



REPORT ON AVIAN INFLUENZA (AI)

SURVEILLANCE MONITORING FOR THE SURVEILLANCE PERIOD

April to June 2024

(2Q2024)

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1. INTRODUCTION

1.1 World HPAI situation

As can be seen from the map obtained from the website of the Food and Agriculture Organization (FAO) of the United Nations (Figure 1), limited HPAI outbreaks have continued worldwide. Fewer outbreaks are expected during summer in the Northern Hemisphere than during winter months. In the Southern Hemisphere there have been few reported outbreaks. The most interesting have been the recent HPAI H7 outbreaks in Australia – these appear to be due to local mutation of H7 viruses from wild birds into chickens.



Figure 1: Global map showing reported cases of HPAI (April - July 2024) (source: FAO)

Although there have been losses due to HPAI H5N1 in the USA in 2024, these have been quite modest (Figure 2). Less than 5% of national egg production has been lost. The reason for the reduced impact of HPAI in the USA remains unclear. It is of concern that the outbreaks have continued through the summer months.

A small number of human cases of HPAI H5 have been reported among agricultural workers in the USA. In all cases symptoms have been mild.

In a worrying development, on 27 March HPAI H5N1 was isolated from dairy cows and unpasteurised milk in the USA. The virus has spread in dairy cattle populations and has now been reported from 152 herds in 12 different states up to 12 July 2024 (Figure 3). Typically avian influenza viruses have difficulty infecting humans because humans have low levels of the receptors required by these viruses to bind to host cells. The mammary glands of cows contain high levels of these receptors, resulting in high levels of the virus in the milk of infected cows. Pasteurisation effectively kills AI viruses in milk, meaning there is little risk of transmission to the public. There is presently no evidence of AI in cattle in South Africa.

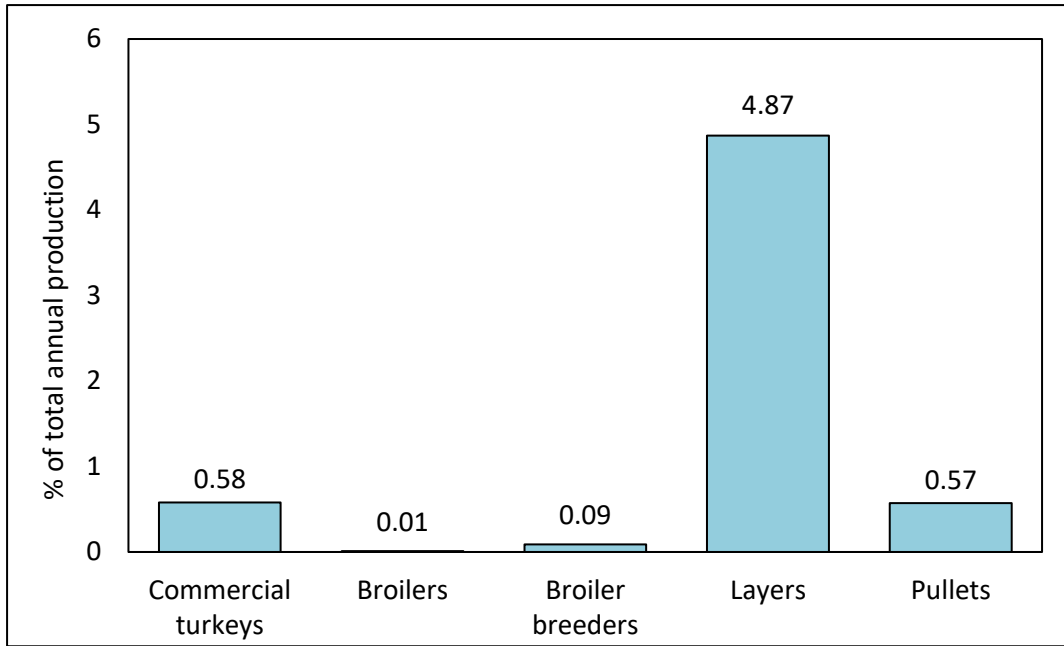


Figure 2: HPAI losses in the USA (1 Jan–12 Jul 2024)

