

# Avian Influenza: H5 and H7 outbreak update report

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26 April 2023



agriculture, land reform  
& rural development

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

Report compiled by:  
Directorate: Animal Health

Please note: This report includes all information as available by close of business on 26 April 2023. *Avian Influenza update reports will from now on be issued on a fortnightly basis.*

## 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. Both categories had to be reported to the World Organisation for Animal Health (WOAH, founded as OIE). This was reviewed and since 1 January 2022, only HPAI in poultry and birds other than poultry are reportable to the WOAH. LPAI has to be reported only when there is proof that natural transmission with severe consequences in humans occurred.

Poultry is defined by the WOAH as all domesticated birds, used for the production of meat or eggs for consumption, for the production of other commercial products, for restocking supplies of game, or for breeding these categories of birds, as well as fighting cocks used for any purpose. Backyard poultry is excluded from the WOAH definition of poultry only if the birds are kept in a single household, the products of which are used within the same household exclusively with no direct or indirect contact with poultry or poultry facilities (2021 OIE Terrestrial Animal Health Code).

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 WOAH 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 in order to detect any incursion of avian influenza. Passive and active surveillance in backyard and commercial chickens is continuing across the country. A number of backyard chicken holdings in all Provinces are included in the six monthly active surveillance. Active surveillance in commercial chickens is conducted every six months with monthly surveillance in NAI free compartments. Active surveillance in commercial ostriches is conducted six monthly with additional pre-movement, pre-slaughter and 28 days post-movement testing.

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. No new HPAI outbreaks were reported in commercial and backyard chickens since June 2018 until the detection in April 2021 of a HPAI H5N1 in commercial chickens. 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 3.

## **2. Highly pathogenic avian influenza (HPAI)**

There has been a sudden upsurge in H5 PCR positive samples. Pathotyping, N typing and sequencing is currently under way. The majority of H5 PCR positive samples are samples collected under an environmental research project for wild bird surveillance and originated from Gauteng, KwaZulu Natal and Mpumalanga Provinces. Samples from shorebirds from the Western Cape Province from three different locations were confirmed to be HPAI H5 PCR positive. Two commercial chicken facilities in the Western Cape Province are also affected – one was confirmed to be HPAI H5 PCR Positive and the other tested H5 PCR positive.

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 where 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.

### **2.1 Overview of the HPAI H5N1 events**

#### **2.1.1 Overview of the HPAI H5N1 poultry event**

The index case was detected on 11 April 2021 in Gauteng Province. A total of ninety four (n=94) outbreaks were reported across Gauteng, North West, Western Cape, Mpumalanga, Free State, KwaZulu Natal and Eastern Cape Provinces. All outbreaks have been resolved and the two that remain open with the WOAHA will be closed upon receipt of the paperwork from the responsible Provincial Veterinary Services.

Sequencing of the samples from the commercial ostrich facility in the Letsemeng Local Municipality in the Free State reported with start date in November 2022 indicated that the virus is phylogenetically distinct from the H5N1 HPAI strains that caused South Africa's outbreaks in 2021-2022. Instead it shared a most recent common ancestor with H5N1 HPAI strains that caused outbreaks in Botswana from June to September 2021. This virus therefore appears to have been a new introduction into South Africa in 2022.

#### **2.1.2 Overview of the HPAI H5N1 non-poultry (wild bird) event**

A total of seventy four (n=74) non-poultry outbreaks were reported and these include wild birds and birds kept as hobby or zoo purposes. Backyard poultry as per the WOAHA definition specified the introduction and background in point 1 are now reported as part of the wild bird event since the publishing of the 2021 OIE Terrestrial Animal Health Code. All of these non-poultry outbreaks were resolved with the WOAHA.

## 2.2 Overview of the new HPAI H5 event

In view of the sequencing data that became available in April 2023, indicating an introduction of a new strain of HPAI H5N1 in November 2022 in the Free State Province, it was decided to report any future HPAI H5 outbreaks as new events with the WOA. H.

### 2.2.1 Overview of the new HPAI H5 poultry event

The last reported outbreak of HPAI H5 in commercial chickens in the Western Cape Province was during January 2022, while the last reported in the country was during September 2022. The index case of the new 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 one (n=1) outbreak was reported to WOA. H. as part of the new HPAI H5 poultry event.

A second commercial poultry facility in the Western Cape Province tested positive for H5 on PCR. Pathotyping, N typing and sequencing is underway.

### 2.2.2 Spatial distribution of the new HPAI H5 poultry event

The spatial distribution of the reported HPAI H5 outbreaks in poultry is represented in Figure 1 below.

