

Foot and Mouth Disease outbreak and surveillance update report

31 October 2022*



agriculture, land reform
& rural development

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

Report compiled by:
Directorate: Animal Health

* This report includes all information as available by close of business on the indicated date. All the updates contained in this report may not currently reflect on the WOAHA WAHIS system due to technical difficulties with the WOAHA reporting system. This report reflects changes since the previous update report of 24 October 2022.

1. Introduction and summary

South Africa currently has 183 open Foot and Mouth Disease (FMD) outbreaks in the previous FMD free zone, comprised of three outbreak events. The outbreaks affect the Limpopo, North West, Gauteng, Mpumalanga, Free State and KwaZulu-Natal (KZN) Provinces of South Africa.

Map 1: Reported outbreaks in the previous FMD free zone 2021 - 2022

Note: Dots on the maps that indicate locations in close proximity might appear as single dots.

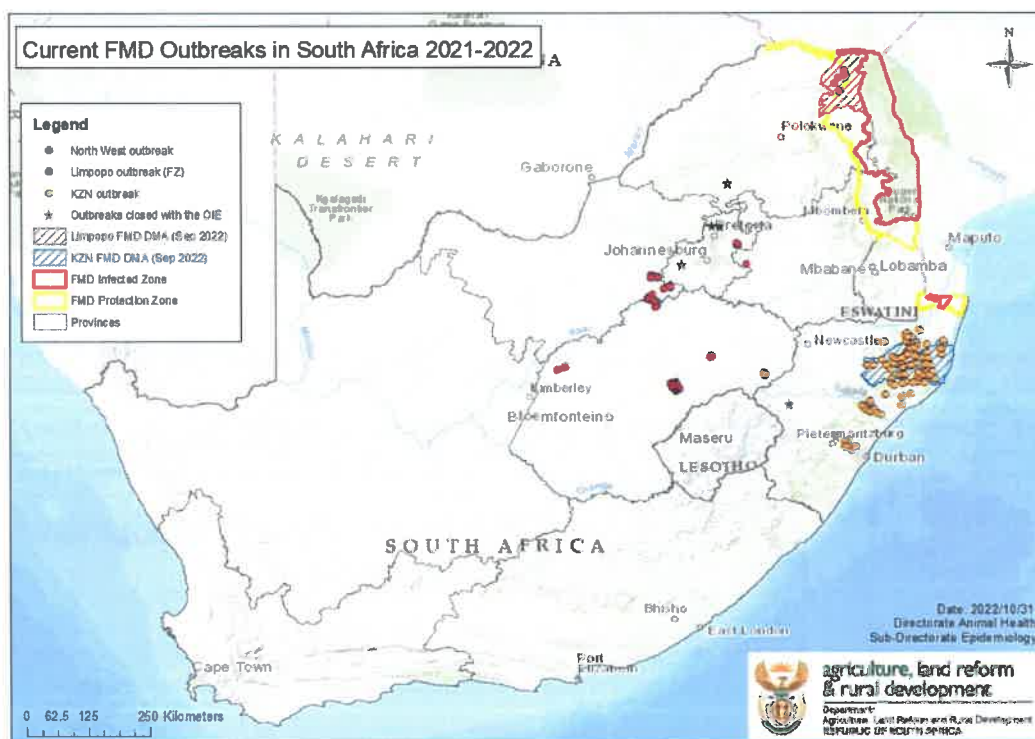


Table 1: Summary of active outbreaks per province:

Province	Number of open outbreaks	Number of resolved outbreaks	Total number of outbreaks	Last reported outbreak
KwaZulu-Natal	115	2	117	31 October 2022
Limpopo (previous free zone)	7	1	8	13 June 2022
North West	16	1	17	21 October 2022
Gauteng	4	3	7	15 September 2022
Free State	40	1	41	31 October 2022
Mpumalanga	1	0	1	5 August 2022
Total	183	8	191	

2. Control Measures

2.1 Control measures on movement of cattle, sheep and goats

The control measures on movement of cattle, sheep and goats in the two Disease Management Areas (DMAs) in Limpopo and KwaZulu-Natal Provinces, remain in place. Should farmers wish to move such animals into, through, within, or out of these two DMAs, their local state veterinary office must be contacted to find out whether the intended movements will be allowed, and under which conditions.

