

## H7 high pathogenicity avian influenza update

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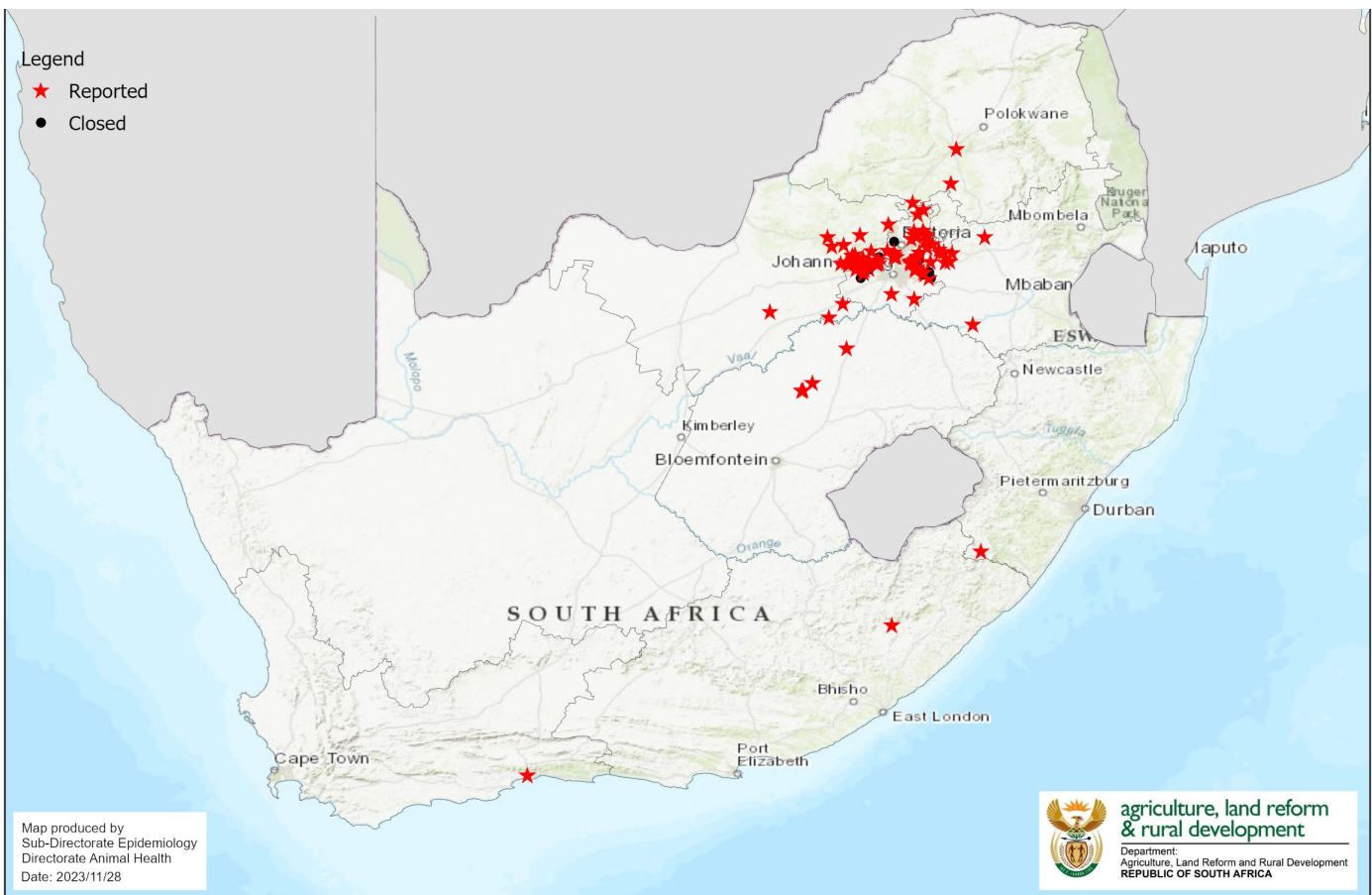
After H5N1 high pathogenicity avian influenza (HPAI) caused several outbreaks in commercial chicken flocks in South Africa in the first half of 2023, another strain of HPAI emerged in the northern part of the country. H7N6 HPAI was first detected in commercial chickens in Gauteng in June 2023 and quickly spread to infect many other chicken farms in the months that followed. Unlike H5N1, which circulated in and was spread by wild birds, the new H7N6 appeared to infect only chickens. To date, evidence of this virus has not been found in wild birds or in any bird species other than chickens. How the virus spread between farms is unknown in most cases, but it is likely that it was transmitted either by movement of live birds, or by fomites such as vehicles, feed and/or equipment.

