Foot and Mouth Disease outbreak and surveillance update report

21 June 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 OIE WAHIS system due to technical difficulties with the OIE reporting system. This report reflects changes since the previous update report of 30 May 2022.

1. Introduction and summary

South Africa currently has 91 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 Province. The second outbreak event started in March 2022 in the previous free zone in Limpopo Province with spread to northern Gauteng Province in April 2022. The third outbreak event also started in March 2022 in North West Province, with spread to Free State and Gauteng Provinces. The affected linked locations in Gauteng and Free State Provinces were depopulated and those outbreaks will be officially closed once the disinfection processes have concluded.

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.

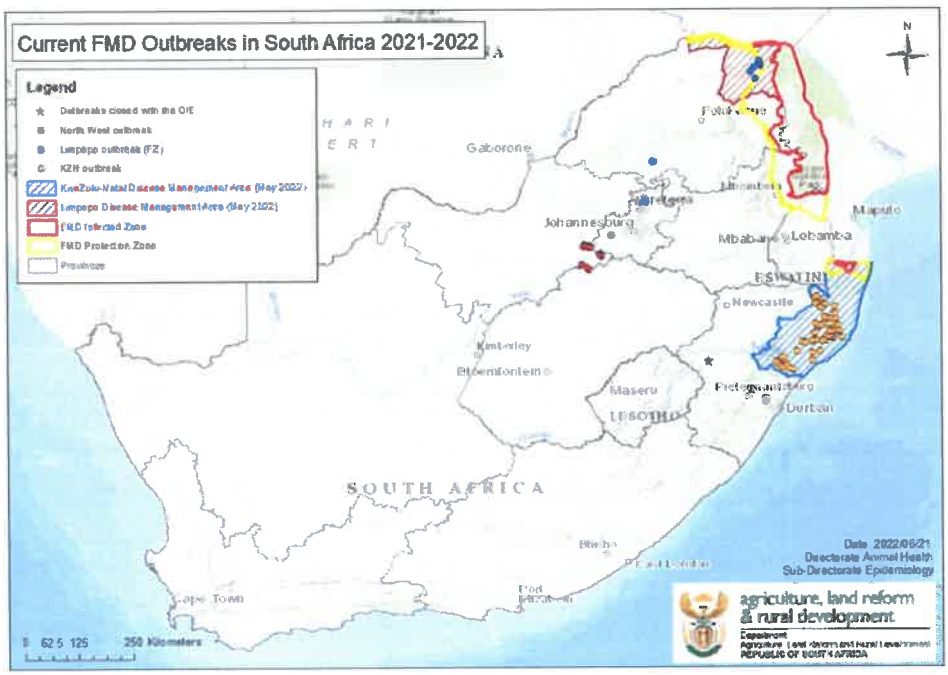


Table 1: Summary of active outbreaks per province:

Province	Number of open outbreaks	Number of resolved outbreaks	Total number of outbreaks	Last reported outbreak
KwaZulu-Natal	66	2	68	21 June 2022
Limpopo (previous free zone)	8	0	8	13 June 2022
North West	14	0	14	21 June 2022
Gauteng	2	1	3	26 April 2022
Free State	1	0	1	7 April 2022
Total	**91**	**3**	**94**	

2. Details of open outbreaks

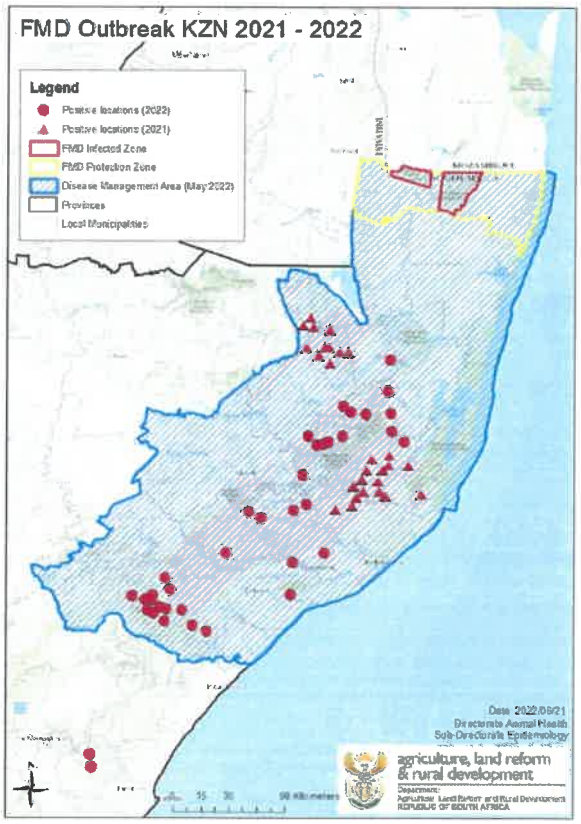
2.1 Outbreak event 1: KwaZulu-Natal Province