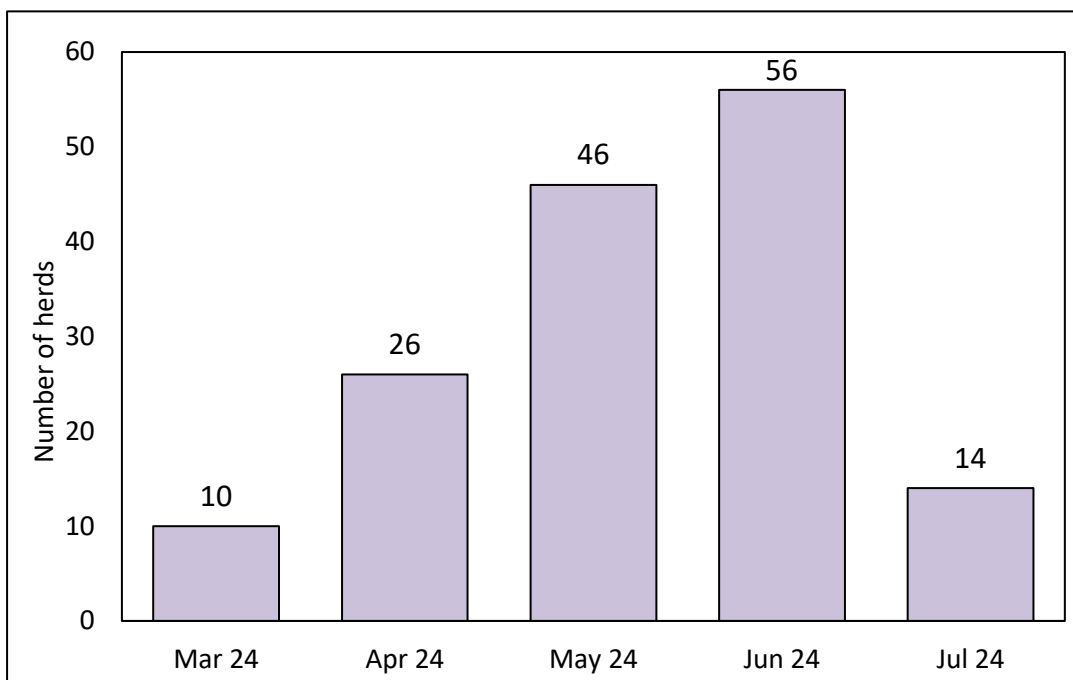


Figure 3: USA dairy herds that tested positive for HPAI

1.2 South Africa

No cases of HPAI have been reported in South Africa during the period under review.

1.3 Control of HPAI

Vaccine evaluation, approval and registration with Act 36

Although three HPAI H5 vaccines have been registered in South Africa no-one has yet been granted permission by the Director of Animal Health to vaccinate against HPAI, despite numerous applications. HPAI H7 vaccines have been submitted for registration but none have yet been approved, pending local efficacy trials. This is a serious concern. Discussions between the SAPA HPAI technical team and DALRRD are ongoing but progress is slow.

Layer flocks which have been challenged but not culled

There remains a number of commercial layer flocks that were challenged with HPAI but not culled. It is highly unlikely that these flocks remain infected with HPAI – all tests have indicated that they are disease free. However, they cannot be removed from farms for destroying until permission is granted by DAH. In this case as well, no such permissions have been granted and birds are stuck on farms. This situation is also frustrating.

2. RESULTS OF AI SURVEILLANCE MONITORING

2.1 Reported HPAI outbreaks

There were no reported outbreaks during the quarter under review.

2.2 AI surveillance programme

Table 1 summarises the AI test results of farms that submitted data during the reporting period. The total number of samples tested increased from 44 093 in 4Q2023 to 44 269. (Note: These figures change from time to time due to ongoing submissions of data). The number of broiler industry farms submitting samples increased from 333 in 4Q2023 to 405, while the number of egg industry farms submitting samples decreased from 28 to 20. Of the samples tested during 2Q2024, 198 (0.4%) were positive.

A positive ELISA test does not necessarily indicate a true outbreak. All ELISA results must be verified using haemagglutination inhibition (HI) testing which also confirms which strain of AI is involved. Further confirmation is done using PCR, molecular sequencing and on occasion, virus isolation. False positive results on the ELISA test may run at about 1–2%.

Table 2 gives a breakdown of the number of chicken farms that participated in the AI surveillance monitoring during the quarter under review.

