



agriculture, forestry & fisheries

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Report on the Foot and Mouth Disease outbreak in KwaZulu Natal

15 April 2011

1). History:

On the 1st of February 2011, the KwaZulu-Natal Veterinary Services performed routine sampling for Foot and Mouth Disease (FMD) within the FMD Protection Zone and just outside the FMD Protection Zone in northern part of the KwaZulu-Natal Province (KZN). On the 11th of February 2011, the samples came back positive for SAT-1 and SAT-3 on Liquid-phase blocking ELISA. The non-structural protein (NSP) ELISA tests were all negative and no clinical signs were seen.

A surveillance campaign to test the surrounding diptanks was launched and several other diptanks were found to be positive. On the 2nd of March 2011, the first positive NSP results were received.

The most western and southern positive sampling point is the Gwegwede diptank, north of the Hluhluwe-Imfolozi Nature Reserve, close to the town of Hlabisa.

Several suspect sampling points, with single low positive samples, were found. These were all retested and found to be negative

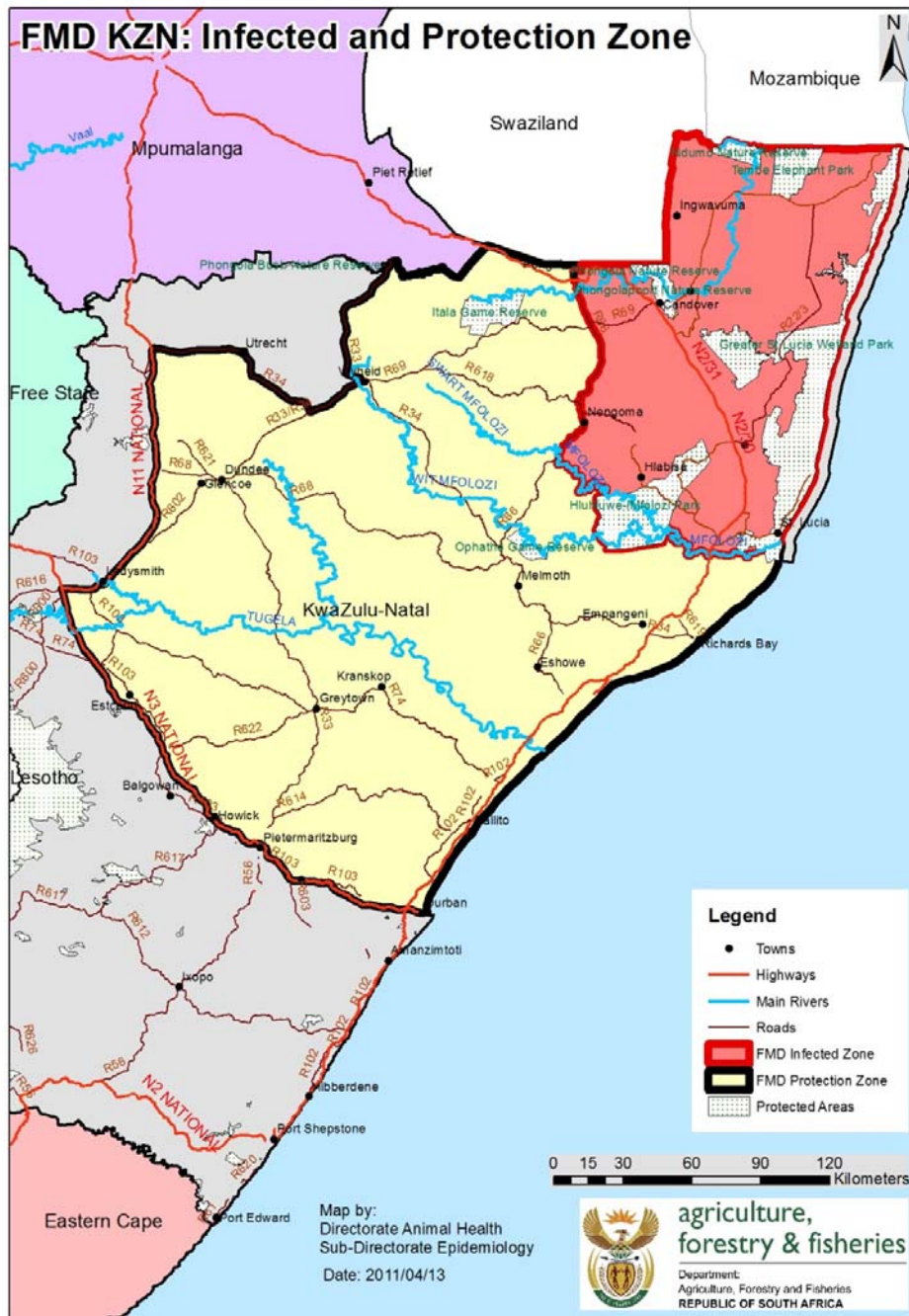
2). Current status of outbreak:

To date, 53 sampling points around the most northern part of KZN were found to be positive and one location, in a feedlot in Gauteng was found to be positive. The cattle in the sero-positive camps and the in-contact camps of the feedlot were slaughtered under controlled conditions. The cattle in the surrounding camps were bled and tested twice and found negative for FMD on serology. Close to 268 sampling points from all over KZN were found to be negative for FMD on serology.

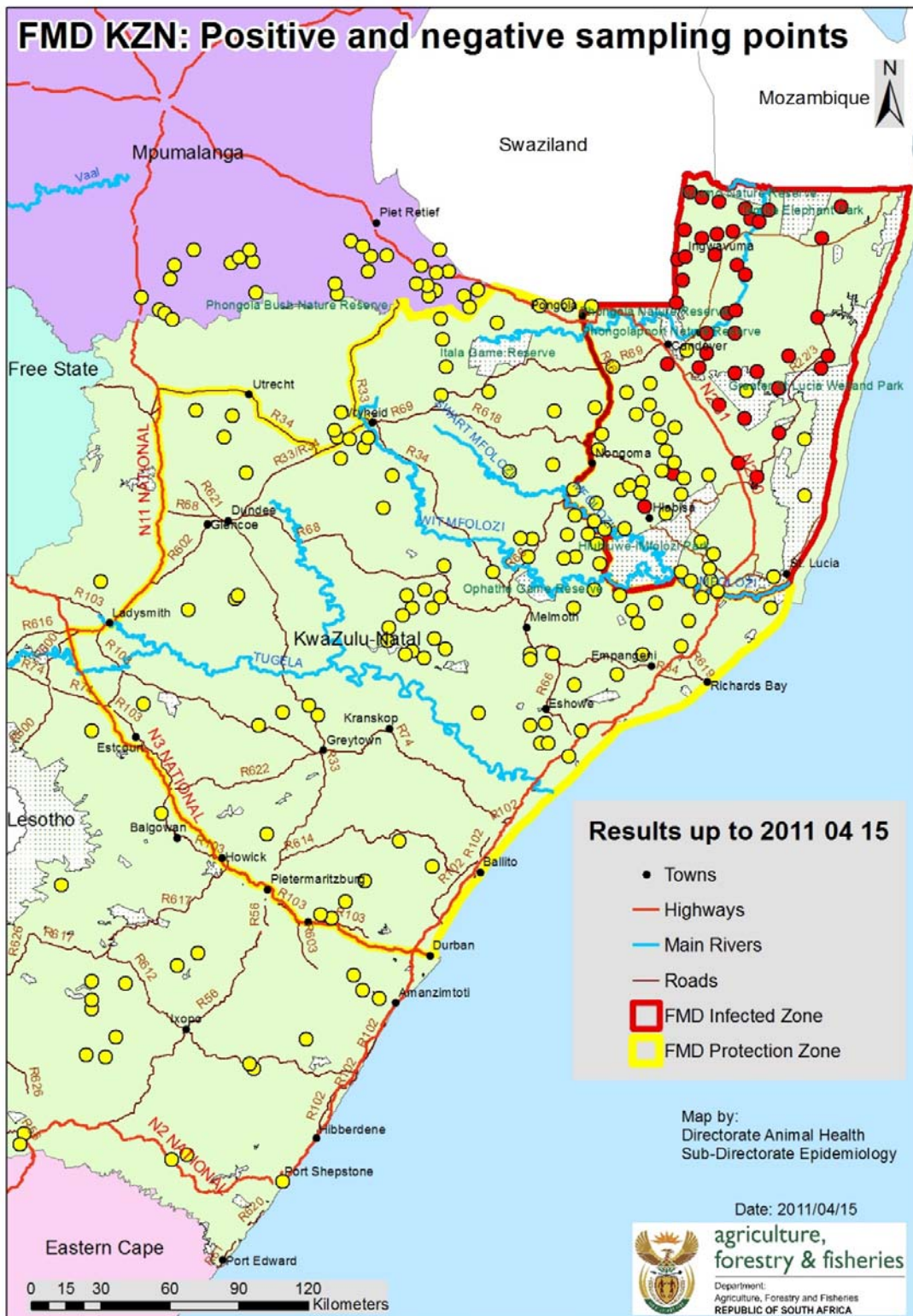
To date, no clinical signs have been seen and all attempts to isolate virus have been unsuccessful.

