

Foot and Mouth Disease outbreak and surveillance update report

16 August 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 5 August 2022.

1. Introduction and summary

South Africa currently has 116 open Foot and Mouth Disease (FMD) outbreaks in the previous FMD free zone, comprised of three outbreak events. The first event started in May 2021 and is affecting KwaZulu-Natal (KZN) Province. The second outbreak event started in March 2022 in the previous free zone in Limpopo Province. The third outbreak event also started in March 2022 in North West Province, with spread to Free State, Gauteng and Mpumalanga Provinces. In order to halt the spread of FMD, the movement of cattle in the whole country was temporarily suspended.

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.

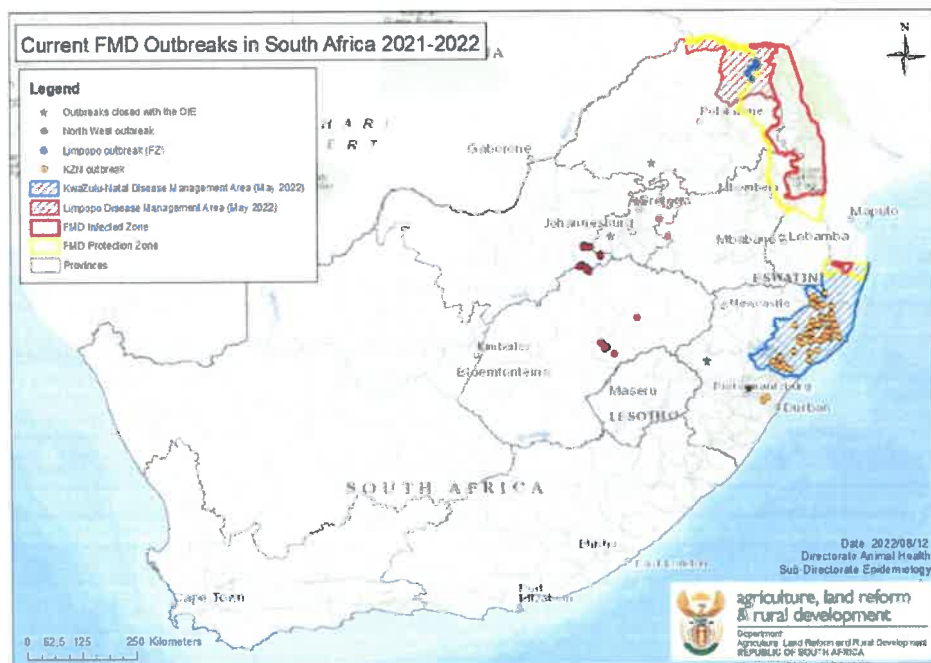


Table 1: Summary of active outbreaks per province:

Province	Number of open outbreaks	Number of resolved outbreaks	Total number of outbreaks	Last reported outbreak
KwaZulu-Natal	73	2	75	29 July 2022
Limpopo (previous free zone)	7	1	8	13 June 2022
North West	14	0	14	21 June 2022
Gauteng	2	3	5	16 August 2022
Free State	19	0	19	16 August 2022
Mpumalanga	1	0	1	5 August 2022
Total	116	6	122	

2. Control Measures

2.1 National Cattle Standstill

A National movement ban on cattle was instituted on 16 August 2022. This restriction will remain in place for only a short period of time, until the current exponential spread of FMD has been stopped. Due to the major disruption that the movement ban will cause in the normal business of many sectors, the ban is only applicable to cattle, as the movement of cattle was identified as the main cause of the continued spread of the outbreaks.

The implications of the movement ban include:

- Cattle may not be moved from one property to another for any reason, except for direct slaughter at a registered abattoir.
- No cattle may be moved between farms, locations or premises for purposes of sale, shows, breeding, backgrounding, ritual purposes, lobola, or any other purpose.
- No cattle may be moved into feedlots, and movement out of feedlots are only allowed directly to registered abattoirs.
- No cattle may be moved for purpose of import or export.

