



**REPORT ON NOTIFIABLE AVIAN INFLUENZA (NAI)**  
**SURVEILLANCE MONITORING FOR THE SURVEILLANCE PERIOD:**  
**January 2017 to June 2017**  
**(1H 2017)**

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## 1 OVERVIEW

The South African Poultry Association (SAPA) is an active participant in the surveillance monitoring process for highly pathogenic notifiable avian influenza (HPNAI) in the national poultry flock. Surveys are conducted on a six-monthly basis, according to a prescribed protocol, and all producers are encouraged to participate.

The Department of Agriculture, Forestry and Fisheries (DAFF) and the Poultry Disease Management Agency (PDMA) have jointly established precautionary measures and disease surveillance and control protocols, in order to reduce the likelihood of an outbreak of HPNAI and to minimise the impact of any outbreaks that might occur.

In the first half of 2017 there were reported cases globally of highly pathogenic avian influenza in Bulgaria, Bosnia and Herzegovina, Cameroon, China, Chinese Taipei, Croatia, Czech Republic, Democratic Republic of Congo, Egypt, Finland, India, Iran, Israel, Italy, Kazakhstan, Kuwait, Lithuania, Luxembourg, Macedonia, Nepal, Niger, Nigeria, Portugal, Romania, Republic of Korea, Russia, Serbia, Slovakia, Slovenia, Sweden, Switzerland, Uganda, Ukraine and Zimbabwe. In addition, the following countries have reported the H5N1 strain: Bangladesh, Cameroon, Cambodia, Côte d'Ivoire, India, Malaysia, Nepal, Niger, Nigeria, Vietnam and Zimbabwe.

### SAPA contact details

Silverpath Consulting has been contracted by SAPA to contact poultry farmers located in South Africa. Mrs Christel van der Merwe will be conducting the surveys. She can be contacted at 079 871 9085 during working hours, and via e-mail: [christelvdm@mweb.co.za](mailto:christelvdm@mweb.co.za) or 011 768 5126.

## 2 RESULTS OF NAI SURVEILLANCE MONITORING: 1H 2017

### 2.1 Reported cases

On 19 June, the presence of the avian flu virus was detected in chickens in South Africa. The highly pathogenic strain H5N8 infected a broiler breeder flock in the Villiers district, on the Free State - Mpumalanga border. This strain, while causing high mortalities in chickens, does not affect humans. The farm was immediately quarantined and 24 000 birds culled.

A second case was confirmed on 26 June, on a commercial laying farm near Standerton, Mpumalanga. 25 000 infected hens died or were culled out of a susceptible population of 243 000.

The following cases were reported by the OIE:

Date	Region	Province	Species	Strain	Suscep- tible	Cases	Deaths	Killed	Morbid- ity	Mort- ality	Lost
17-Jan	Breede Valley	W. Cape	Ostriches	H5N2		60					
15-Feb	Oudtshoorn	W. Cape	Ostriches	H5N2		19					
19-Jun	Dipaleseng	Mpumal.	Br. breeders	H5N8	280 000	8 211	8 211	178 976	2.93%	2.93%	66.85%
26-Jun	Dipaleseng	Mpumal.	Com. Layers	H5N8	250 000	25 000	25 000	62 080	10.00%	10.00%	34.83%

## 2.2 Provincial distribution of layer and broiler birds in South Africa

The provincial distribution of chicken farms, in terms of broilers and layers, is given in Table 1. These figures were recorded during the course of the NAI survey. 'Broiler birds' refers to broiler breeders, broiler day-old chicks and broilers in rearing. 'Layer birds' refers to layer breeders, day-old pullets, pullets in rearing and layers in lay. Layer birds belong to the egg industry.