In the rest of the country, livestock owners must provide a declaration of health and origin and must obtain the necessary Stock Theft documents for all cattle, sheep and goats to be moved from their property of origin onto new properties. Recipients of such animals must give written agreement to isolate new livestock for 28 days before introducing them into the main herds of the destination farm.

2.2 Movement control on affected farms / locations

All affected farms and feedlots in North West, Free State, Gauteng and Mpumalanga Provinces remain under quarantine with strict access control. The locations involved are well fenced and movement of animals from these farms can be effectively prevented. Affected locations in KwaZulu Natal and Limpopo also remain under quarantine and no cloven-hooved animals or their products may move from these locations. The control measures for movement of cloven-hooved animals and products out of the FMD protection zones have not changed.

2.3 Vaccination

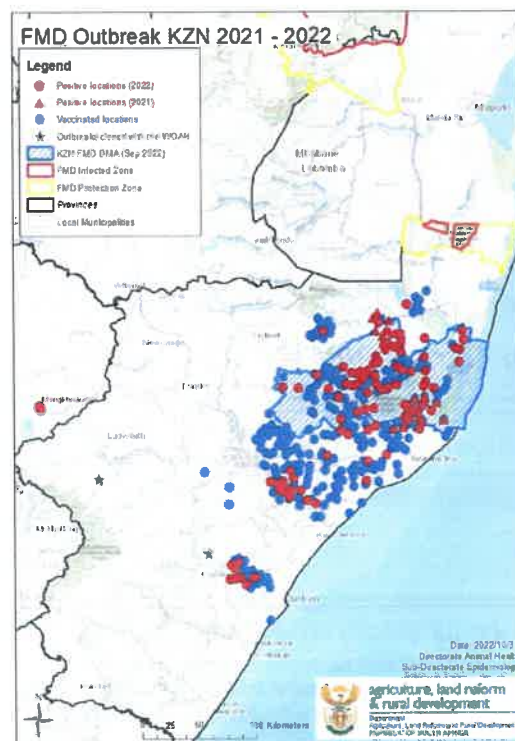
Vaccination campaigns run continuously in affected provinces. For the purpose of these technical update reports, the consolidated information as received at the national office is as follows:

Table 2: Summary of animals vaccinated per Province and in total:

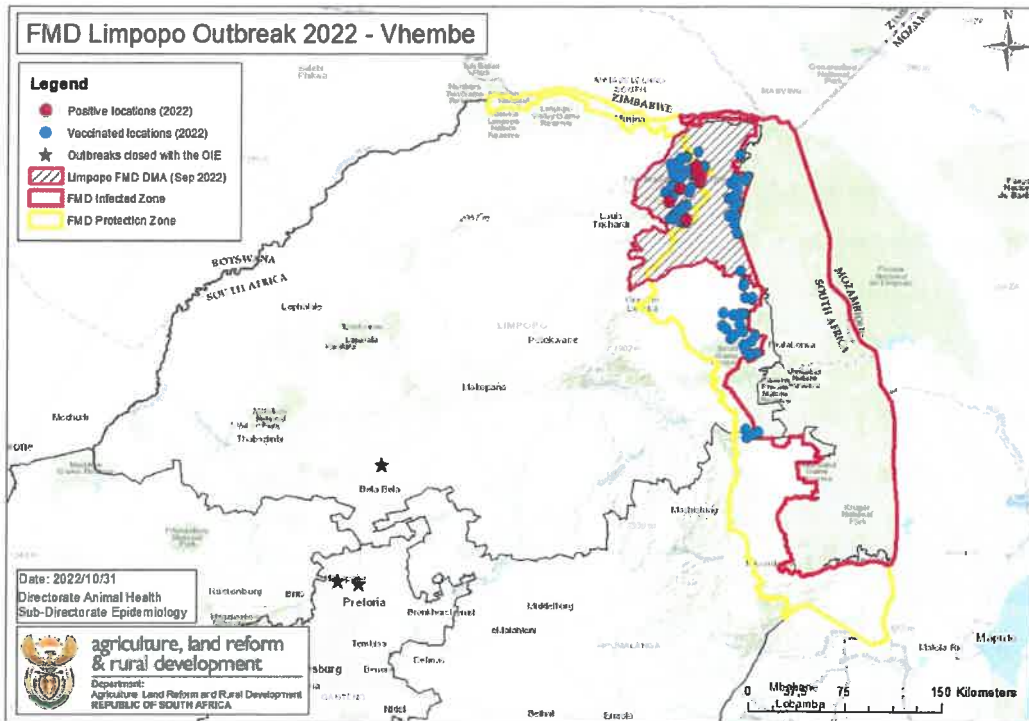
Province	Number of animals vaccinated
KwaZulu Natal	300 000
Limpopo	99 522
North West	33 577
Free State	81 909
Gauteng	29 307
Mpumalanga	26 073
Total animals vaccinated	570 388

The following maps reflect to the most recent consolidated vaccination statistics.

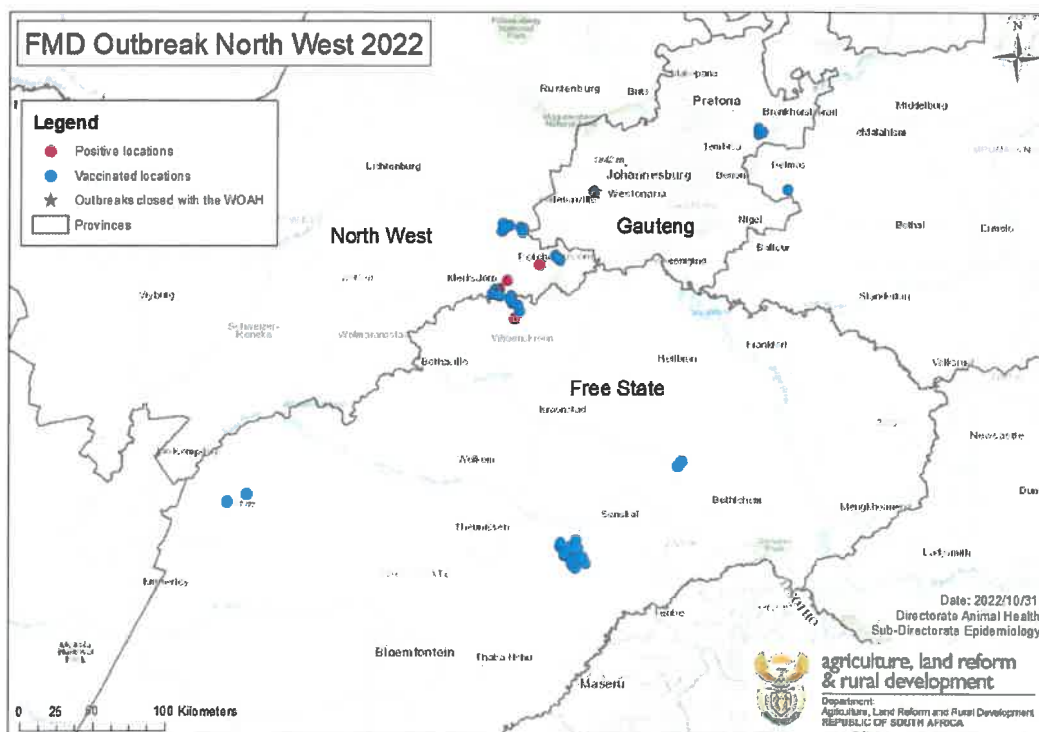
Map 2: Vaccinated locations in KwaZulu-Natal – Free State Provinces outbreak event
 (most positive locations are also vaccinated, therefore vaccinated and positive points are superimposed)