2.1.1 Affected locations

Since the update report of 30 May 2022, 5 additional positive locations have been identified in KZN through ongoing active and passive surveillance efforts. The locations of the new cases are as follows, 2 in Mthonjaneni municipality and 3 in Hlabisa Big 5 municipality, one of which is Hluhluwe-iMfolozi Park (HiP). These new cases fall within the KZN Disease Management Area (KZN DMA).

Buffalo with antibodies against FMD were identified in Hluhluwe iMfolozi Park. This is a serious challenge, since buffalo become permanent carriers of the disease without showing clinical signs. The Department met with the affected parties to discuss options in order to determine the best way forward. The park is currently undergoing serological surveillance to determine the status of the rest of the buffalos within the park.

Map 2: Outbreak event in KwaZulu-Natal Province



2.1.2 KZN Disease Management Area:

The Minister of Agriculture, Land Reform and Rural Development declared an expansion of the KZN DMA in the Government Gazette No. 46350 on 10 May 2022.

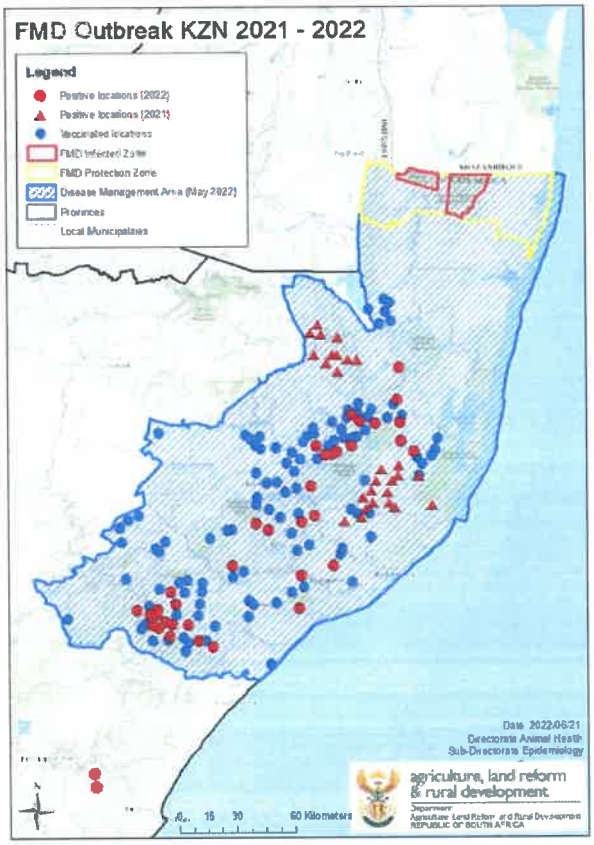
2.1.3 Movement control

There are still movement restrictions on cloven-hoofed animals, their products and genetic material out of, into, within or through the DMA. The Movement Control Protocol was revised and an updated version circulated on 25 May 2022. Visible Veterinary Patrols were redirected to cover high risk areas in the increased DMA.

2.1.4 Vaccination

The vaccination campaign started on 15 March 2022 and is still ongoing in the areas of the KZN DMA where there appears to be active virus circulation. A risk-based approach is followed, to determine which areas to vaccinate and around 190 000 cattle were vaccinated thus far.

