

Situation report period covered: 1 September to 11 October 2022

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 1 September to 11 October 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.

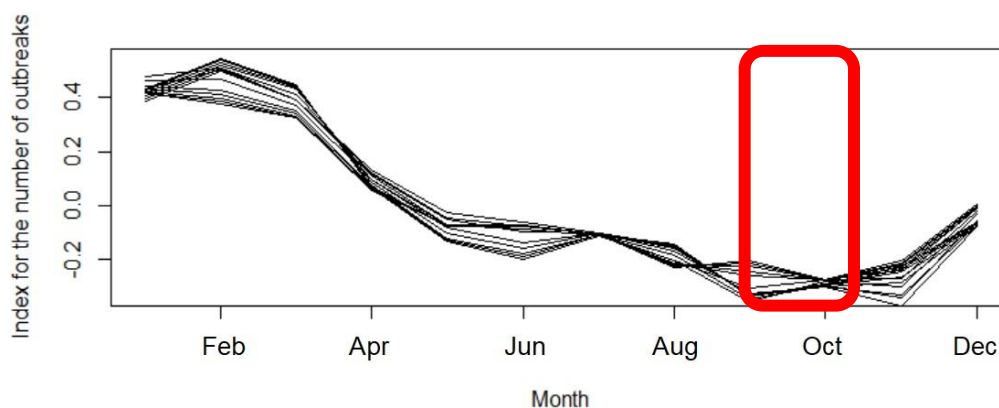


Figure 1. Seasonal trend in global HPAI incidence in poultry

Recent updates (01/09/2022 – 11/10/2022)

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 6-week period (reported through immediate notifications); (b) information on events that started before the 6-week period but were still ongoing during that period; (c) the geographic distribution of new outbreaks³ that started during the 6-week period and d) events which started before the 6-week period but were reported during the 6-week period. The different subtypes of HPAI circulating during the 6-week period are also listed below. This information is based on the immediate notifications and follow-up reports received by WOAH.

HPAI in poultry**New events by world region (reported through immediate notifications)****Africa****Subtype H5N1**

A recurrence started in Algeria (Médéa) on 24 September 2022.

Europe**Subtype H5N1**

A recurrence started in Belgium (Vlaanderen) on 18 September 2022.

A recurrence started in Poland (Łódzkie) on 19 September 2022.

A recurrence started in Italy (Veneto) on 21 September 2022.

A recurrence started in United Kingdom (England) on 24 September 2022.

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.

A recurrence started in Germany (Nordrhein-Westfalen) on 30 September 2022.

Americas, Asia and Oceania

No new events reported

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

Africa

Subtype H5N1

South Africa

Americas

Subtype H5N1

Canada, United States of America

Asia

Subtype H5N2

Chinese Taipei

Europe

Subtype H5N1

France, Germany, Netherlands, Portugal, Spain, United Kingdom

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 145 new outbreaks in poultry were reported by 14 countries and territories (Algeria, Belgium, Canada, Chinese Taipei, France, Germany, Italy, Netherlands, Poland, Portugal, South Africa, Spain, United Kingdom, United States of America). Details are presented in Figures 2 and 3.