2.2 Movement control

All affected farms and feedlots in North West, Free State, Gauteng and Mpumalanga are currently under quarantine with strict access control. The locations involved are well fenced and movement of animals from these farms can be effectively prevented.

The Minister of Agriculture, Land Reform and Rural Development declared an expansion of the KZN Disease Management Area (KZN DMA) and the Disease Management Area that had been originally introduced 2019 in the Limpopo Province (LP DMA), in the Government Gazette No. 46350 on 10 May 2022.

There are still movement restrictions on cloven-hoofed animals, their products and genetic materials out of, into, within or through the KZN DMA and LP DMA. The Movement Control Protocol was revised, and an updated version circulated on 25 May 2022. Visible Veterinary Patrols and roving roadblocks are directed to cover high risk areas according to information on possible movement of animals.

2.3 Vaccination

In an effort to curtail the spread of the disease, vaccination campaigns have been initiated in affected provinces. A total of 388 449 vaccinations have been recorded so far. Although vaccination campaigns run continuously, the vaccination statistics for the purpose of these technical update reports reflect the consolidated information as received at the National office.

In KZN, the vaccination campaign started on 15 March 2022 and is still ongoing in the areas of the KZN Disease Management Area (KZN DMA) where there appears to be active virus circulation. A risk-based approach is followed to determine which areas to vaccinate and over 256 000 cattle were vaccinated thus far.

The Thulamela area of Limpopo Province is being vaccinated to establish a band of resistant animals around the known positive dip tanks. Local dip tanks and crush pens have been revamped, enabling vaccination and surveillance teams to work more effectively. In addition to vaccinations within the previous Free Zone, the Protection Zone is also undergoing routine vaccinations. Vaccination statistics for Limpopo have not been updated since the report of 5 August 2022. Thus far 80 locations with a total of 44 373 cattle have been vaccinated, and the vaccination campaign continues.

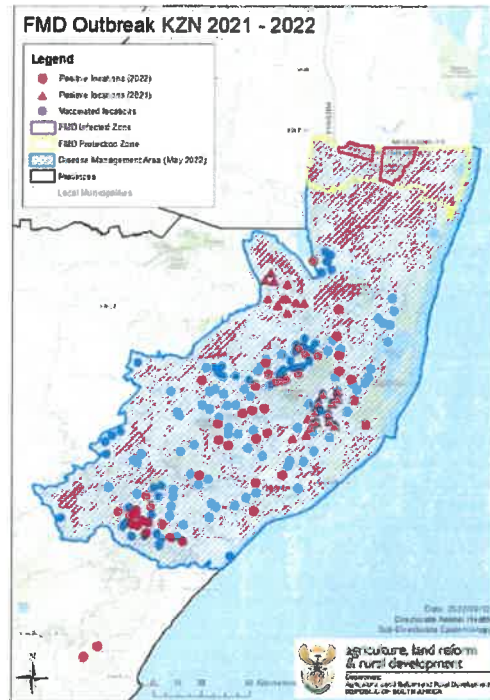
Vaccinations of affected premises in the North West Province began in early June 2022. Veterinary Services has started with the second round of vaccinations. The vaccination statistics have not been updated since the report on the 5 August 2022, with 32 448 animals being vaccinated in the North West Province.

The Free State Province vaccination campaign is ongoing, including vaccination of new affected premises. To date, 55 628 cattle were vaccinated at five locations in the Free State Province.

