

Avian Influenza: H5 and H7 outbreak update report

6 December 2024



**agriculture, land reform
& rural development**

Department:
Agriculture, Land Reform and Rural Development
REPUBLIC OF SOUTH AFRICA

Report compiled by:
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Please note: This report includes all information as available by close of business on 6 December 2024.

1. Introduction and Background

Avian influenza is a highly contagious viral disease that affects several species of food producing birds, pet birds and wild birds. Occasionally other mammals, including humans, may also contract avian influenza. H5 and H7 avian influenza are classified into two categories according to the severity of disease it causes in poultry namely low pathogenic avian influenza (LPAI) and highly pathogenic avian influenza (HPAI). LPAI strains cause few or no clinical signs in poultry while HPAI strains may cause severe clinical signs and potentially high mortality rates among poultry. Outbreaks of HPAI in poultry may result in trade bans on the export of poultry and poultry products. Reporting of HPAI outbreaks in non-poultry (e.g. wild birds, pet birds, birds kept as a hobby, backyard poultry as defined by the 2021 OIE Terrestrial Animal Health Code), to the WOA do not have trade implications.

In South Africa, avian influenza of any subtype is a controlled animal disease in terms of the Animal Diseases Act, 1984 (Act No 35 of 1984). Any suspect or confirmed case of avian influenza of any subtype must be reported immediately to the responsible state veterinarian in terms of the Animal Diseases Act, 1984 (Act No 35 of 1984). Both passive and active surveillance for avian influenza are conducted across the country to detect any incursion of avian influenza. Passive and active surveillance in backyard and commercial chickens is continuing across the country.

In 2017 the first case of Highly Pathogenic Avian Influenza (HPAI) was confirmed in commercial chickens in South Africa. This was confirmed as HPAI H5N8. A HPAI H5N2 was detected in October 2022 in chickens of a small-scale farmer facility in KwaZulu-Natal Province in 2022. This is the first ever HPAI H5N2 in chickens in the country. HPAI H5N2 was detected in ostriches during 2004, 2006 and 2011.

Current H5 and H7 avian influenza outbreaks within the country are summarised in this report and are categorised according to pathogenicity (HPAI, LPAI or undefined). The HPAI outbreaks are discussed under point 2 and LPAI is discussed in point 5.

2. Highly pathogenic avian influenza (HPAI)

All HPAI suspect farms are immediately placed under quarantine and no movement of birds, eggs or products are allowed on, off or through these farms. Samples are collected for verification of the suspicion and back and forward tracing is implemented to detect any possible spread of disease. So far most of the affected properties have culled out the chickens and carcasses were disposed of by dumping at an approved hazardous dump site, incineration, rendering or composting on farm; or on farm burial were allowed by the Environmental Affairs Department. Eggs are either taken under veterinary supervision for pasteurisation or moved after double fumigation or fogging.

Passive and active six-monthly surveillance in the country is ongoing. Listed NAI free compartments are continuing with the monthly surveillance. In terms of the Animal Diseases Act, 1984 (Act No 35 of 1984) any suspect or confirmed outbreak of any avian influenza strain must be immediately reported to the responsible state veterinarian for immediate investigation.

If HPAI is suspected/detected in poultry, there is no scientific justification in placing a radius around the affected farms as a controlled/protection zone due to the mode of transmission, primarily by wild birds. However, all neighbouring farms are immediately visited, and all epidemiologically linked properties to an affected farm are immediately placed under quarantine until preliminary investigations can be conducted.

The recovery of country HPAI freedom may require additional surveillance over and above the current passive and active surveillance.

3. HPAI H5N1 event

Sequencing data that became available in April 2023, indicated that a new strain of HPAI H5N1 was introduced in November 2022 in the Free State Province. It was decided to report this outbreak and any future HPAI H5 outbreaks as new events with the World Organisation of Animal health (WOAH), unless proven otherwise.