**Table 1:** Provincial distribution of chickens in South Africa

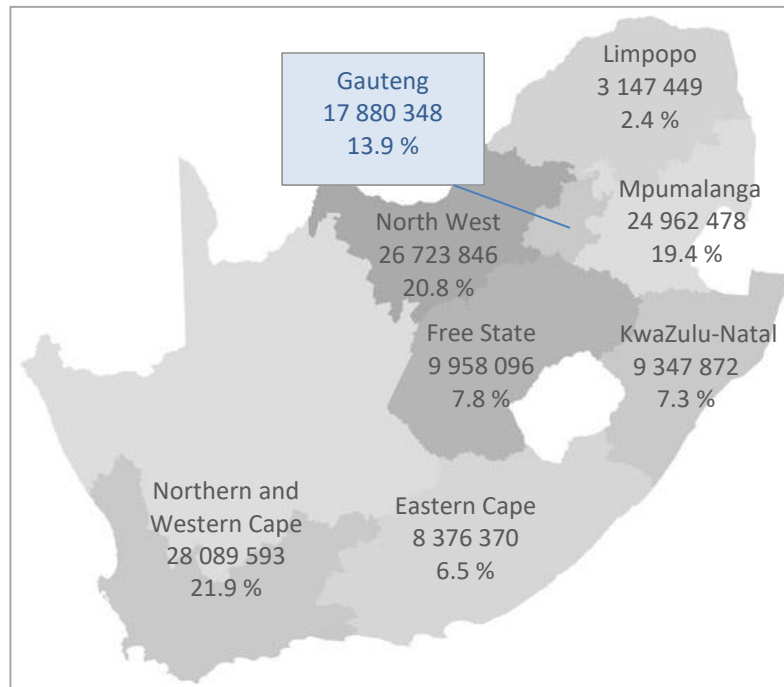
PROVINCE	BROILER		LAYER		TOTAL	
	birds	%	birds	%	birds	%
E. Cape	7 453 087	7.3	923 283	3.6	8 376 370	6.5
Free State	6 455 800	6.3	3 502 296	13.5	9 958 096	7.8
Gauteng	11 168 656	10.9	6 711 692	25.9	17 880 348	13.9
KZN	6 696 594	6.5	2 651 278	10.2	9 347 872	7.3
Limpopo	2 343 780	2.3	803 669	3.1	3 147 449	2.4
Mpumalanga	22 848 236	22.3	2 114 242	8.2	24 962 478	19.4
North West	23 967 611	23.4	2 756 235	10.6	26 723 846	20.8
N & W Cape	21 666 185	21.1	6 423 408	24.8	28 089 593	21.9
<b>TOTAL</b>	<b>102 599 949</b>	<b>100.0</b>	<b>25 886 103</b>	<b>100.0</b>	<b>128 486 052</b>	<b>100.0</b>

Table 2 shows the poultry census figures as given by SAPA's broiler and egg forecasting models. The NAI survey therefore represents 78.8% of the potential bird numbers in the egg industry.