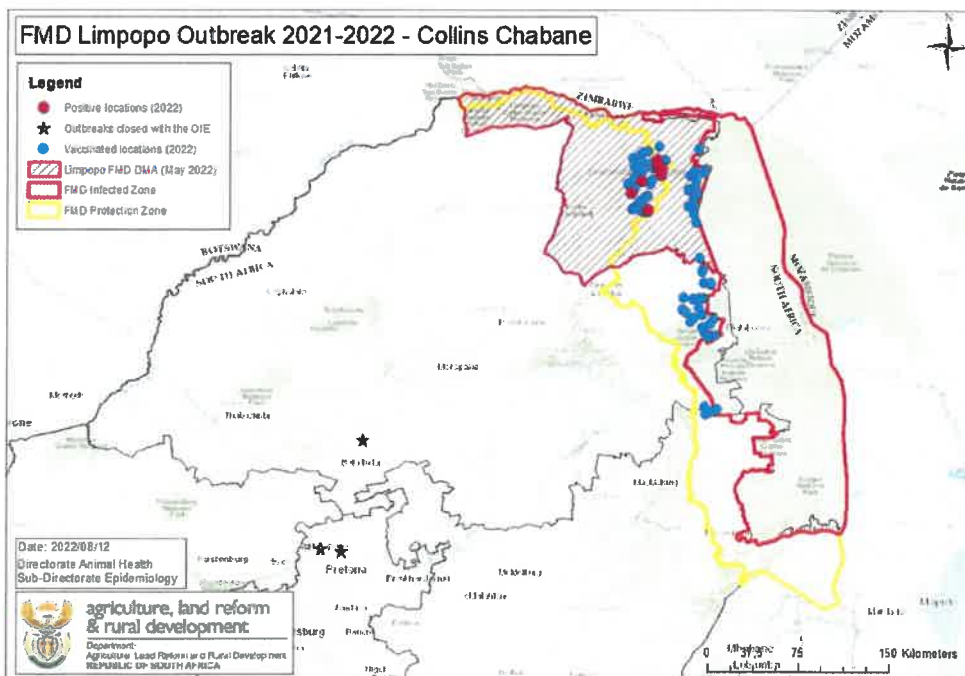
Vaccination campaigns have similarly begun at infected premises in Gauteng and Mpumalanga Provinces and the statistics will be reported as they become available.

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

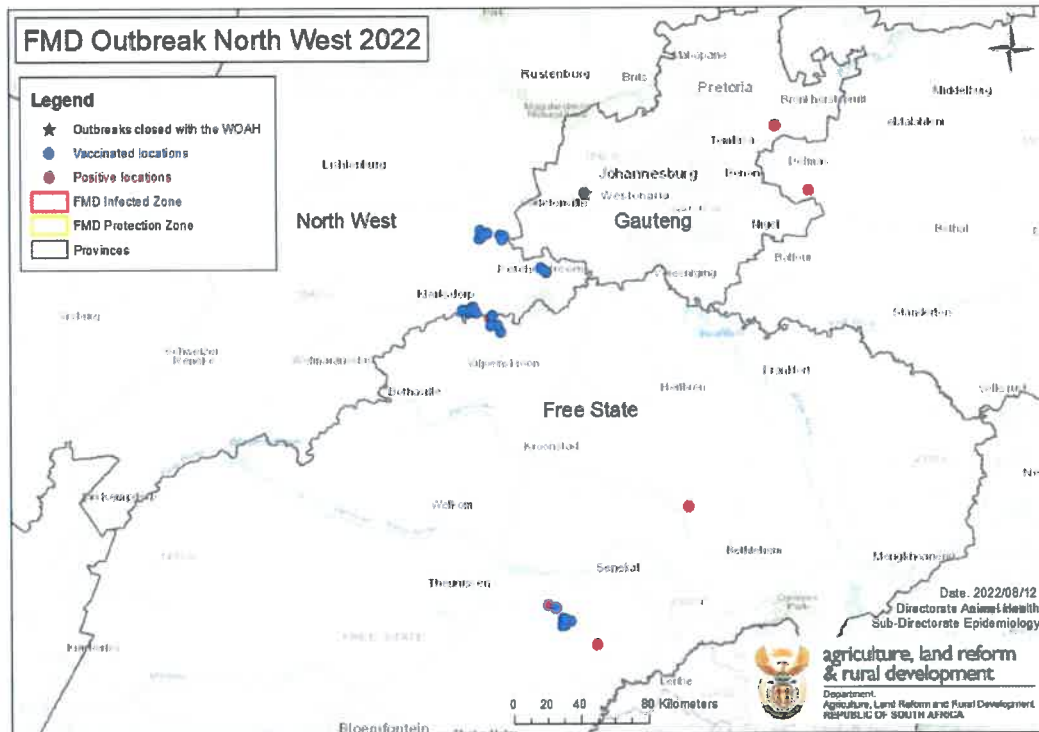
Map 2: Vaccinated locations in KwaZulu-Natal Provinces outbreak event (most positive locations are also vaccinated, therefore vaccinated and positive points are superimposed)