Map 3: Vaccinated locations in Limpopo Province outbreak event (most positive locations are also vaccinated, therefore vaccinated and positive points are superimposed)



Map 4 Vaccinated locations in North West - Free State – Gauteng - Mpumalanga Provinces outbreak event (most positive locations are also vaccinated, therefore vaccinated and positive points are superimposed)



2.4 Depopulation of affected premises and closure of outbreaks

In total, 8 premises where outbreaks occurred have been resolved and closed with the World Organization for Animal Health (WOAH founded as OIE).

The Free State has begun with depopulating animals from positive locations, with 11 963 cattle sent to designated abattoirs for controlled slaughter. The infected properties remain under quarantine until 28 days after depopulation and disinfection. The outbreaks on the properties will be officially closed once the disinfection process has been concluded. One outbreak has been officially closed with the WOAHA.

Two farms in Gauteng were depopulated through movement of the cattle to a designated abattoir for controlled slaughter, and destruction with safe disposal of other cloven-hoofed animals that were present on one of the farms.

Serologically positive F-branded animals were found at two auction premises in Gauteng and Limpopo Provinces. These animals were slaughtered and disposed of, followed by disinfection of the auction premises, and these two outbreaks have subsequently been closed.

Mpumalanga Province has begun depopulating animals from the affected property, with 5 379 cattle sent to a designated abattoir for controlled slaughter. The outbreaks on the farm will be officially closed once the farm has been depopulated and the disinfection process has been concluded.

Two feedlots in KwaZulu-Natal Province were depopulated through controlled slaughter and the outbreaks on these properties were closed.

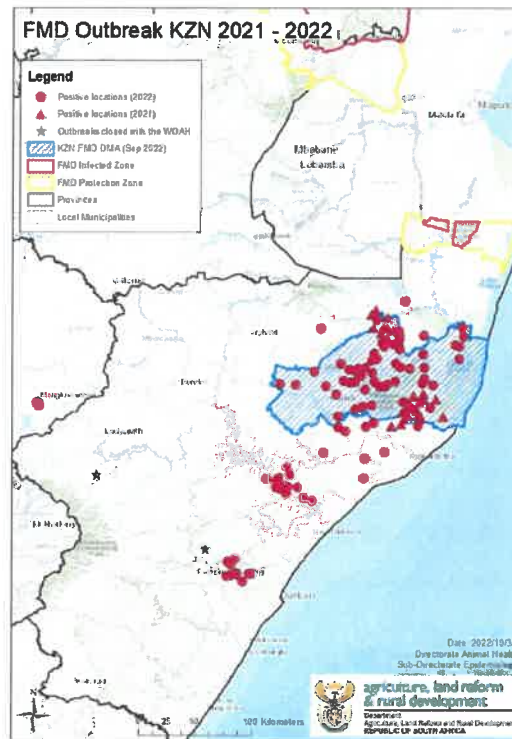
The North West Province has begun depopulating animals from positive locations, with 16 302 cattle sent to designated abattoirs for controlled slaughter. These properties will remain under quarantine until 28 days after they have been depopulated and disinfected. One outbreak has been officially closed with the WOAHA.

3. Details of open outbreaks

3.1 Outbreak event 1: KwaZulu-Natal – Free State Provinces

There are 119 affected properties in this outbreak event (115 in KZN and 4 in the Free State), while two outbreaks have been resolved. This outbreak event started in May 2021 in KZN. Seven new positive cases have been reported since the update report on 24 October 2022. Five new positives were identified in eThekweni local municipality in KZN and two new positives in Maluti-a-Phofung local municipality in the Free State province.