An infected zone and a protection zone in KZN have been declared (see Map 1 below). Movement out of the infected area will not be allowed, but animals can be allowed to move within the infected zone. No movement restrictions will be imposed in the protection zone, and this zone will be used as a high sero-surveillance area.

Map1: FMD infected zone and protection zone in KZN:



Map 2: FMD positive and negative sampling points in KZN up to 15 April 2011:



3). **Weekly updates:**

3.1). **Update on the activities for the week ending on 1 April 2011:**

3.1.1). The results of 39 additional sampling points from KZN were received from the Onderstepoort Veterinary Institute (OVI). All the results were negative for FMD. The additional sampling points were added to Map 2 on page 3 of this document. The map shows all the sampling points in KZN for this outbreak.

3.1.2). Animals from KZN have been traced to a feedlot in Gauteng and were found to be positive. All the positive and in-contact animals in this feedlot have been slaughtered under strict veterinary supervision; the meat has been matured and deboned and the heads and feet rendered. The feedlot has been put under quarantine.

3.1.3). The OVI was requested by the DAFF to submit samples of the outbreak for confirmatory testing to the World Reference Laboratory for foot and mouth disease at the Institute for Animal Health (IAH) in the United Kingdom. A total of 357 representative samples were selected from various diptanks within the FMD control area in KZN.

There is a good correlation between the results obtained by the OVI and that obtained by the IAH. It can be concluded that the samples collected from positive diptanks in KZN contains antibodies to both the SAT1 and the SAT3 virus strains of FMD, with some animals also positive for the SAT2 strain.

3.2). **Update on the activities for the week ending on 8 April 2011:**

3.2.1). The results of 26 additional sampling points from KZN were received from the Onderstepoort Veterinary Institute (OVI). All the results were negative for FMD. The additional sampling points were added to Map 2 on page 3 of this document. The map shows all the sampling points in KZN for this outbreak.

3.2.2). Vaccination of animals north of the N2 has resumed and 10 000 animals were vaccinated so far. All animals vaccinated are branded with the 'F' mark on the neck.

3.2.3). Movement controls out of the area have been relaxed. Meat hanged out to dry, as well as matured animal carcasses, will be allowed to be moved out of the FMD infected zone, as it is regarded to pose a minimal risk of transmitting the virus. Live animals however are still not allowed out of the infected area.

3.2.4). A meeting was held with the Gauteng Veterinary Services and the management of the feedlot in Gauteng to consolidate information gathered and agree on the way forward. More samples of the sentinels were collected on the 8th of April.

3.3). Update on the activities for the week ending on 15 April 2011:

3.3.1). The results of 19 additional sampling points from KZN were received from the Onderstepoort Veterinary Institute (OVI). All the results were negative for FMD. The additional sampling points were added to Map 2 on page 3 of this document. The map shows all the sampling points in KZN for this outbreak.

3.3.2). Some sampling points from the southern part of the infected zone were re-tested. Three diptanks in the southern area of the infected zone that were previously sampled and were found to be negative were once again negative on the second sampling effort. These diptanks are Mduna, Gunjaneni and Matshamhlope. This clearly indicates that no virus circulation is taking place in the area.

Samples taken from the previously positive Nomathiya and Dukuduku diptanks now test negative for FMD on LPB ELISA.