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

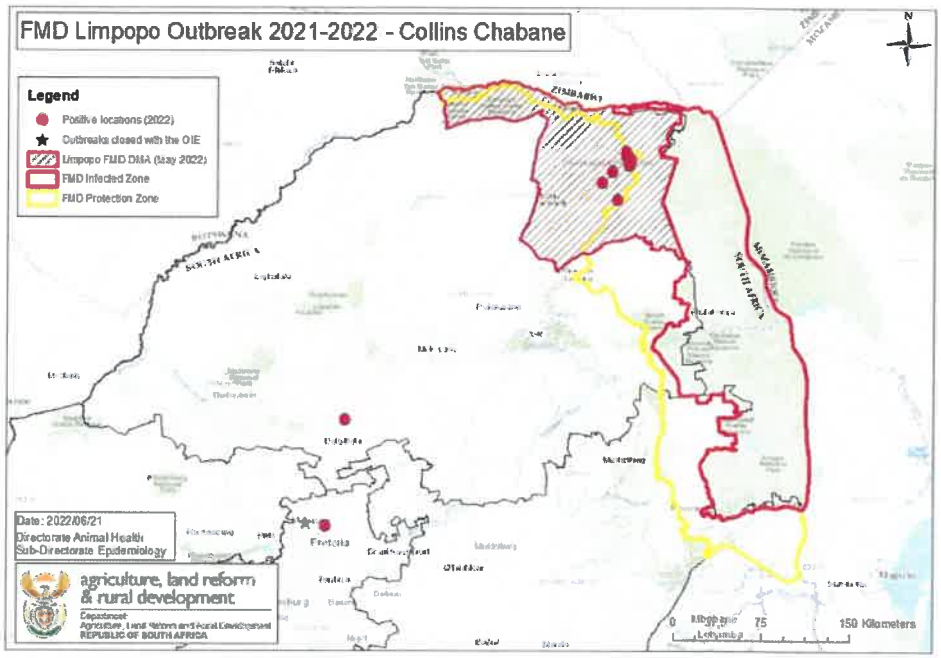


2.2 Outbreak event 2: Limpopo Province

2.2.1 Affected locations:

Since the update report of 30 May 2022, surveillance revealed one additional positive location in the previous free zone of Limpopo Province. This case is a dip tank in communal grazing land within the Thulamela district.

Map 4: Outbreak event in Limpopo and Gauteng Province



2.2.2 Limpopo Disease Management Area:

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

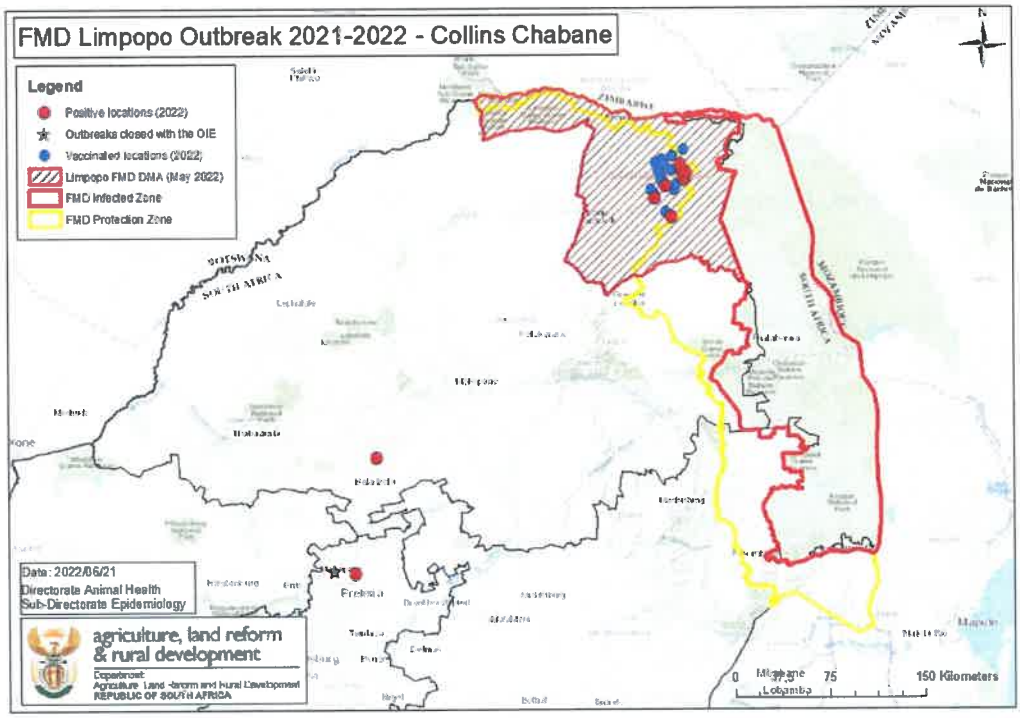
2.2.3 Movement control:

Movement control is being implemented in the expanded DMA, with restrictions on cloven-hoofed animals' movement, their products and genetic material out of, into, within or through the revised DMA in accordance with the updated Movement Control Protocol circulated on 25 May 2022. Two road blocks have started operations in the western part of the DMA. These road blocks operate 24 hours a day and will run till 7 July 2022, where-after roaming road blocks will continue as per information on possible movement of animals.

2.2.4 Vaccination:

In an effort to curtail the spread of the disease, cattle in the affected Thulamela area of Limpopo Province are 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. Fifteen locations with a total of 8948 cattle have been vaccinated thus far, and the vaccination campaign continues.

Map 5: Vaccinated locations in Limpopo outbreak event (most positive locations are also vaccinated, therefore vaccinated and positive points are superimposed)

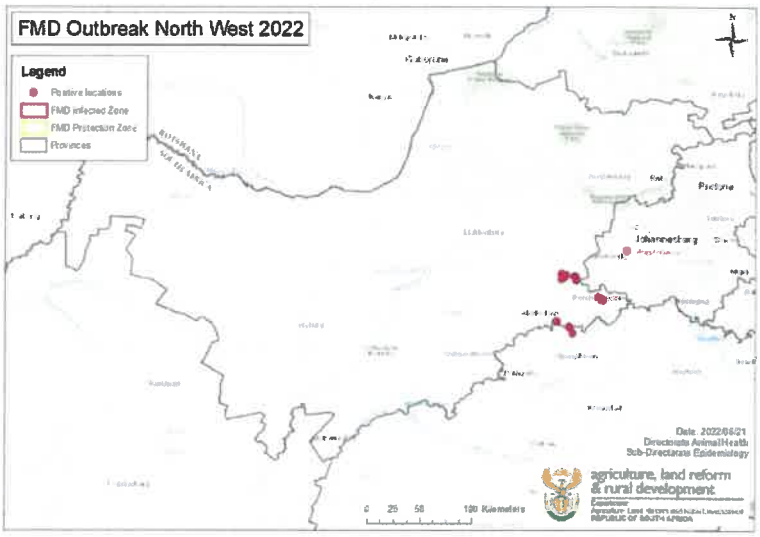


2.3 Outbreak event 3: North West Province-Gauteng-Free State

2.3.1 Affected locations:

Since the update report of 30 May 2022, five new positive cases were identified in the North West Province through continued testing of farms adjacent to affected premises and through active reporting from farmers. The new cases have all been identified in the JB Marks municipality.

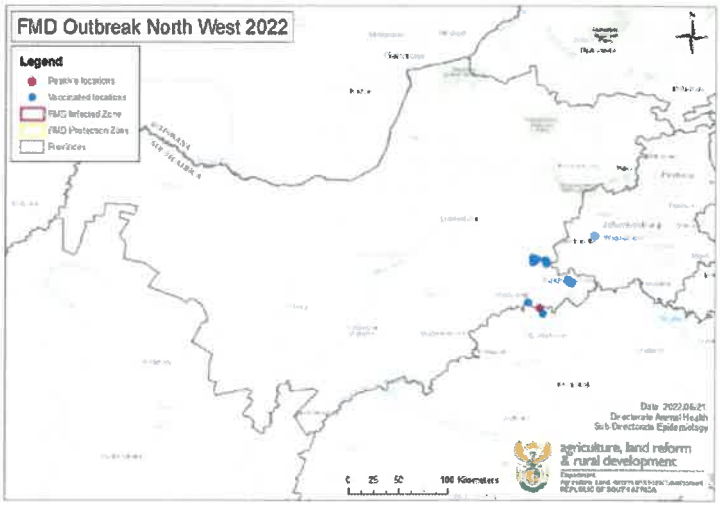
Map 6: Outbreak event North West - Gauteng - Free State