**Table 2**

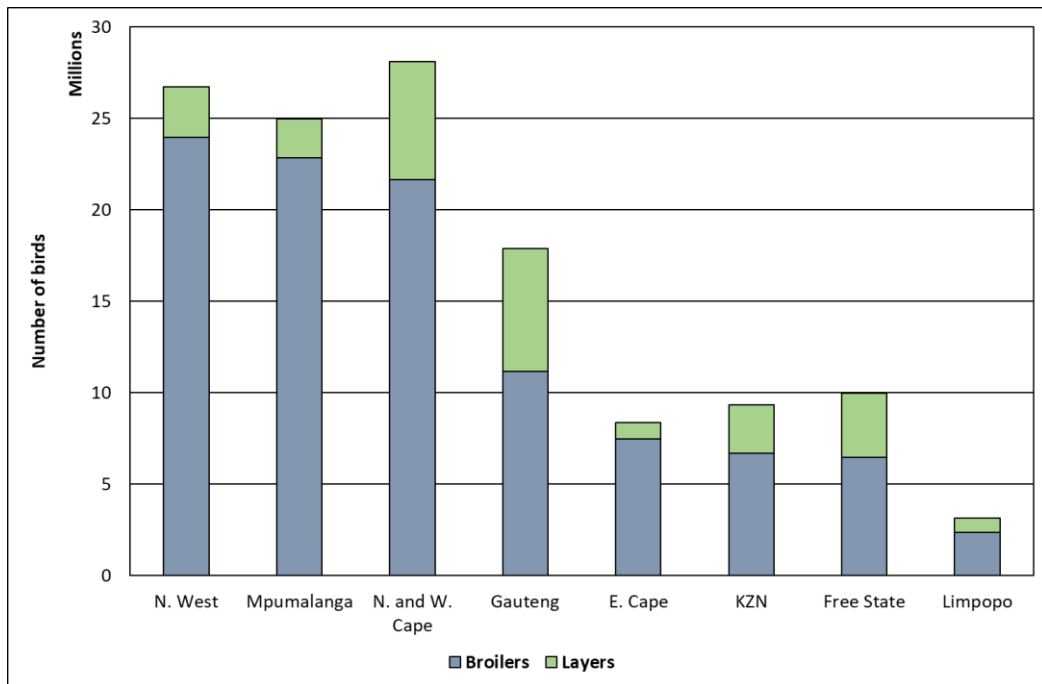
Broiler GGP's & GP's	242 000
Broiler parents in rearing	Not available
Broiler parents in lay	7 347 663
Broiler rearing	Not available
<b>TOTAL BROILER INDUSTRY</b>	<b>Not available</b>
Comm. Layer GP's	8 900
Layer parent hens	327 000
Layer replacement pullets	8 243 853
Commercial Layers	24 272 774
<b>TOTAL EGG INDUSTRY</b>	<b>32 852 527</b>
<b>TOTAL INDUSTRY</b>	<b>Not available</b>

Figure 1 gives the total number of chickens per province at 30 June 2017, as per Table 1. The Northern Cape has a very small number of poultry producers, thus in order to disguise their bird numbers the province is combined with the Western Cape. These two provinces are home to the largest number of birds with 21.9% of the national total, followed by the North West with 20.8%.



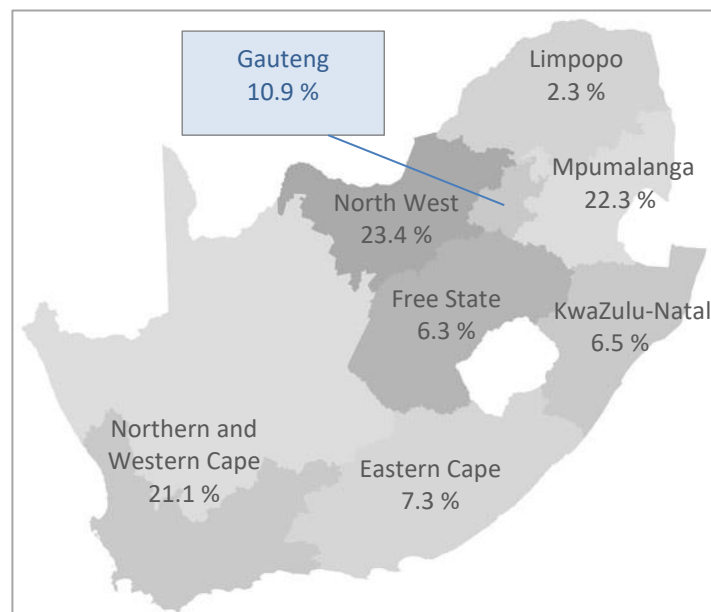
**Figure 1:** Provincial distribution of the national chicken flock in South Africa at June 2017; numbers per province and percentage of total flock.

The proportion of broiler birds and layer birds in each province is illustrated in Figure 2. Broiler production dominates in Mpumalanga, North West and E. Cape, with the ratio of broilers to layers being 10.8:1, 8.7:1 and 8.1:1 respectively.