Map 3: Re-sampling in the southern area of the infected zone



This suggests that a possible laboratory error could have occurred as both sets of samples were tested on the same day. All samples of which the tests were completed on 7/03/2011, gave positive results. It is recommended to have the same samples retested to confirm a possible error or if serum is no longer available, to re-sample these diptanks to confirm the suspicion.

3.3.3). The vaccination program in KZN is in full swing in the far north of the Isimangaliso Wetland Park and north of the Ubombo mountain range. It has been learnt that during winter periods, when grazing becomes scarce, cattle are moved northwards towards Manguzi in search of better grazing. Therefore it has been decided to vaccinate all cattle in the Jozini and Umhlabuyalingana Local Municipalities. The slow spreading nature of the current infection was one of the factors that persuaded the Veterinary Command Centre to take the resolution to vaccinate east of N2, and re-bleed the five dip tanks that fall west of the N2. In the event these showing negative results, the resolution to move vaccination east of N2 would be justified.

The first round of vaccination is nearing completion, with more than 64 597 animals having been vaccinated. The operation will then be suspended for three (3) weeks and then commence again. The aim of the booster vaccination will be to keep the animal immunity at protective levels.

3.3.4). Results of samples collected from sentinels at the Gauteng Feedlot came back all negative. Quarantine has been lifted from the feedlot and the matter is considered to be resolved.

4). Trade implications

4.1). The following bans were imposed by South Africa's trade partners:

4.1.1). Australia:

Export of ruminant embryos banned.

4.1.2). Botswana:

Cloven hoofed animals and unprocessed products, including livestock feeds.

Exclusions:

- Heat treated products (UHT milk, pet food, pharmaceuticals, cheese, etc.).
- From Limpopo, North West and Northern Cape Provinces ONLY: Grasses and straw for use in livestock feeds, pasteurized milk, matured red meat from export approved abattoirs, hides, skins and trophies soaked in 4% soda, for 30 days in a quarantine, and transit pork and other cloven hoofed meat products.
- Transit meat products should enter through Cape Town and will then require an import permit from Botswana and a transit permit from RSA.

4.1.3). Egypt:

Bone-in beef.

Exclusions: Deboned frozen or chilled meat subject to 2°C for 24 hours after deboning.

4.1.4). European Union:

Export of game meat banned.

Exclusions: Game meat produced prior to 11 February 2011.

4.1.5). Egypt:

Bone-in beef.

Exclusions: Deboned frozen or chilled meat subject to 2°C for 24 hours after deboning.

4.1.6). Italy:

Export of game meat banned.

Exclusions: Italy has no objection to the import of products processed to ensure inactivation of the FMD virus.

4.1.7). Namibia:

Cloven hoofed animals and unprocessed products.

Animal products for own use.

Exclusions:

- Products processed to inactivate FMDV: Pasteurized dairy products, Heat treated processed meat, Fully processed trophies (subject to a veterinary import and health certificate), Hides and skins processed to wet blue or beyond, Pharmaceuticals.
- In-transit consignments that meet all other requirements are allowed through SA provided they were not released into the RSA market. These will be subject to usual import/transit permits, as well as non-manipulation permits.

4.1.8). Zambia:

Cloven hoofed live animals and products.

Exclusions: Products that have been processed to inactivate the FMD virus.

- These products include, but are not limited to pasteurized dairy products, heat treated processed meat, casings, trophies, wool, hair and bristles, hides and skins, pharmaceuticals, animal feeds and pet food.
- In-transit consignments of products originating from third countries are allowed.

4.1.9). Zimbabwe:

Cloven hoofed animals and unprocessed products

Exclusions:

- Products processed to inactivate FMDV: Pasteurised dairy products, Heat treated processed meat, Casings, Trophies, Wool, hair, bristles, Hides and skins, Pharmaceuticals, Animals feeds and pet food.
- In-transit consignments are allowed through SA provided they have been subject to a process that inactivates the FMDV.

4.2). Export bans imposed by South Africa:

As a result of South Africa having lost its OIE recognised FMD free status, all exports of cloven hoofed animals and their products, which have not been treated to inactivate the FMD virus, have had to be suspended. South Africa will be in a position to negotiate with its

trading partners once a nationwide sero-surveillance for FMD has been concluded, indicating that the rest of the country is free of infection.