2.3.2 Movement control and Vaccination:

The affected farms remain under quarantine and no movement of animals are allowed off the farms. Vaccinations of affected premises began in early June 2022 and 4116 animals have been vaccinated thus far.

Map 7: Vaccinated locations in North West outbreak event (most positive locations are also vaccinated, therefore vaccinated and positive points are superimposed)



2.3.3 Depopulation of affected premises

Affected animals on the two positive farms in Gauteng Province and Free State Province were moved to a designated abattoir for controlled slaughter. The farms remain under quarantine until 28 days after depopulation and disinfection.

3. 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 North West, Free State and Gauteng Provinces. This virus is not epidemiologically linked to other FMD viruses identified in recent years.

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 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)

4. 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 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 mouthing, as well as serology.

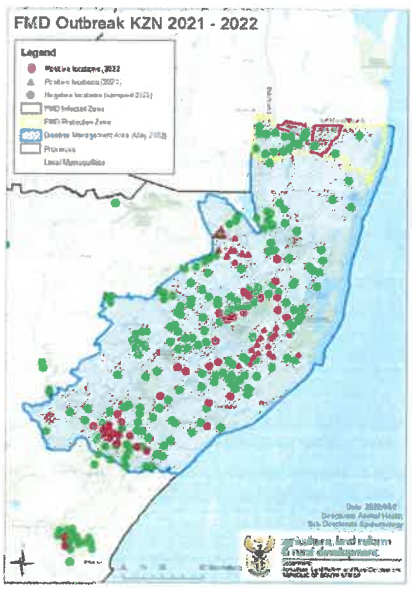
Table 2: Summary of Serological surveillance per province:

Province	Number negative locations	Number of positive locations	Total number of locations sampled
KwaZulu-Natal	246	66	312
Limpopo	53	8	61
North West	52	14	66
Gauteng	25	2	27
Free State	27	1	28
Total	**403**	**91**	**494**

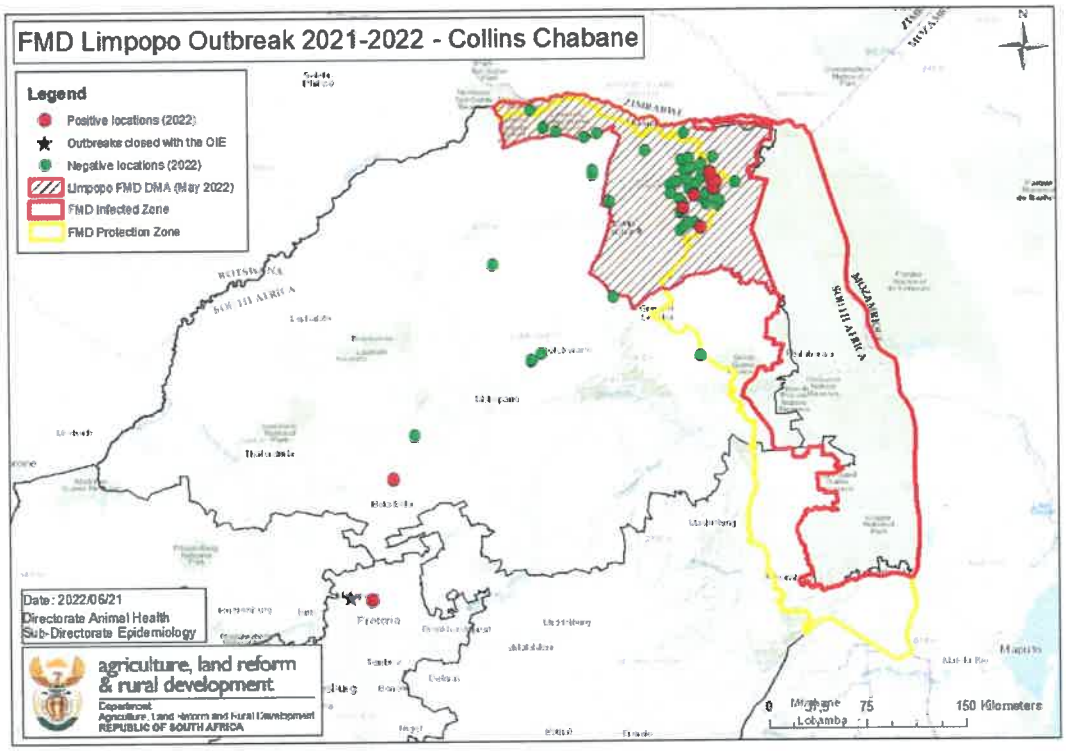
Once any animals are found to be positive at a location, the entire location with all in contact animals at the location, are regarded as positive. The table above therefore reflects the status of locations and not the individual animals at the locations. Note that the North West, Gauteng and Free State Provinces are undergoing the second round testing on numerous locations. Therefore, the negative locations have not drastically changed for these provinces, due to conducting several second round tests on previously identified linked 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 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).