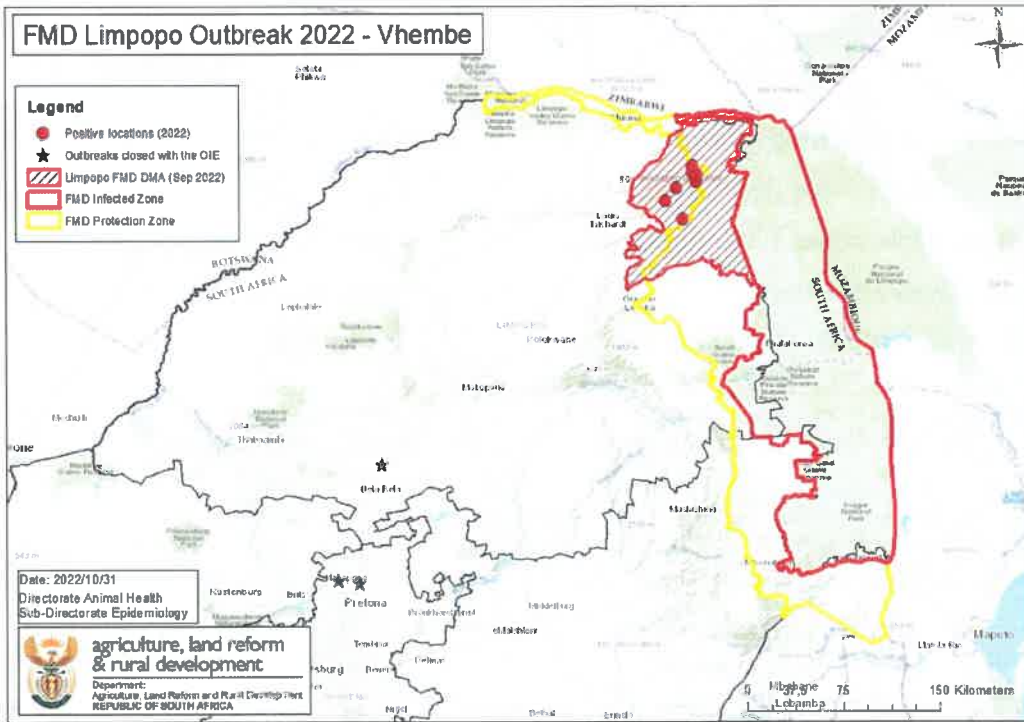
Map 5: Outbreak event in KwaZulu-Natal – Free State Provinces



3.2 Outbreak event 2: Limpopo Province

This outbreak event started in March 2022. There are 7 affected properties, with the last positive case reported on 13 June 2022. Three outbreaks have been resolved, which includes two properties in Gauteng that became infected as part of this outbreak event.