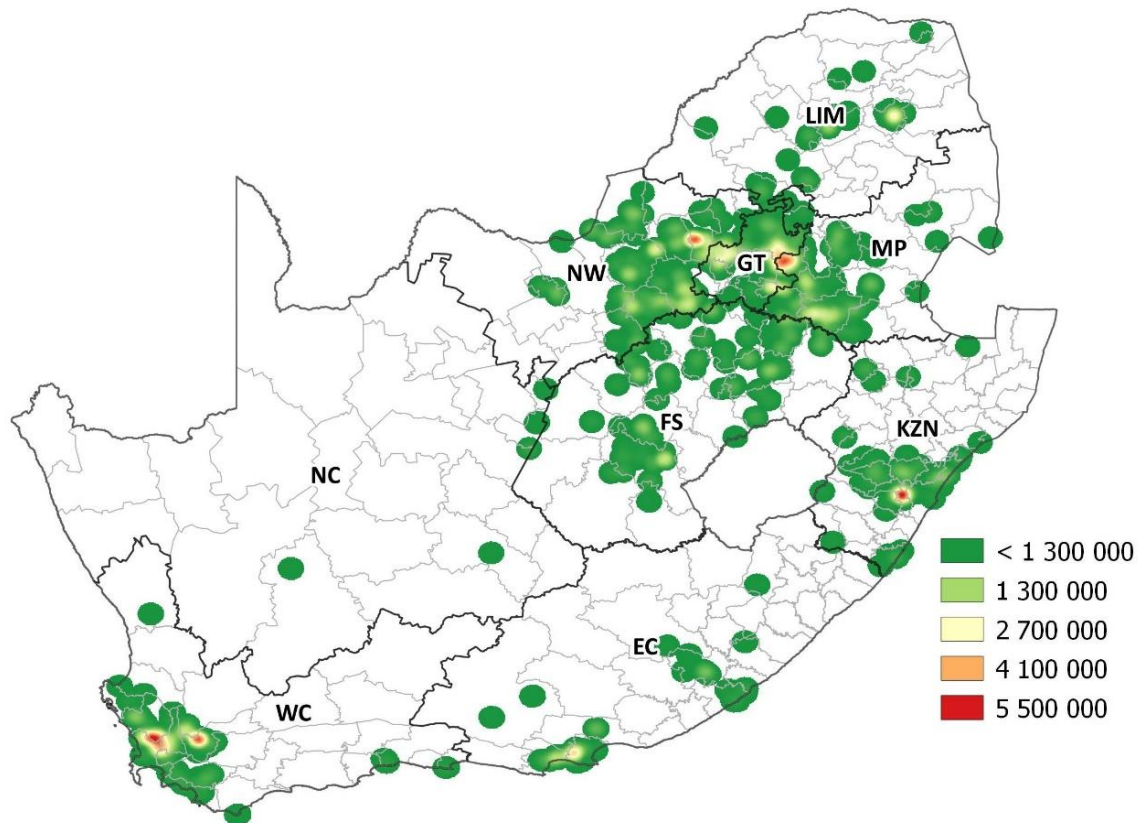
Table 3 indicates the total number of farms that did not participate during the quarter under review. Farms that are not exporting are only required to submit samples twice a year.

PROVINCE	FARM TYPE		SAMPLES		
	Broiler industry	Egg industry	Tested	Positive (ELISA)	Negative
Eastern Cape	27	0	2 806	0	2 806
Free State	28	4	5 192	0	5 192
Gauteng	40	2	5 098	8	5 090
KwaZulu-Natal	60	4	7 730	144	7 586
Limpopo	27	1	3 126	0	3 126
Mpumalanga	102	1	8 767	39	8 728
North West	70	7	8 338	0	8 338
Northern Cape	1	0	60	0	60
Western Cape	50	1	3 152	7	3 145
National	405	20	44 269	198	44 071

BROILER INDUSTRY	
GGP and grandparent farms	18
Parent rearing farms	46
Broiler breeder farms	74
Broiler rearing farms	267
TOTAL	405
EGG INDUSTRY	
Grandparent farms	2
Parent rearing farms	0
Layer breeder farms	5
Pullet rearing farms	7
Layers (table egg production)	6
TOTAL	20
BROILER AND EGG INDUSTRIES	
	425

PROVINCE	FARM TYPE	
	Broiler industry	Egg industry
Eastern Cape	14	13
Free State	27	31
Gauteng	53	64
KwaZulu-Natal	31	33
Limpopo	8	19
Mpumalanga	28	26
North West	76	34
Northern Cape	0	5
Western Cape	49	37
National	286	262

Figure 4 shows the density of chicken farms weighted according to the number of birds on each farm. The heat map has been generated by specifying that an area be coloured according to the vicinity of neighbouring farms within a 20 km radius. The purpose of this map is to identify potential hotspots where the possibility for transmission of the avian influenza virus is higher. The relative risk of transmission is low in the green areas, moderate in the yellow areas and high in the red areas.



Source: SAPA

Created by: Leading Edge Poultry Software

Figure 4: Heat map illustrating the density of chicken farms

3. AVIAN INFLUENZA MONITORING IN SOUTH AFRICA

SAPA is an active participant in the surveillance monitoring process for avian influenza in the national poultry flock. Surveillance is conducted on a monthly basis for ZA compartments (export facilities) and on a six-monthly basis for non-ZA compartments, according to a prescribed protocol. All producers are encouraged to participate in this programme.

Producers are requested to ensure that the **AI monitoring database update input sheet** is filled in accurately with every submission. Of particular importance are:

- the geographical location (gps coordinates) of the farm;
- the type of poultry; and
- the average number of chickens currently on the farm.

Silverpath Consulting continues to focus on improving the quality of the information in the AI database.

4. CONCLUSION

Although the risk of HPAI outbreaks appears to be low this winter season, producers need to remain vigilant as always and are encouraged to comply with HPAI protocols.

5. SAPA contact details

Silverpath Consulting is contracted to SAPA to collate the information regarding avian influenza and thus to contact poultry farmers in order to solicit the required information. Ms Idah Mosweu conducts these surveys and we request the industry to cooperate with the process. She can be contacted on the cell phone number 078 951 6937 or land line 011 794 182 during working hours. Alternatively use the e-mail address: diseasereports@sapoultry.co.za.

*Data collated by Silverpath Consulting
Report compiled by Leading Edge Poultry Software
Technical input provided by Dr Shahn Bisschop*

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