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



Map 4: Vaccinated locations in North West and Free State Province 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

One Free State farm was depopulated and remains under quarantine until 28 days after depopulation and disinfection. The outbreak on this farm will be officially closed once the disinfection process has been concluded.

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. These animals were slaughtered and disposed of, followed by disinfection of the auction premises, and these two outbreaks have subsequently been closed.

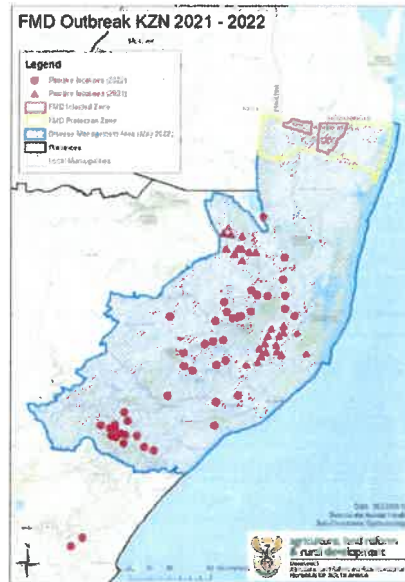
Two feedlots in KwaZulu Natal Province were depopulated through controlled slaughter and the outbreaks on these properties were closed.

3. Details of open outbreaks

3.1 Outbreak event 1: KwaZulu-Natal Province

There are 73 affected properties in this outbreak event, with the last positive case reported on 29 July 2022. Two outbreaks have been resolved.

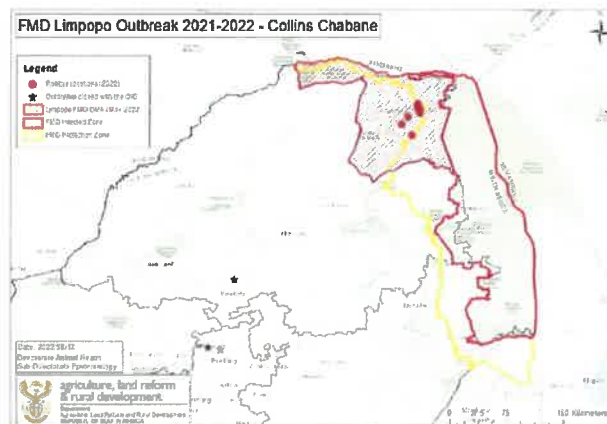
Map 5: Outbreak event in KwaZulu-Natal Province



3.2 Outbreak event 2: Limpopo Province

There are 7 affected properties in this outbreak event, with the last positive case reported on 13 June 2022. One outbreak has been resolved.