Map 6: Outbreak event in Limpopo Province

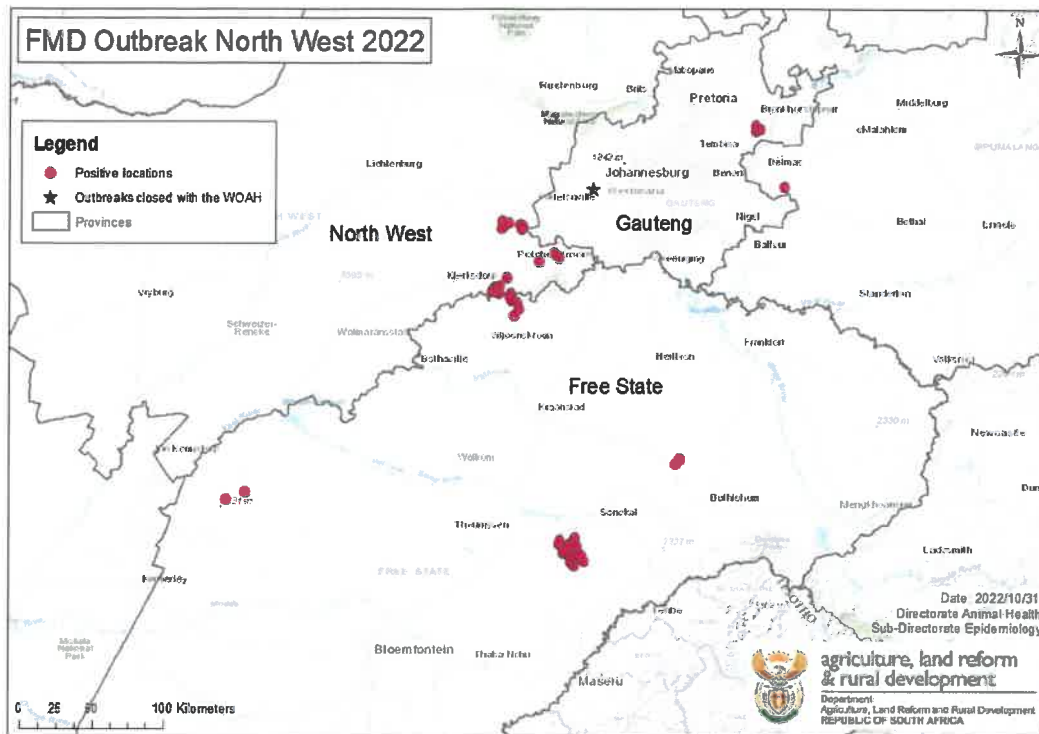


3.3 Outbreak event 3: North West - Free State – Gauteng - Mpumalanga Provinces

This outbreak event started in North West Province in March 2022. There are 57 properties currently affected in this outbreak event, and 3 outbreaks have been resolved. The breakdown per province is as follows:

- North West Province has 16 open outbreaks and 1 outbreak has been resolved.
- Gauteng Province has 4 open outbreaks, with no new positive cases reported since 15 September 2022, and 1 outbreak has been resolved.
- Free State Province has 36 open outbreaks in this outbreak event. One outbreak has been resolved.
- Mpumalanga Province has 1 open outbreak, which was reported on 5 August 2022 and no outbreaks resolved yet.

Map 7: Outbreak event North West - Free State – Gauteng – Mpumalanga Provinces



4. Diagnostic tests and epidemiology

There are two viruses responsible for the current outbreaks:

- SAT 2 serotype in KwaZulu Natal Province, with spread to Free State Province
- SAT 3 serotype originating from Limpopo Province, with spread to North West, Free State, Gauteng and Mpumalanga.

Based on epidemiological investigations, the main routes of virus transmission are:

- Movement of clinically healthy animals that are in the incubation period
- Contamination of properties by vehicles, persons, implements and other possible fomites entering the farms
- Nose to nose contact between cattle on neighbouring farms
- Illegal movement of animals out of affected areas

For all reported outbreaks, confirmation of disease was done using a combination of the following diagnostic tests at the ARC Onderstepoort Veterinary Research Transboundary Animal Diseases laboratory (OVR-TAD):

- Solid Phase Competition ELISA (SPCE)

- Non Structural Protein (NSP) ELISA
- Polymerase Chain Reaction (PCR)

5. Surveillance

The three outbreak event areas continue to be subjected to clinical and serological surveillance, with intensified inspections around newly identified infected farms and dip tanks and at epidemiologically linked locations identified through forward and backward tracing.

Passive surveillance leads to reporting of suspect outbreaks by veterinarians and farmers that are followed up by intensive clinical inspection and laboratory testing. Some outbreak locations were identified as a result of such reports of varied clinical signs seen in cattle, while most were identified during trace back and trace forward exercises, including links of movements, as well as surveillance of farms adjacent to positive locations. The varying clinical presentation of the disease in different locations necessitates surveillance based on both clinical inspections, including mouthings, as well as serology.