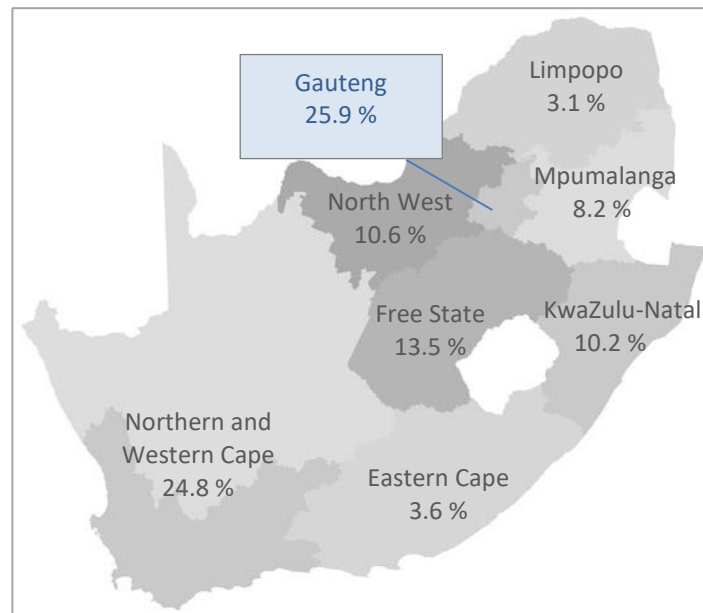


**Figure 2:** Provincial distribution of layer and broiler birds in South Africa in 1H 2017

The provincial distributions (%) of broiler and layer chickens are given in Figures 3 and 4 respectively. Bird numbers are shown in Table 1.



**Figure 3:** Provincial distribution of the national broiler flock in South Africa at June 2017, as a percentage of the total flock.



**Figure 4:** Provincial distribution of the national layer flock in South Africa at June 2017, as a percentage of the total flock.

### 2.3 The number, type and distribution of poultry farms in South Africa

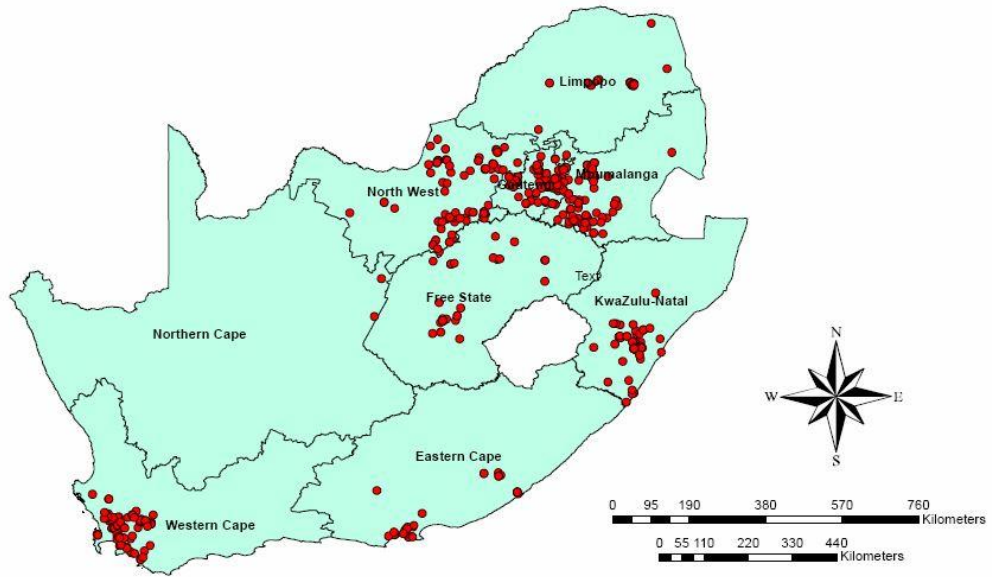
The number of farms participating in the 1H 2017 NAI survey is given in Table 3.