3.1 Overview of the HPAI H5N1 poultry event

The index case of the HPAI H5 poultry event has a start date of 18 April 2023 and was detected in poultry layers in the Swartland Local Municipality within the Western Cape Province. A total of twenty-nine (n=29) outbreaks were reported to WOAH as part of the new HPAI H5 poultry event - nineteen outbreaks in the Western Cape Province, four outbreaks in KwaZulu-Natal Province, one outbreak in North West Province, one outbreak in Mpumalanga Province, three outbreaks in Gauteng Province and one outbreak in Northern Cape Province.

All the HPAI H5 outbreaks were resolved, and the event has been closed.

3.2 Overview of the HPAI H5 non-poultry (wild bird) event

A new wave of H5 avian influenza introductions started in March 2023. Forty-four (n=44) were reported to WOAH as part of this new HPAI H5 event. These outbreaks are distributed as follows:

Nineteen (n=19) in the Western Cape Province, six (n=6) in the Eastern Cape Province, six (n=6) in KwaZulu-Natal Province, two (n=2) in the North West Province, ten (n=10) in Gauteng Province and one (n=1) in Mpumalanga Province. The newly reported outbreak is in a swift tern from Bitou Local Municipality in the Western Cape Province, sampled on 29 February 2024. All outbreaks were resolved, and this event is regarded as closed.

4. Overview of the HPAI H7N6 event

The first ever HPAI H7 was detected in chickens in South Africa on samples collected in beginning of June 2023. The first H7 PCR positive was detected in non-poultry in a backyard chicken flock in Gauteng Province in September 2023.

4.1 Overview of the HPAI H7N6 poultry event

A total of a hundred and sixteen (n=116) outbreaks were reported up to date. Seventy three (n=73) of these outbreaks are located in Gauteng Province; eleven (n=11) in Mpumalanga Province, four (n=4) in the Free State Province, six (n=6) in Limpopo Province, sixteen (n=16) in North West Province, one (n=1) in KwaZulu-Natal Province, one (n=1) in the Eastern Cape Province and three (n=4) in the Western Cape Province.

The sample from Gauteng Province just across the border from Mpumalanga, yielded an HA0 cleavage-site sequence characteristic of HP H7. The sample yielded an HA sequence with less than 95% nucleotide identity to H7 viruses isolated in Egypt and Georgia. Sequencing of the NA gene yielded an N6 positive and an NA sequence with 97% nucleotide identity to a virus isolate obtained in Egypt and Georgia. Sequencing of the neuraminidase (N) protein gene identified it as a N6 virus.

Good progress is made with the development of a local H7 AI vaccine. It will however still take some time to gather all the required information to support registration.

4.2 Spatial distribution of the HPAI H7 poultry event

The spatial distribution of the reported HPAI H7 outbreaks in poultry is represented in Figure 1 below.