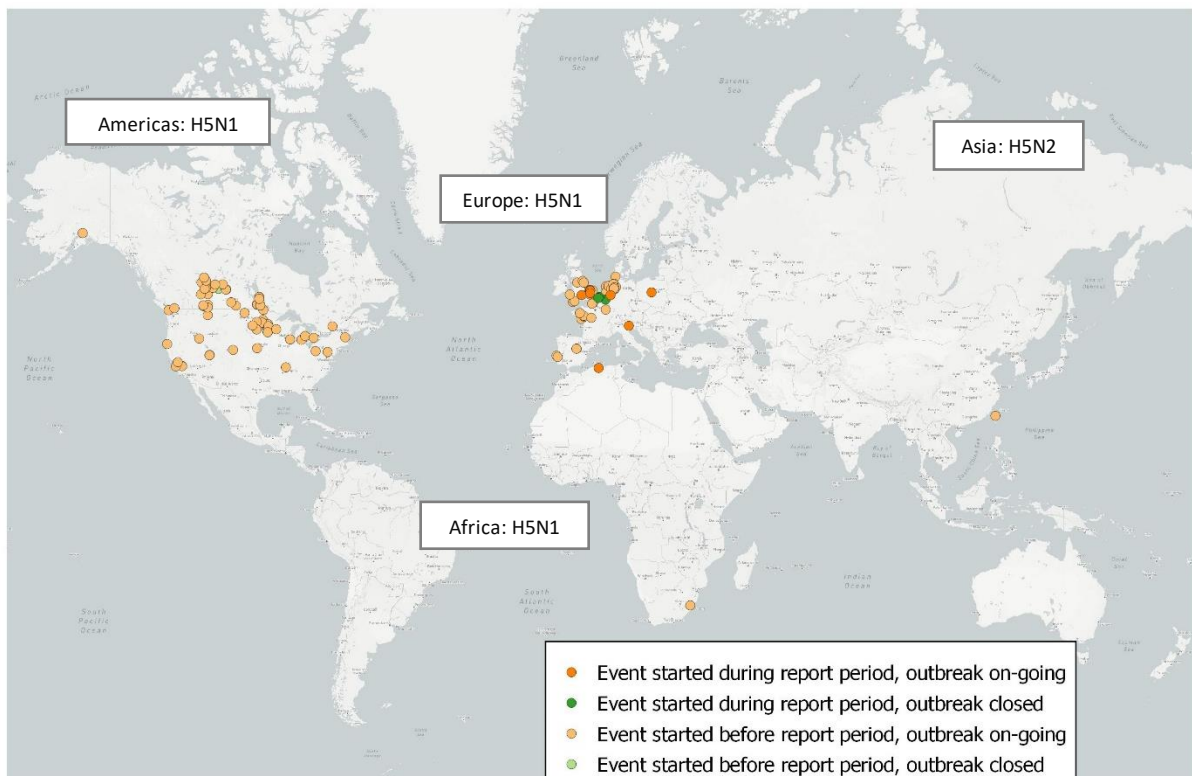


Figure 2. Distribution of HPAI new outbreaks in poultry, and corresponding subtypes

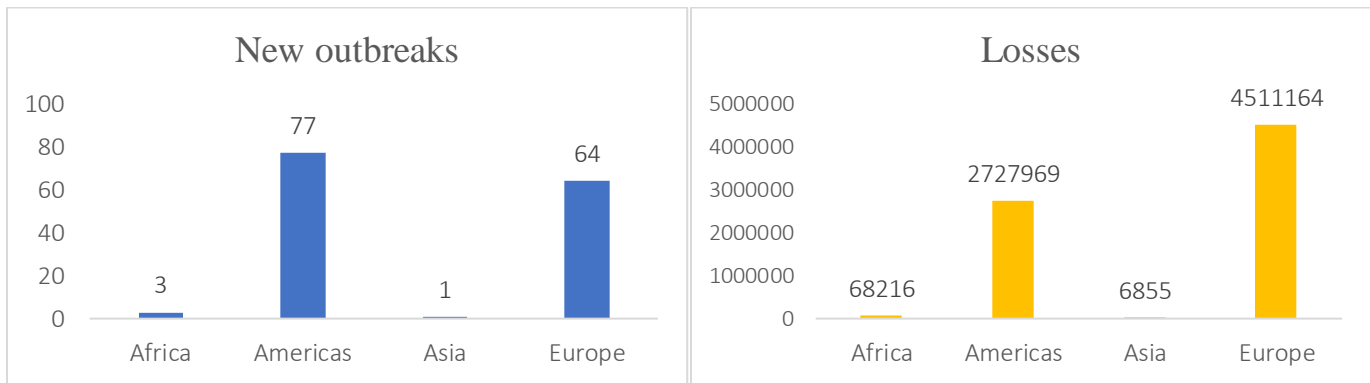


Figure 3. Number of new outbreaks and associated losses by geographical region (losses include animals dead and killed and disposed of within outbreaks – they do not include culling around outbreaks)

Events which started before the 6-week period but were reported during the 6-week period (reported through immediate notifications)

Europe

Subtype H5

A recurrence started in Russia (Saratov) on 25 August 2022.