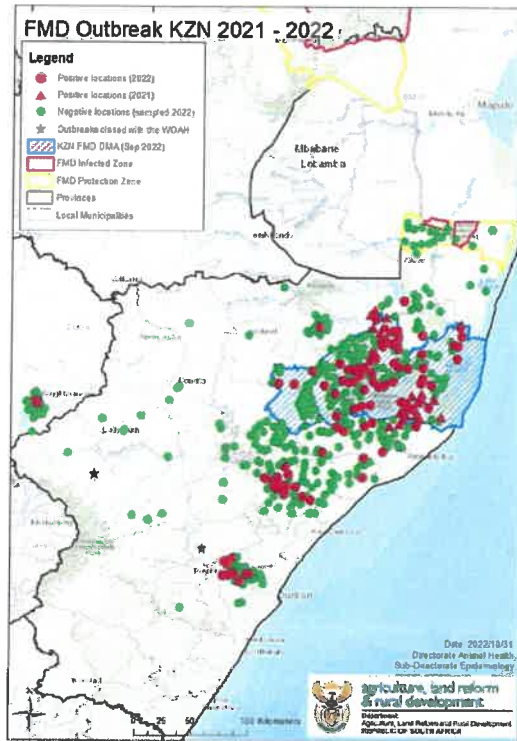
Once any animals are found to be positive at a location, the entire location with all in contact animals at the location, is regarded as positive. The table above therefore reflects the status of locations and not the individual animals at the locations. Note that the number of negative locations statistics are only updated when all the information has been received.

Table 3: Summary of Serological surveillance per province:

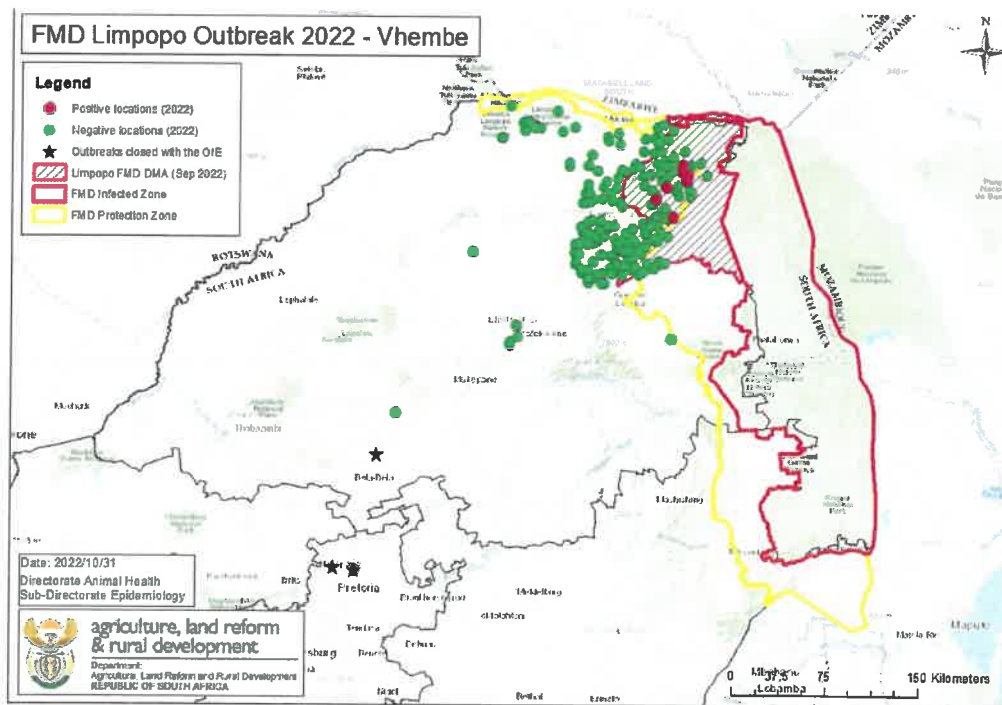
Province	Number negative locations	Number of open positive locations	Total number of locations
KwaZulu-Natal	387	115	502
Limpopo	211	7	218
North West	92	16	108
Gauteng	46	4	50
Free State	205	40	245
Mpumalanga	52	1	53
Total	993	183	1 176

Below are maps of each outbreak event, indicating all locations surveyed, with negative results indicated in green and positive locations in red. Please also refer to the explanatory notes after the maps for more clarity.