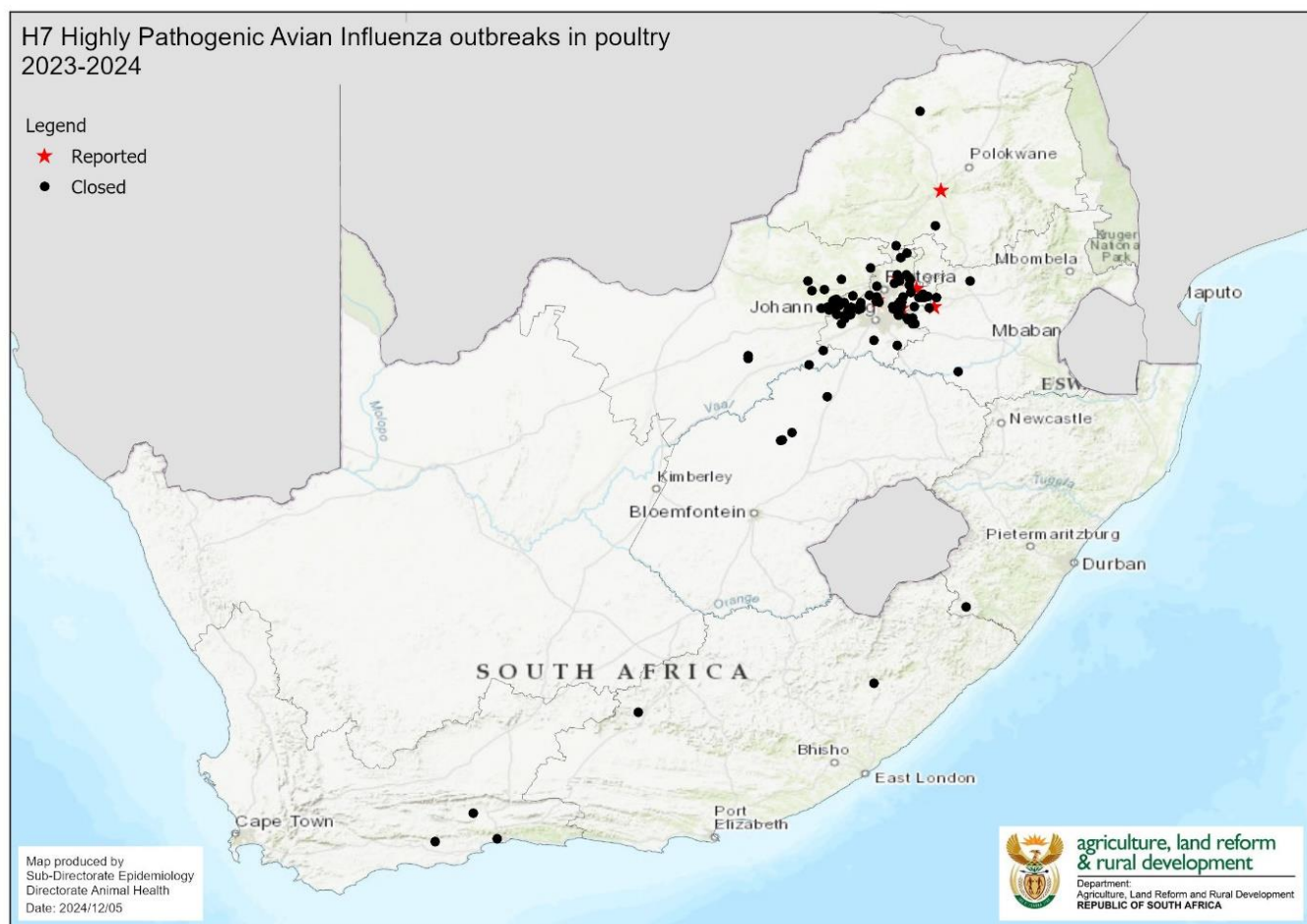


Figure 1: SPATIAL DISTRIBUTION OF HPAI H7 OUTBREAKS in POULTRY

Hundred and eight (n=108) of the HPAI H7 outbreaks were resolved.

The number of unresolved outbreaks (n=8) per Local Municipality is represented in Table 1 below.

Province and Local Municipality per Province	Grand Total
01 MPUMALANGA	1
104 Victor Khanye	1
02 GAUTENG	6
219 Mogale City	2
224 City of Tshwane	4
03 LIMPOPO	1
367 Mogalakwena	1
Grand Total	8

TABLE 1: NUMBER OF UNRESOLVED OUTBREAKS PER LOCAL MUNICIPALITY PER PROVINCE FOR HPAI H7 IN POULTRY

4.3 Temporal distribution of the HPAI H7 event in poultry

The temporal distribution of the HPAI H7 event in poultry is depicted in Figure 2 below.