Subtype H5N1

A recurrence started in Portugal (Évora) on 29 August 2022.

Africa, Americas, Asia, and Oceania

No events reported

HPAI in non-poultry

New events by world region (reported through immediate notifications)

Asia

Subtype H5N1

A recurrence started in Japan (Kanagawa) on 24 September 2022.

Europe

Subtype H5N1

Ireland reported the detection of the disease in an unusual host. It was detected in red fox (*Vulpes vulpes*) on 18 September 2022.

A recurrence started in Italy (Emilia-Romagna) on 21 September 2022.

A recurrence started in United Kingdom (England) on 25 September 2022.

Subtype H5N5

Subtype H5N5 was detected in Finland (Pohjois-Suomen aluehallintovirasto) for the first time on 17 September 2022.

Africa, Americas, 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

Europe

Subtype H5N1

Belgium, Denmark, France, Germany, Ireland, Netherlands, Norway, Portugal, Russia, Spain, United Kingdom

Subtype H5N5

Norway

Africa, Asia 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 197 outbreaks in non-poultry were reported by 16 countries (Belgium, Canada, Denmark, Finland, France, Germany, Ireland, Italy, Japan, Netherlands, Norway, Portugal, Russia, Spain, United Kingdom, United States of America). Details are presented in Figures 4 and 5.