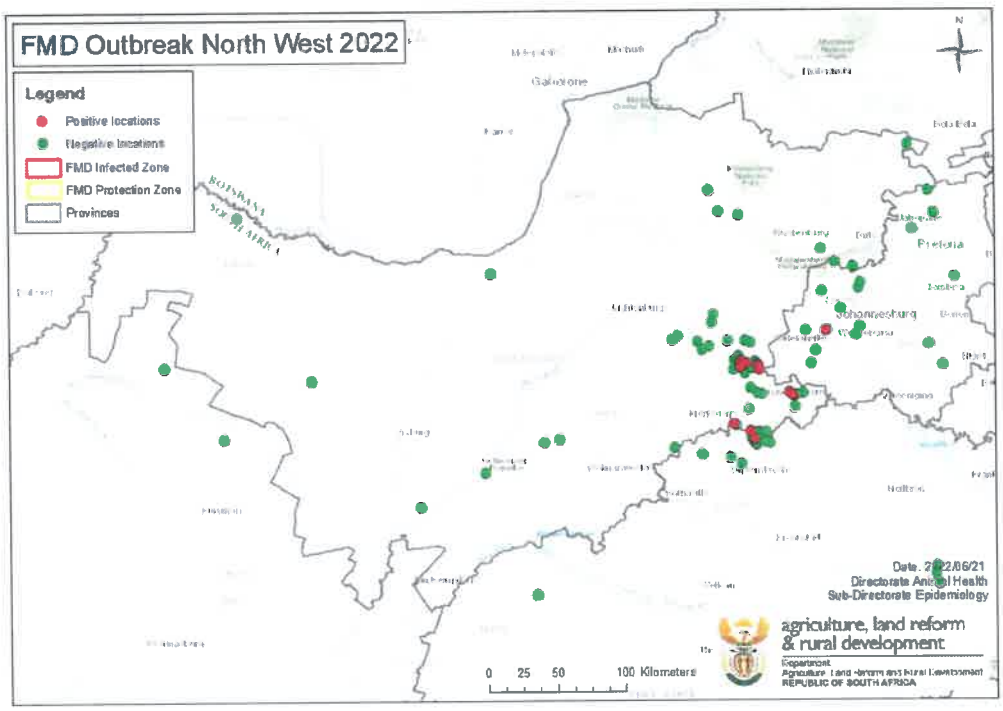
Map 7: Serological surveillance in KwaZulu-Natal outbreak event, showing 246 negative and 66 positive locations



Map 8: Serological surveillance in Limpopo-Gauteng outbreak event, showing 53 negative and 9 positive locations



Map 9: Serological surveillance in North-West-Gauteng-Free State outbreak event showing 52 negative and 16 positive locations (please note that some of the points are superimposed due to close proximity)



5. Awareness and clamp down on 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, Limpopo and Gauteng 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

Date: 2022 -06- 21