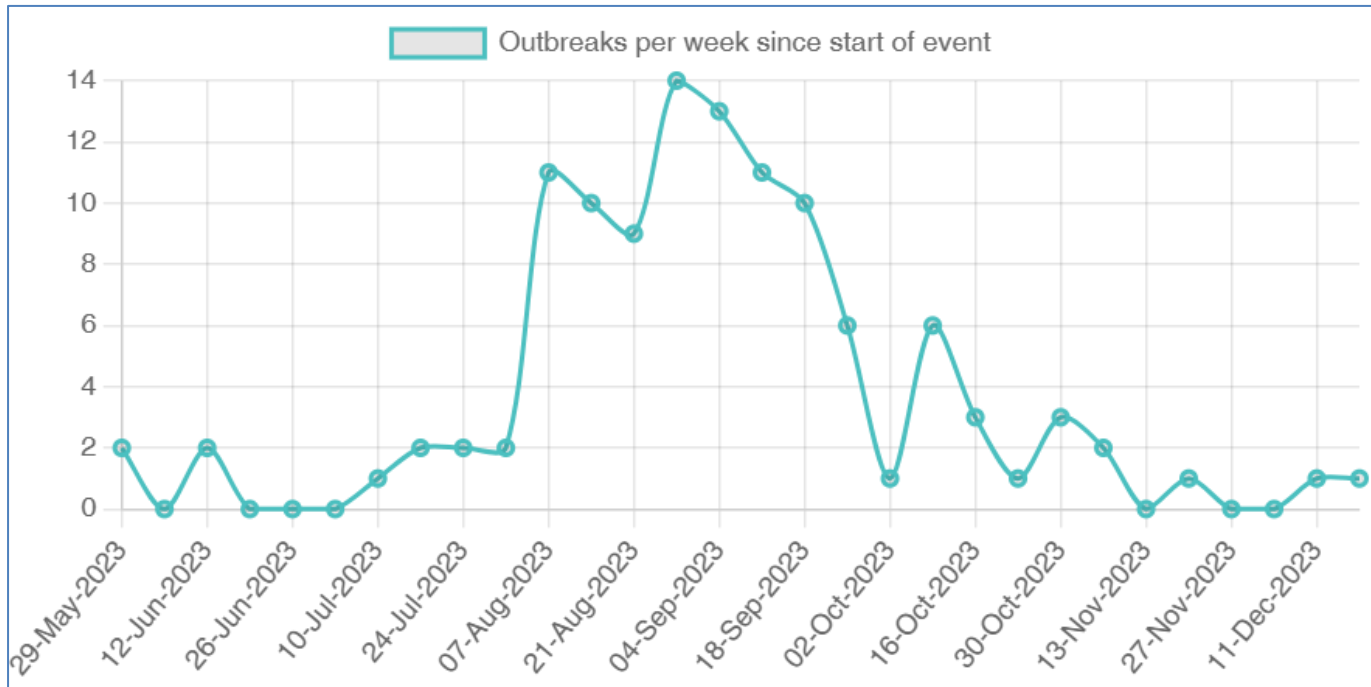


FIGURE 2: TEMPORAL DISTRIBUTION OF HPAI H7 EVENT IN POULTRY

4.4 Overview of the HPAI H7 non-poultry (wild birds)

The first outbreak of HPAI H7 has been reported in backyard poultry. Both outbreaks (n=2) were resolved, and the event is regarded as closed.

5. Suspect HPAI outbreak in seabirds on Marion Island

Marion Island is one of South Africa's sub-Antarctic Prince Edward Islands in the southern Indian Ocean. A number of seabirds died following neurological signs indicative of HPAI. Samples were collected but these will only be able to be tested upon return of the ship during 2025.

6. Low pathogenic avian influenza (LPAI)

In accordance with Chapter 1.3 of the OIE Terrestrial Animal Health Code, the “low pathogenic avian influenza (poultry)” disease code has been delisted. As of 1 January 2022, LPAI is only being reported to the WOAHA as part of a country’s six-monthly surveillance.

All LPAI strains however are still controlled animal diseases in terms of the Animal Diseases Act, 1984 (Act No 35 of 1984) and control measures and reporting will remain unaltered until reviewed.

A H7 was detected by PCR on an ostrich farm in the Oudtshoorn Local Municipality. Sequencing confirmed it to be a H7N7 low pathogenic avian influenza strain. A LPAI H5 was also detected by PCR on an ostrich farm. N typing of the LPAI H5 strain is still in progress.


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