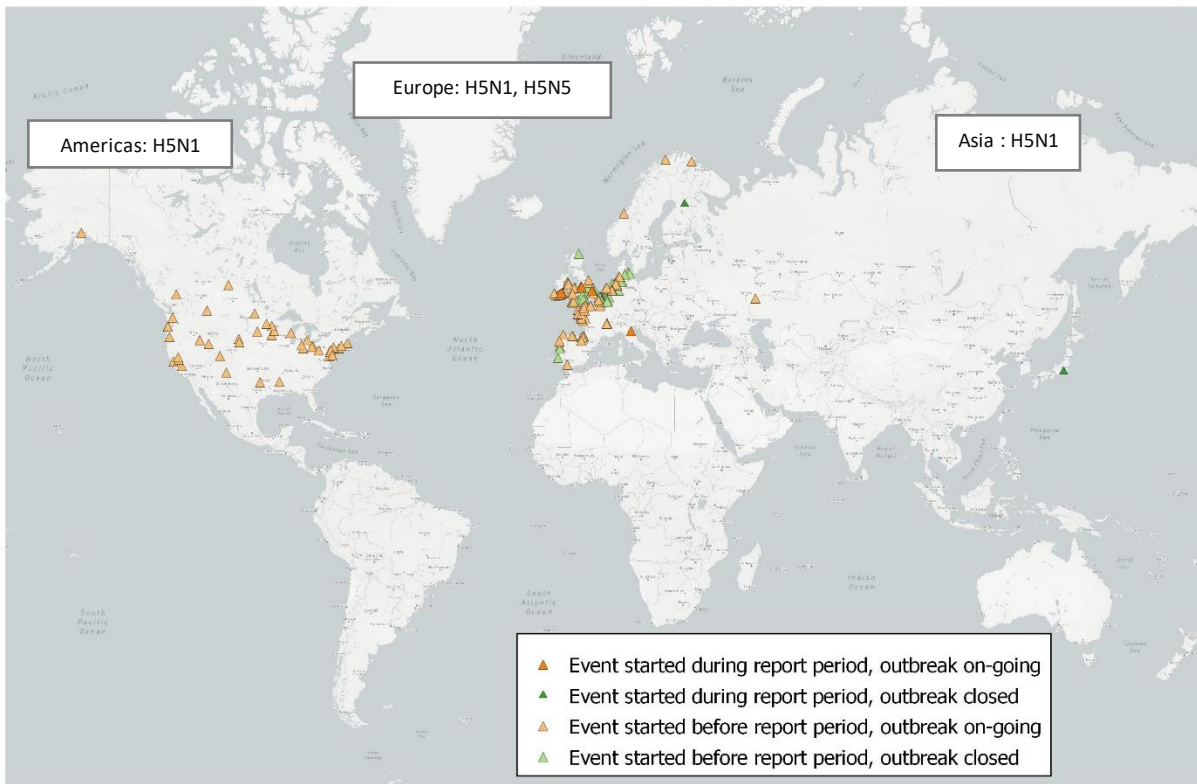


Figure 4. Distribution of HPAI new outbreaks in non-poultry birds, and corresponding subtypes.

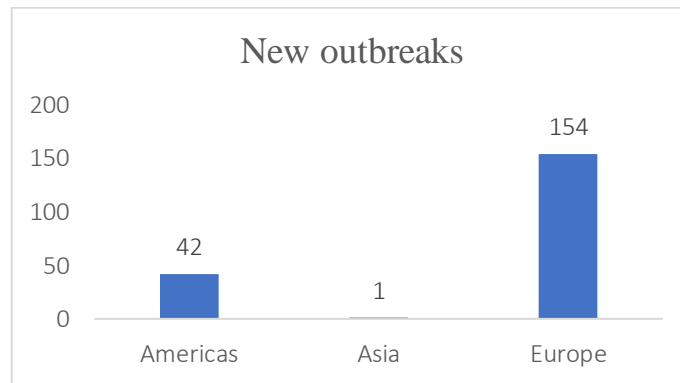


Figure 5. Number of new outbreaks by geographical region

Events which started before the 6-week period but were reported during the 6-week period (reported through immediate notifications)

Africa, Americas, Asia, Europe 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, of which about 600 died), H5N6 (around 80 cases reported, of which about 30 died), H9N2 (around 75 cases reported, of which 2 died) and sporadic cases have been reported with subtypes H3N8, H7N4, H7N7 and H10N3^{4,5,6,7,8}.

Key messages

The current HPAI epidemic season continues with about 150 outbreaks being reported in poultry and about 200 outbreaks reported in non-poultry birds over the 6 weeks covered by the report, mainly in Europe and Americas, and also in Africa and Asia. Over 7 million birds died or were culled during the 6 weeks period, marking an increase since the summer period. The predominant subtype noticed in the current epidemic season is still subtype H5N1 and for the first time there is unusual persistence of the virus in wild birds over the summer months. Based on HPAI seasonal pattern, the number of outbreaks is expected to raise in the coming months and the World Organisation for Animal Health (WOAH) recommends that countries maintain their surveillance efforts, the biosecurity measures at farm level, and continue timely reporting of avian influenza outbreaks in both poultry and non-poultry species. High quality of information is key to support early detection and rapid response to potential threats to both animal and public health.

Visit our [website](#) for more information on avian influenza. For any press inquiry on the disease, you can email us at media@woah.org

Other relevant resources

- [WHO, Human infection with avian influenza A\(H5\) viruses](#)
- World Organisation for Animal Health (WOAH), [Self-declared Disease Status](#)
- World Animal Health Information System ([WAHIS](#))
- OFFLU avian influenza VCM report for WHO vaccine composition meetings ([September 2022](#))
- [Influenza at the human-animal interface summary and assessment, October 2022](#)

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 866, https://www.who.int/docs/default-source/wpro---documents/emergency/surveillance/avian-influenza/ai_20221014.pdf?sfvrsn=5bc7c406_13#:~:text=virus%20in%20China-,Between%20%20October%202022%20and%2013%20October%202022%2C%20no%20new,has%20been%20reported%20to%20WHO.