Map 6: Outbreak event in Limpopo Province



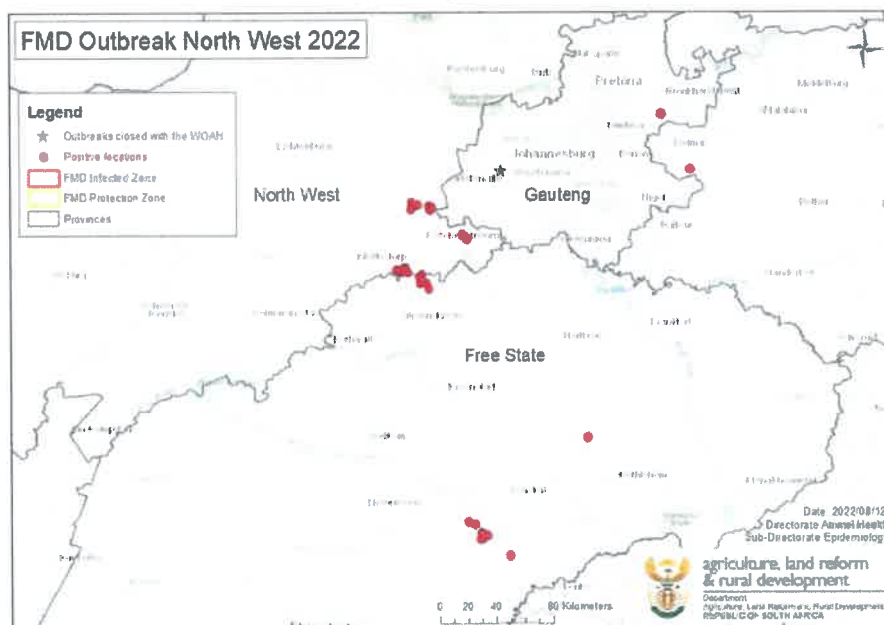
3.3 Outbreak event 3: North West - Free State – Gauteng - Mpumalanga Provinces

There are 36 properties currently affected in this outbreak event and four outbreaks have been resolved. The breakdown per province is as follows:

- North West Province has 14 open outbreaks, with the last positive case reported on 21 June 2022 and no outbreaks resolved yet.
- Gauteng Province has 2 open outbreaks, with the last reported case on 16 August 2022, and 3 outbreaks have been resolved.
- Free State Province has 19 open outbreaks, with the last positive case reported on 16 August 2022, and no outbreaks resolved yet.
- Mpumalanga Province has 1 open outbreak, reported on 5 August 2022.

Since the update report of 5 August 2022, a total of 6 new positive locations were identified in this outbreak event. Five of the new locations were reported in the Free State province - one in Moqhaka municipality, three in Setsoto municipality and one in Nketoana municipality. One location was identified in the City of Tshwane municipality of Gauteng Province. Locations were detected through serological surveillance within the radius surrounding previously identified infected locations or through detection and reporting of clinical signs.

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



4. Diagnostic tests and epidemiology

The outbreak event in Vhembe district in Limpopo Province is caused by a SAT 3 virus, which is also responsible for the outbreaks in the North West, Free State, Mpumalanga and Gauteng Provinces. This virus appears to be highly contagious and spread continues despite the implementation of quarantine and movement control. From preliminary epidemiological investigations, it appears that there are three main routes of virus transmission:

- Movement of clinically healthy animals that are in the incubation period
- Contamination of properties by vehicles, persons, implements and other possible so-called fomites entering the farms due to inadequate biosecurity
- Nose to nose contact between cattle on neighbouring farms.

In KwaZulu Natal Province, epidemiological investigations to date have not revealed a plausible source for the outbreak. However, the virus responsible for the outbreak is a SAT 2 serotype and is closely related to a SAT 2 virus responsible for an outbreak that occurred in the FMD Protection Zone in northern Limpopo Province in 2019.

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. Within the Limpopo Province DMA, separate teams are also performing clinical and serological surveillance from the outskirts of the DMA towards the known affected areas.

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 through auctions, 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.

Table 2: Summary of Serological surveillance per province:

Province	Number negative locations	Number of open positive locations	Total number of locations
KwaZulu-Natal	323	73	396
Limpopo	166	7	137
North West	71	14	85
Gauteng	26	2	28
Free State	73	19	92
Mpumalanga	0	1	1
Total	659	116	775