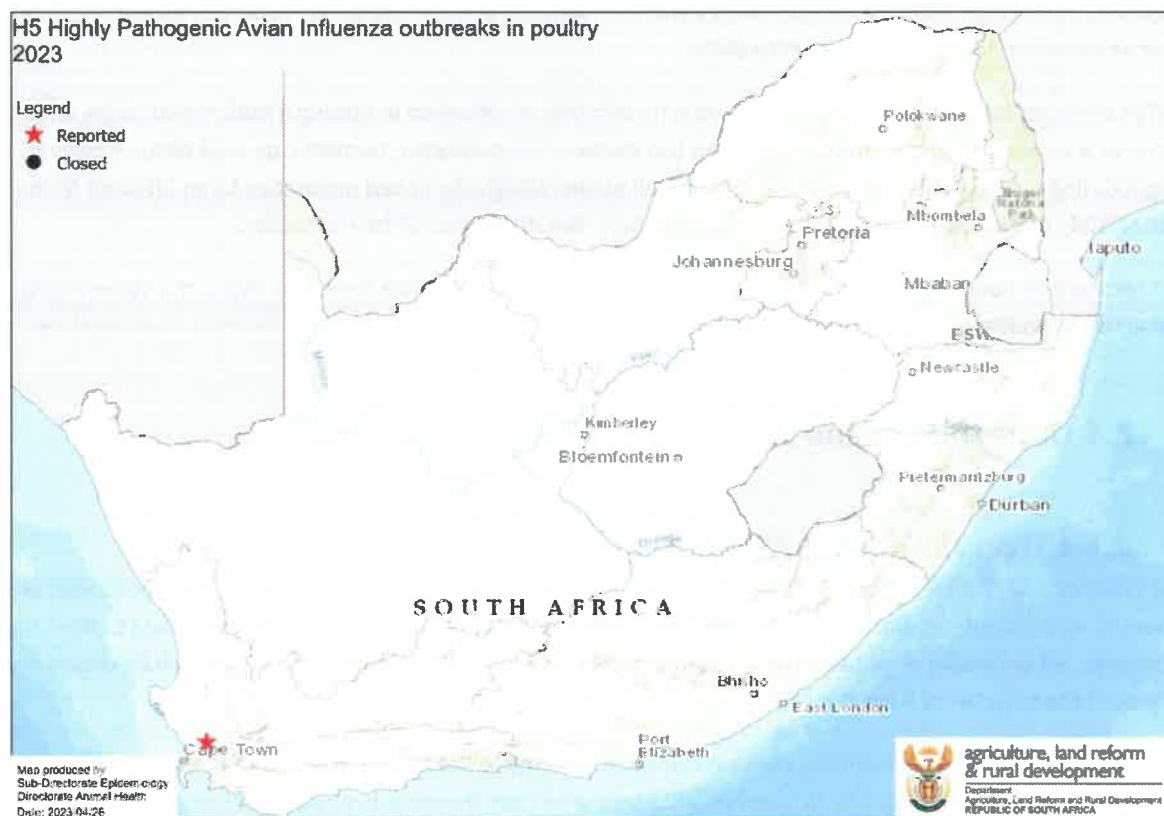


FIGURE 1: SPATIAL DISTRIBUTION OF HPAI H5 OUTBREAKS IN POULTRY

### 2.2.3 Overview of the new HPAI H5 non-poultry (wild bird) event

A new wave of H5 avian influenza introductions seems to have started in March 2023. Three outbreaks (n=3) were reported to WOA. H. as part of the start of this new HPAI H5 event.

Two (n=2) of these outbreaks are in the Western Cape Province. HPAI in wild birds in the Western Cape Province was last detected in November 2022. End of March 2023, samples were collected from shorebirds that were

suspected to have HPAI or died and these samples tested positive for avian influenza. These samples originated from shorebirds from Strand Beach and Blouberg Beach in the City of Cape Town Local Municipality. The sample from Blouberg Beach tested suspect positive for HPAI H5 on PCR and the sample from Strand Beach tested positive for HPAI H5 on PCR. Further diagnostics to determine the N type and sequencing are underway.

One (n=1) of the three outbreaks were from environmental wild bird surveillance samples collected at Bon Accord Dam in the City of Tshwane Local Municipality. These samples tested H5 PCR positive. Sequencing is underway.

A third outbreak in the Western Cape Province was confirmed to be HPAI H5 and will be reported to WOAHP upon receipt of the emergency report.

Environmental wild bird surveillance samples from a number of other locations across Gauteng, KwaZulu Natal and Mpumalanga Provinces also tested H5 PCR positive. Further diagnostics are underway and these will be reported upon receipt of the emergency reports from the relevant Provincial Veterinary Authorities.

### 2.2.4 Spatial distribution of the new HPAI H5 non-poultry (wild bird) event

The spatial distribution of the reported HPAI H5 outbreaks in non-poultry is represented in Figure 2 below.



FIGURE 2: SPATIAL DISTRIBUTION OF HPAI H5 OUTBREAKS IN NON-POULTRY

## 3. 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. The WOAHP has requested that South Africa thus resolve the currently

unresolved LPAI H7, Undefined H7 and LPAI H5 events before 31 December 2021. As of 1 January 2022 only HPAI are to be reported to the WOAAH.

All LPAI strains however remain 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.

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DIRECTOR: ANIMAL HEALTH

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Date:

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