Avian Influenza: HPAI H5N8 outbreak and surveillance update report

26 MARCH 2020

agriculture, forestry & fisheries

Department:
Agriculture, Forestry and Fisheries
REPUBLIC OF SOUTH AFRICA

Report compiled by:
Directorate: Animal Health
26 MARCH 2020
1. Introduction and Background

On 19 June 2017, a case of Highly Pathogenic Avian Influenza (HPAI) was confirmed on a chicken farm in Mpumalanga Province. This was the first outbreak ever of HPAI in chickens in South Africa. Since the index case, a number of other poultry and ostrich operations, as well as wild bird species, have subsequently also been infected with HPAI.

Up to 26 March 2020, a total of 215 outbreaks were detected and confirmed as HPAI H5N8 by laboratory tests, and reported to the World Organisation for Animal Health (OIE). Of those outbreaks, 185 (86%) have already been closed with the OIE.

The affected birds are divided into five distinct categories – commercial poultry, backyard poultry, ostriches, wild birds and hobby birds. The number of outbreaks in each category is illustrated in Figure 1.

![Categorical breakdown of HPAI H5N8 outbreaks since index case](image)

**FIGURE 1: CATEGORICAL BREAKDOWN OF ALL HPAI H5N8 OUTBREAKS REPORTED SINCE REPORTING OF THE INDEX CASE ON 19 JUNE 2017 UNTIL 26 MARCH 2020.**

The categorical breakdown of the number of HPAI H5N8 outbreaks per Province is represented in Table 1 below.

<table>
<thead>
<tr>
<th>Province</th>
<th>Backyard</th>
<th>Commercial</th>
<th>Hobbyists and zoo</th>
<th>Ostriches</th>
<th>Wild birds</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mpumalanga</td>
<td>4</td>
<td>5</td>
<td>1</td>
<td>0</td>
<td>2</td>
<td>12</td>
</tr>
<tr>
<td>Gauteng</td>
<td>0</td>
<td>4</td>
<td>5</td>
<td>0</td>
<td>7</td>
<td>16</td>
</tr>
<tr>
<td>Limpopo</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>North West Province</td>
<td>0</td>
<td>3</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>Free State</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>KwaZulu-Natal</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Eastern Cape</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>6</td>
<td>10</td>
</tr>
<tr>
<td>Western Cape</td>
<td>5</td>
<td>17</td>
<td>13</td>
<td>63</td>
<td>65</td>
<td>163</td>
</tr>
<tr>
<td>Northern Cape</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>10</strong></td>
<td><strong>33</strong></td>
<td><strong>23</strong></td>
<td><strong>68</strong></td>
<td><strong>81</strong></td>
<td><strong>215</strong></td>
</tr>
</tbody>
</table>

**TABLE 1: CATEGORICAL BREAKDOWN OF HPAI H5N8 OUTBREAKS PER PROVINCE SINCE THE INDEX CASE UNTIL 26 MARCH 2020**
2. Temporal distribution of the HPAI H5N8 outbreaks

2.1 Commercial poultry, backyard poultry and hobby birds
Passive and active surveillance in commercial chickens and backyard chickens is continuing across the country. Active surveillance in commercial chickens includes six monthly surveillance and still includes monthly surveillance in compartments. The last reported outbreak in commercial poultry was in June 2018. Active surveillance in backyard chickens includes six monthly surveillance. Passive surveillance in hobby birds is continuing across the country. No outbreaks were reported in commercial poultry, backyard poultry and hobby birds since week 50 (3 to 9 June 2018).

The number of HPAI outbreaks that were reported in birds other than ostriches and wild birds (commercial poultry, backyard poultry and hobby birds) per week, since the index case is depicted as an epidemiological curve in Figure 2.

---

![Graph](image_url)

**FIGURE 2: TEMPORAL DEPICTION OF THE AMOUNT OF NEW HPAI POSITIVE LOCATIONS THAT WERE REPORTED IN COMMERCIAL POULTRY, BACKYARD POULTRY AND HOBBY BIRDS SINCE THE INITIAL REPORTING OF THE INDEX CASE.**

2.2 Wild birds
Passive surveillance in wild birds is continuing. No new outbreaks were reported in wild birds since week 107 (7 to 13 July 2019). The outbreaks in wild birds have no trade implications for the country. The number of HPAI outbreaks in wild birds per week, since the index case is depicted as an epidemiological curve in Figure 3 below.
2.3 Ostriches

Active and passive surveillance for avian influenza in ostriches is continuing across the country. Normal active surveillance in ostriches includes six monthly surveillance, pre-movement testing, pre-slaughter testing and post-movement testing. The number of HPAI outbreaks in ostriches that were reported per week since the index case, is depicted as an epidemiological curve in Figure 4.

Figure 5 is a temporal depiction of the amount of new HPAI positive ostrich locations that were reported during the first two years (first year of outbreak runs from 18 June 2017 to 7 July 2018; second year of outbreak runs from 8 July 2018 to 20 July 2019) of the outbreak compared to that of the first 25 weeks of the third year of the outbreak (21 July 2019 to 18 January 2020). The last reported outbreak in ostriches in week 134 (12 to 18 January 2020) was reported based on serological results where the presence of H5N8 cannot be excluded.
FIGURE 5: TEMPORAL DEPICTION OF THE AMOUNT OF NEW HPAI POSITIVE LOCATIONS THAT WERE REPORTED IN COMMERCIAL OSTRICHES DURING THE FIRST YEAR COMPARED TO THE AMOUNT OF NEW HPAI POSITIVE LOCATIONS THAT WERE REPORTED DURING THE SECOND YEAR AND FURTHER COMPARED TO THE FIRST 25 WEEKS OF THE THIRD YEAR SINCE THE INITIAL REPORTING OF THE INDEX CASE

The peaks for the second year plot below the correlating weeks of the first year. The third year is following a similar trend to the second year with a decrease in the number of outbreaks compared to that of the first year. DAFF is working with the relevant Provinces and the Ostrich Industry to fast track the slaughter out of the affected ostrich farms.

Once the situation in the ostriches has stabilised, a strategy will be put in place to support the process of declaration of freedom from HPAI. This will include a country wide surveillance programme to demonstrate the absence of HPAI virus infection and the absence of HPAI virus circulation for at least 12 months.

3. Spatial distribution of the HPAI H5N8 outbreaks
The spatial distribution of all the outbreaks in the event can be seen in Figure 6 and Figure 7 below. The outbreaks which were already resolved with the OIE are depicted in black. The one unresolved commercial chicken outbreaks in Figure 6 in the North West Province will be resolved upon receipt of final documentation.

The spatial distribution of the H5N8 outbreaks in wild birds and birds kept as a hobby is depicted in Figure 7. The outbreaks at locations where birds are kept as a hobby require improved biosecurity and active surveillance prior to the lifting of quarantine and resolving of the outbreaks. This is to lower the risk of AI virus introduction into these facilities in future. DAFF is working with the relevant Provinces to resolve these outbreaks. The outbreaks in wild birds and hobbyists have no trade implications for the country.
FIGURE 6: SPATIAL DISTRIBUTION OF THE H5N8 OUTBREAKS IN CHICKENS AND OSTRICHES

FIGURE 7: SPATIAL DISTRIBUTION OF THE H5N8 OUTBREAKS IN WILD BIRDS AND BIRDS KEPT AS A HOBBY

Director Animal Health
Date: 2020-12-26