**Table 3:** Number of farms participating in the survey

<b>BROILER INDUSTRY</b>	
Broiler breeder farms	117
Broiler rearing farms	423
<b>TOTAL</b>	<b>540</b>
<b>EGG INDUSTRY</b>	
Layer breeder farms	24
Layer rearing farms	28
Layer farms (egg producing)	149
<b>TOTAL</b>	<b>201</b>
<b>BROILER AND EGG INDUSTRIES</b>	
<b>GRAND TOTAL</b>	<b>741</b>

For this surveillance period the number of broiler farms remained constant at 540, although 35 farms closed and 35 new farms started trading. In KwaZulu-Natal alone, a total of 21 broiler farms ceased production. The number of layer farms decreased by one; ten farms closed and nine new layer farms were reported. The nationwide distribution of broiler and layer farms that participated in the avian influenza survey is shown in Figures 5 and 6 respectively.

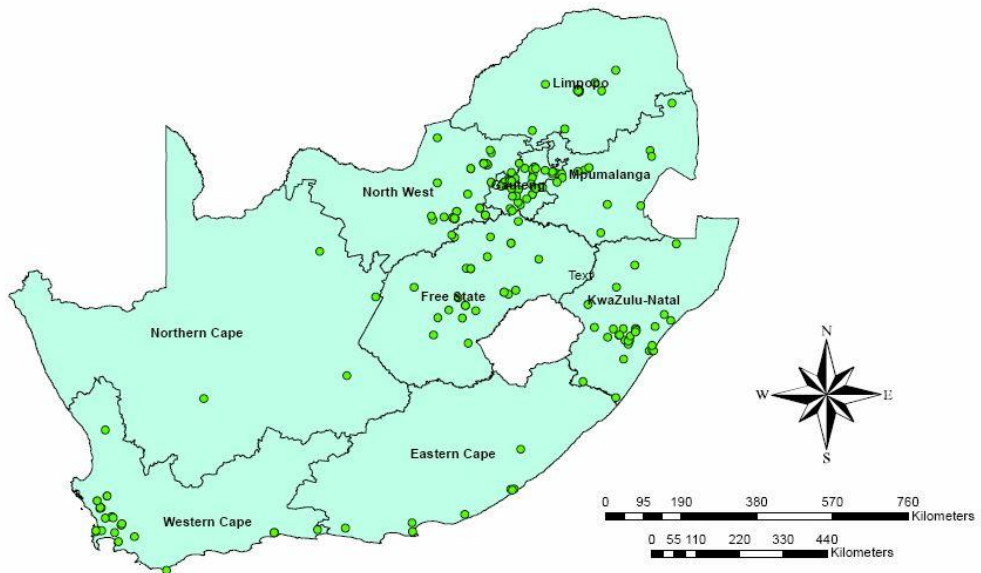
### National Broiler Farms Locations



Publication Date: 10/31/2017

Figure 5: Geographical location of broiler farms

### National Layer Farms Locations



Publication Date: 10/31/2017

Figure 6: Geographical location of layer farms

## 2.4 Distribution of farms according to volumes recorded in the NAI survey

Table 4 shows the distribution of farms according to size of operation. 48 % of the farms fall in the 100 000 to 400 000 bird range (356 farms out of a total of 741).

**Table 4:** The distribution of farms according to the average number of birds on the farms

Number of birds		Number of farms
from	to	
700 000	and more	12
600 000	699 999	12
500 000	599 999	18
400 000	499 999	19
300 000	399 999	47
200 000	299 999	139
100 000	199 999	170
90 000	99 999	20
80 000	89 999	15
70 000	79 999	8
60 000	69 999	23
50 000	59 999	20
40 000	49 999	27
30 000	39 999	86
20 000	29 999	37
15 000	19 999	19
10 000	14 999	27
5 000	9 999	20
100	4 999	22
Total		741

## 3 CHALLENGES

The past few years have seen a large emphasis placed on precautionary measures, disease surveillance and control in order to reduce the incidence of NAI and minimise the impact of outbreaks when they do occur.

The surveillance monitoring in the poultry industry is enormous and complex. The following challenges remain critical:

- Convincing all poultry farmers to participate in the surveillance monitoring.
- Receiving and processing data more rapidly.
- Receiving correct GPS co-ordinates for each farm.