpes*) on 12 April 2022. The occurrence of HPAI H5N1 was detected in United States of America (Wisconsin) in an unusual host (red fox, *Vulpes vulpes*) on 19 April 2022.

Asia

Subtype H5N8

The recurrence of HPAI H5N8 started in Israel (HaMerkaz) on 15 April 2022.

Europe

Subtype H5N1

Two recurrences started in Iceland:

- In Austurland on 14 April 2022.
- In Suðurland on 15 April 2022.

The first occurrence in the area of Khabarovsk started in Russia on 15 April 2022.

Africa, and Oceania

No events reported

Epidemiological background

High pathogenicity avian influenza (HPAI) is caused by influenza A viruses in the family Orthomyxoviridae. Since its identification in China (People's Rep. of) in 1996, there have been multiple waves of intercontinental transmission of the H5Nx Gs/GD lineage virus. HPAI has resulted in the death and mass slaughter of more than 316 million poultry worldwide between 2005 and 2021, with peaks in 2021, 2020 and 2016. During each of the years 2006, 2016, 2017 and 2021, more than 50 countries and territories in the world were affected with HPAI. In addition, up to now, humans have occasionally been infected with subtypes H5N1 (around 850 cases reported, of which half died), H7N9 (around 1,500 cases reported), H5N6 (around 75 cases reported, of which about 30 died) and sporadic cases have been reported with subtypes H7N7 and H9N2^{4,5,6,7,8}. On 19th May 2022, there were reports of China (People's Rep. of) detecting its second human infection with the H3N8 strain of avian influenza⁹.

Key messages

The current HPAI epidemic season continues with outbreaks being reported in poultry and non-poultry mainly in the Americas and Europe, and also in Asia over the 3 weeks covered by the report. The predominant subtype noticed in the current epidemic season is subtype H5N1. The number of new events in poultry remains low globally and there were no new events in non-poultry birds. However, outbreaks continue to be reported in on-going events. The detection of avian influenza strains causing human cases including the recent detections of H3N8 in humans should also be highlighted. Considering this context, the World Organisation for Animal Health (WOAH) urges countries to maintain their surveillance efforts, implement strict biosecurity measures at farm level to prevent the introduction of the disease, continue timely reporting of avian influenza outbreaks in both poultry and non-poultry species, and maintain the high quality of the information provided to support early detection and rapid response to potential threats to both animal and public health.

Other relevant resources

- [OFFLU avian influenza statement](#)
- [OFFLU statement on outbreak of H5N1 high pathogenicity avian influenza in Newfoundland, Canada](#)
- [WHO, Human infection with avian influenza A\(H5\) viruses](#)
- [The World Organisation for Animal Health calls for increased surveillance of avian influenza as outbreaks in poultry and wild birds intensify – Press release](#)
- WHO 2021, [Assessment of risk associated with highly pathogenic avian influenza A\(H5N6\) virus](#)
- World Organisation for Animal Health (WOAH), [Self-declared Disease Status](#)
- World Animal Health Information System ([WAHIS](#))
- [OFFLU Influenza A Cleavage sites update 2021](#)
- [OFFLU avian influenza VCM report for WHO vaccine composition meetings \(February 2022\)](#)
- [OFFLU annual report 2021](#)
- [Preliminary FAO/OIE/WHO Joint Rapid Risk Assessment of Human infection with Influenza A\(H3N8\)](#),

[China](#)

⁴ Chen H. 2019. H7N9 viruses. Cold Spring Harb Perspect Med doi: 10.1101/cshperspect.a038349

⁵ WHO. Influenza (Avian and other zoonotic), 2018, available at [https://www.who.int/news-room/fact-sheets/detail/influenza-\(avian-and-other-zoonotic\)](https://www.who.int/news-room/fact-sheets/detail/influenza-(avian-and-other-zoonotic))

⁶ WHO. Cumulative number of confirmed human cases for avian influenza A(H5N1) reported to WHO, 2003-2021, 21 May 2021, available at [https://www.who.int/publications/m/item/cumulative-number-of-confirmed-human-cases-for-avian-influenza-a\(h5n1\)-reported-to-who-2003-2021-21-may-2021](https://www.who.int/publications/m/item/cumulative-number-of-confirmed-human-cases-for-avian-influenza-a(h5n1)-reported-to-who-2003-2021-21-may-2021)

⁷ Yang L, Zhu W, Li X, Chen M, Wu J, Yu P, Qi S, Huang Y, Shi W, Dong J, Zhao X, Huang W, Li Z, Zeng X, Bo H, Chen T, Chen W, Liu J, Zhang Y, Liang Z, Shi W, Shu Y, Wang D. 2017a. Genesis and spread of newly emerged highly pathogenic H7N9 avian viruses in mainland China. J Virol doi: <https://doi.org/10.1128/JVI.01277-17>

⁸ WHO, Avian Influenza Weekly Update Number 845, https://www.who.int/docs/default-source/wpro---documents/emergency/surveillance/avian-influenza/ai_20220520.pdf?sfvrsn=5bc7c406_2

⁹ Hunan Provincial Center for Disease Control and Prevention, <http://m.hncdc.com/news/show/4883.html>