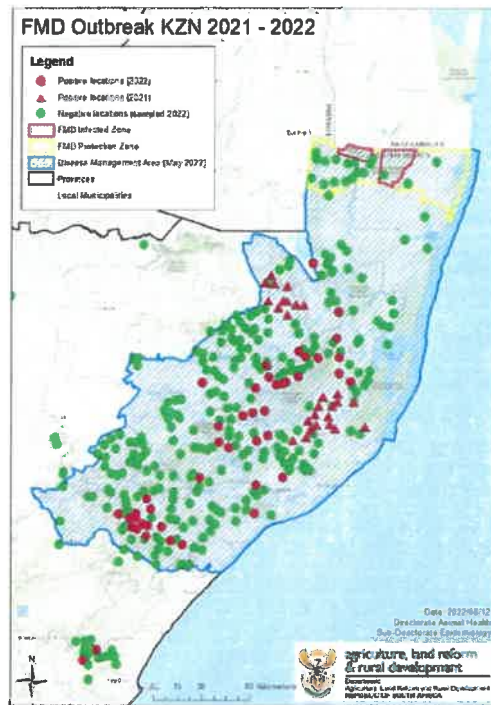
Once any animals are found to be positive at a location, the entire location with all in contact animals at the location, are regarded as positive. The table above therefore reflects the status of locations and not the individual animals at the locations.

Below are maps of each outbreak event, indicating all locations surveyed, with negative results indicated in green and positive locations in red. Note that the number of negative locations statistics are only updated when all the information has been received and consolidated and has not changed since the last report on 5 August 2022.

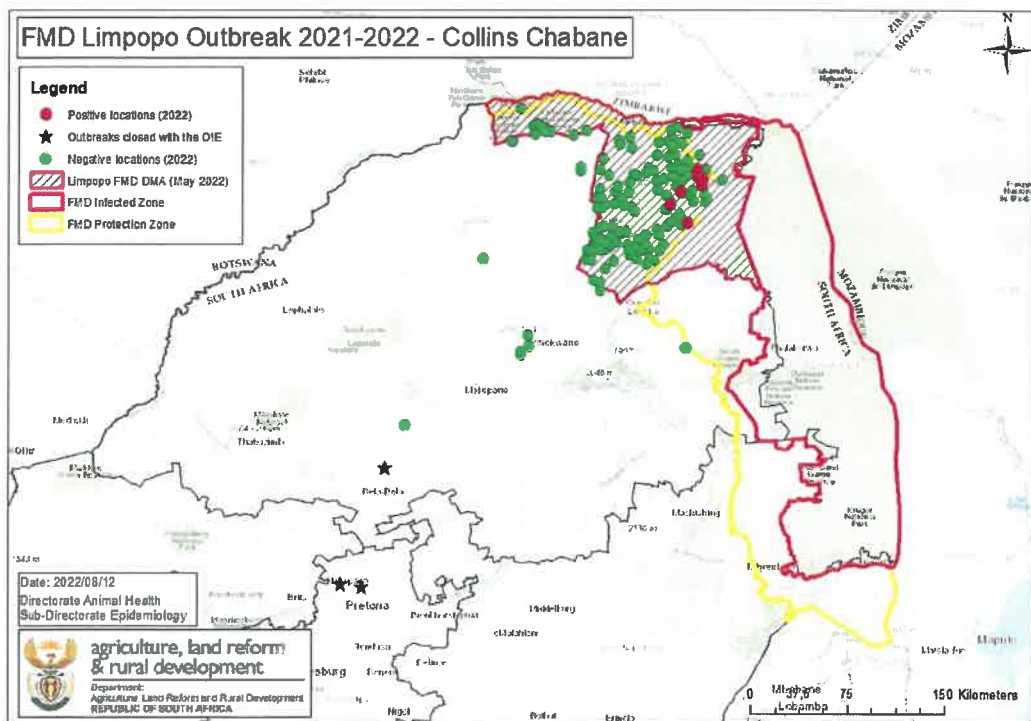
Note that the North West and Free State Provinces are undergoing the second round testing on previously identified linked locations and the numbers of the negative locations have thus not changed drastically for these provinces despite the number of locations tested having increased.

Note that in both the table above, as well as the maps below, 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).