There have been over 100 outbreaks of H7 HPAI in South Africa (Fig. 1), with the majority clustered in and around Gauteng. A total of 70 outbreaks are within Gauteng

Province, affecting mostly layer chickens.

In September and October, a layer chicken farm near George restocked with pullets sourced from a farm in the North West Province. After clinical signs of HPAI were seen in pullets on the farm of origin in early October, tracheal and cloacal swabs were taken from mortalities in the flock in the Western Cape. These samples subsequently tested positive for H7N6 HPAI. To prevent the spread of the outbreak, all chickens on the farm were culled and destroyed, along with all potentially infectious material. The farm was cleaned, disinfected and fumigated twice.

With many unresolved outbreaks ongoing in South Africa, H7 HPAI remains a threat to the poultry industry in the Western Cape. Chicken farmers are strongly discouraged from transporting chickens from other provinces if at all possible.



**Figure 1: Outbreaks of H7 avian influenza in commercial chickens in South Africa in 2023 (Map provided courtesy of DALRRD)**

# Outbreak events

**H7N6 high pathogenicity avian influenza** broke out on a layer **chicken** farm near **George**. This outbreak is detailed on the first page of this report. Cleaning and disinfection took place under official supervision (Fig. 2) and quarantine was lifted once the process was complete.

**Avian influenza** antibodies were detected on two **ostrich** farms: one near **Heidelberg** and one near **Swellendam**. No virus was detected via PCR and serology did not indicate a subtype, so a previous low pathogenicity infection is assumed.

On a farm near **Moorreesburg**, a **bat-eared fox** was seen attacking a vehicle. The fox returned the following day to repeat this behaviour and was shot by the farmer. Samples of the fox's brain tested positive for **rabies**. The neighbouring farms were visited and all dogs and cats vaccinated against rabies in response to this case.

A few poor doers were seen in a **sheep** flock in the **Uniondale** area. One of the ewes was sacrificed and evidence of **Johne's disease** was seen on histological examination of her organs.

Four feral **rabbits** were taken in by a resident of **Paarl**, but all of them died suddenly. On necropsy the lungs were found to be filled with blood. Based on the history and clinical signs, an outbreak of **rabbit haemorrhagic disease** is suspected.

**Salmonella Enteritidis** was cultured from routine samples taken on six different properties keeping broiler **chickens** in the **Malmesbury** and **Worcester** areas.

Skin lesions characteristic of **erysipelas of swine** were seen on a pig carcass after slaughter at an abattoir. The pig originated from a farm near **Moorreesburg**.

A farmer near **Tesselaarsdal** reported that five of his 19 **pigs** had died suddenly. On inspection of the remaining pigs, no signs of illness were seen other than evidence of mange, which the owner had recently treated. The animal health technician noted that water was supplied in black, above-ground pipes and a black plastic bucket. The weather in the preceding few days had been very hot, so he suspected that the pigs had not consumed enough water and therefore developed **salt toxicity**.

Sores were seen on the lips, gums and teats of **sheep** and **goats** belonging to several farmers keeping livestock on a commonage in **Riviersonderend**. A private veterinarian diagnosed **orf** (contagious pustular dermatitis).

Two **sheep** in **Vanrhynsdorp** showed black, foul-smelling diarrhoea with mucus and blood, as well as loss of appetite and signs of abdominal pain. **Coccidiosis** was suspected and the sheep were treated with long-acting sulfonamides.

During an inspection, hair loss due to scratching was seen on three **pigs** belonging to a small-scale farmer in **Atlantis**. The farmer was advised regarding how to treat **mange** and the pigs were injected with ivermectin.



**Figure 2: State Veterinarian: George, Leana Janse van Rensburg, demonstrates the use of gumboots and single-use overalls worn as personal protective equipment on a farm with highly pathogenic avian influenza.**

**(Photo: E. Lottering)**

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