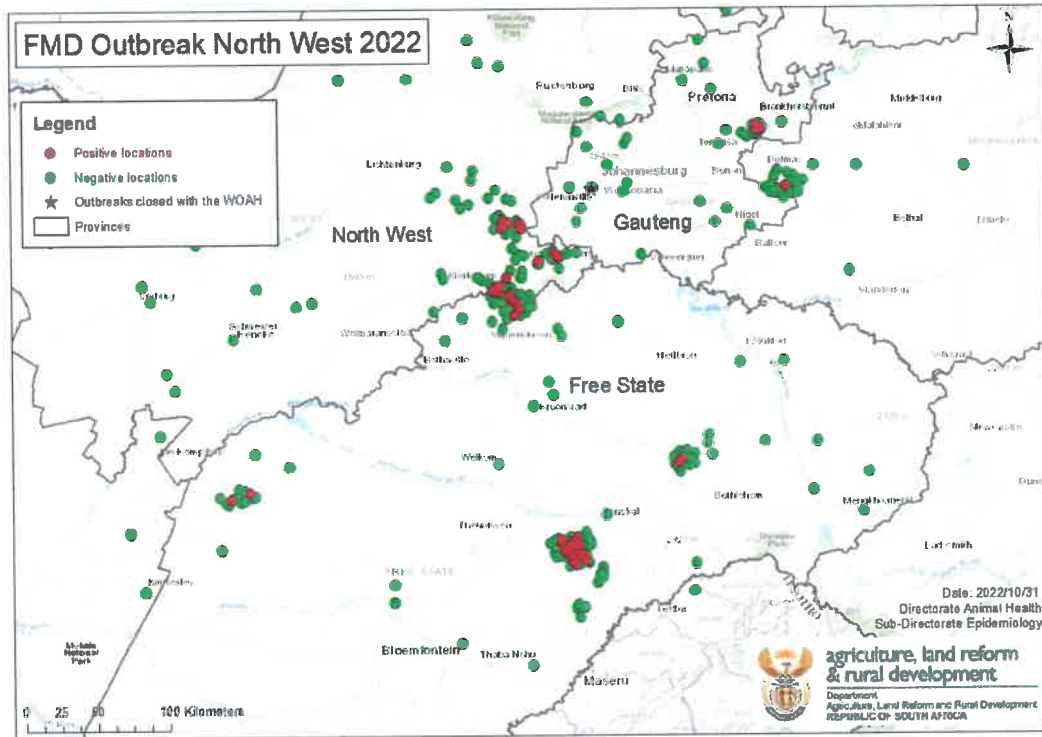
Map 8: Serological surveillance in KwaZulu-Natal-Free State Province outbreak event, showing 387 negative and 119 positive locations



Map 9: Serological surveillance in Limpopo Provinces outbreak event, showing 211 negative and 7 positive locations



Map 10: Serological surveillance in North West - Free State – Gauteng – Mpumalanga Provinces outbreak event showing 395 negative and 57 positive locations (please note that some of the points are superimposed due to close proximity)



Note that the North West, Free State, Mpumalanga and Gauteng Provinces are undergoing the second round testing on previously identified linked locations and the numbers of the negative locations have thus not changed drastically for these provinces despite the number of locations tested having increased.

Note that in both the table, as well as the maps above, the number of locations that tested negative only indicates the number of locations that tested negative during this year (2022) from when the disease was found to be spreading again. The number of positive locations also includes the locations that were identified as positive last year (2021).

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 Date: 31/10/2022