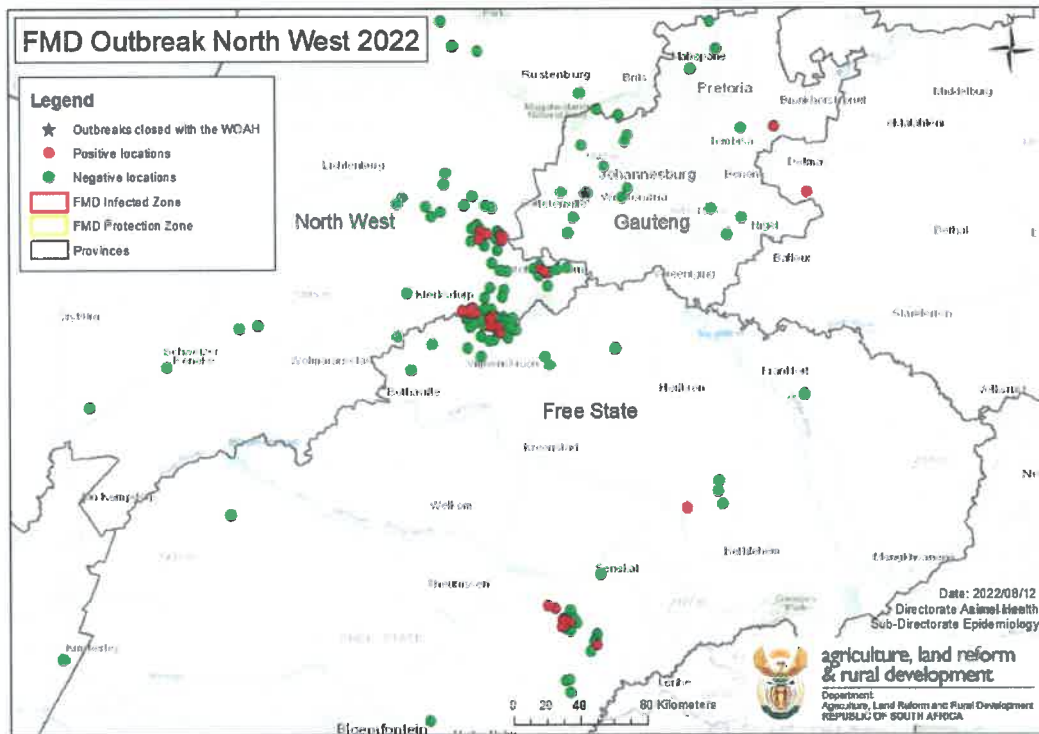
Map 8: Serological surveillance in KwaZulu-Natal Province outbreak event, showing 323 negative and 73 positive locations



Map 9: Serological surveillance in Limpopo Provinces outbreak event, showing 166 negative and 7 positive locations



Map 10: Serological surveillance in North West - Free State – Gauteng – Mpumalanga Provinces outbreak event showing 170 negative and 36 positive locations (please note that some of the points are superimposed due to close proximity)



6. Awareness and Illegal Movements

The movement of animals remains the greatest contributing factor to the spread of disease. All stakeholders, farmers and livestock owners were again requested to abide by the movement restrictions within all affected provinces and to not to move cloven hoofed animals without proper knowledge of the health status of the farms of origin. Feedlots were also advised to isolate animals before allowing entry into the main feedlot.

The illegal movement of animals from the FMD protection zone with vaccination to the FMD free zone played a significant role in all of the current outbreaks. The outbreaks in KZN and Limpopo Provinces were directly caused by such proven or suspected illegal movements. The industry is actively assisting in the clamp-down on illegal movements by cooperating with veterinary services and Stock Theft Units in reporting suspect movements of animals and by reporting animals of suspect origin being presented at auctions. Any illegally moved animals found are seized and destroyed and perpetrators are prosecuted for contravention of the Animal Diseases Act, 1984 (Act No 35 of 1985).

The animals that caused the outbreak in North West Province moved from an area in Limpopo that, at the time of moving, the area of origin in Limpopo was already infected, though yet undetected at the time. This illustrates the real danger of animals moving during the incubation period of the disease.

Livestock owners are continuously reminded to exercise utmost caution when moving cloven-hoofed animals by ascertaining the history of the animals and their contacts and consulting veterinary advice prior to accepting any new stock.


Director Animal Health

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