ISSN 1564-2615

EMPRES
EMERGENCY PREVENTION SYSTEM

EMPRES
Transboundary Animal Diseases Bulletin

No. 28 – 2005
February–June 2005

E-mail: empres-livestock@fao.org ■ www.fao.org/empres


Zambia, 2004

Foot-and-mouth disease status in southern Africa

Since 2000, southern African countries have experienced unprecedented outbreaks of transboundary animal diseases (TADs) the most prominent of which have been foot-and-mouth disease (FMD), contagious bovine pleuropneumonia and African swine fever. A summary of FMD outbreaks in the region over 2000–05, broken down country by country, is given. The synopsis of information is derived from reports presented at an FAO recent workshop on control of TADs in the region, OSRO/RAF/404/SAF, held 3–4 May 2005 at Onderstepoort Veterinary Institute, South Africa.

A multidisciplinary approach to analysing wild birds and avian influenza viruses


WILDLIFE CONSERVATION SOCIETY

EMPRES supported the visit of a veterinary investigation team from the Wildlife Conservation Society to several sites in the central provinces of Mongolia from 29 July to12 August 2005. The team conducted wild bird surveys and sampling at nine sites.

In this particular study, the first of its kind to sample both live and dead wild birds while gathering denominator information on affected as well as sympatric species, no evidence of a reservoir for avian influenza H5N1 was found in the wild birds. The methodology, including the multidisciplinary approach, needs to be taken to other regions where wildlife may be implicated either in introducing the virus in poultry or in being infected by a domestic bird source.

AND...

EMPRES in action: report of an EMPRES emergency mission to Guinea-Bissau for assistance in the control of anthrax

In April 2005, clinical examination of patients seeking medical attention at the Mansoa Hospital, Oio Region, confirmed the presence of *Bacillus anthracis* in skin lesions. On 22 April 2005, the Ministers of Health and Agriculture declared the Oio Region as affected by an anthrax epidemic and, among other measures, appealed for urgent international support for an emergency vaccination campaign to control the epidemic in cattle. FAO deployed an EMPRES Officer to Guinea-Bissau to assess the situation for possible technical assistance.

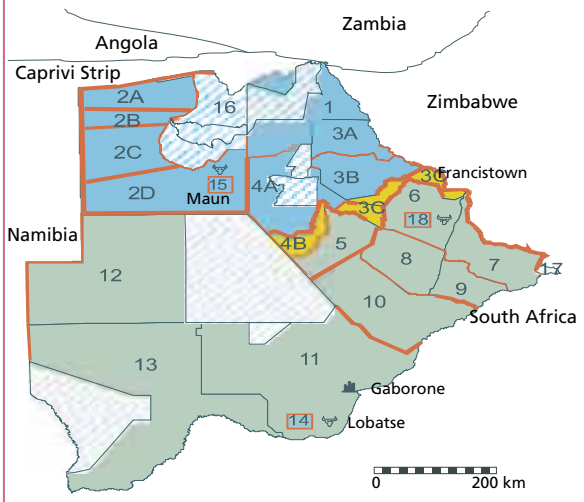
Foot-and-mouth disease status in southern Africa

Since 2000, southern African countries have experienced unprecedented outbreaks of transboundary animal diseases (TADs), the most prominent of which have been foot-and-mouth disease (FMD), contagious bovine pleuropneumonia (CBPP) and African swine fever. Below is a summary of FMD outbreaks in southern Africa, 2000–05. This information is derived from reports presented at an FAO workshop on control of TADs in the region, OSRO/RAF/404/SAF, held 3–4 May 2005 at the Onderstepoort Veterinary Institute, South Africa.

In **Angola**, with the last reported outbreak of FMD in 1974, to confirm the presence or absence of circulating FMD virus, there is a need to promote clinical investigations and to undertake serological testing of cattle and other susceptible species, especially in areas where buffaloes are present, including Bengo, Bié, Cunene, Cuando Cubango, Cuanza Sul, Huambo, Huíla, Malanje, Moxico and Uíge Provinces. Inability to monitor the FMD situation is attributed to the civil strife that devastated the infrastructure of the country for 27 years.

In **Botswana**, much attention is paid to the control of TADs because beef exports contribute significantly to the economy of the country and continued access to lucrative world markets is dependent on freedom from diseases such as FMD and CBPP. The country enforces a strict livestock disease control policy based on early detection and effective response. Capable enforcement is, in turn, enabled by effective disease control operating structures and programmes among government authorities in conjunction with private interests. The structures are made up of a disease control

Veterinary disease control zones in **Botswana**



Area: 582 000 km²
Semi-arid
Population 1.7 million (2001 census)
2.5 million cattle
1.0 million goats
0.5 million sheep

FMD-vaccinated zone
Non-vaccinated surveillance zone
FMD-free zone

Cordon fences
Double
Single
Stock-free zone
Abattoir

Source: M. Letshwenyo. Presentation at OSRO/RAF/404/SAF workshop, Onderstepoort, South Africa, 3–4 May 2005

committee, an FMD alert team, an FMD contingency plan and public awareness campaigns, combined with bilateral collaboration with neighbouring countries.

The effective disease control and prevention programmes include disease reporting, surveillance and monitoring, vaccination activities, animal movement control, a permit system, veterinary infrastructure and extension delivery services. FMD control in Botswana is based on veterinary control zones (see map).

In 2002–03, however, the country experienced FMD outbreaks near the Zimbabwe border that were successfully controlled through quick action by central and local authorities. All previously affected areas have since been restocked with cattle. A 10 km-wide surveillance zone has been created along the border with countries where FMD has been reported in recent times, and patrols have been intensified. The height of cordon fences has been raised from 1.4 metres to 2.4 metres, and fences are now electrified. Cattle are mouthed during the annual vaccination campaigns, and the disease control committee reviews the situation regularly. Cloven-hoofed animals are quarantined for at least 21 days before leaving their districts.

Botswana enforces a strict livestock disease control policy based on early detection and effective response

In **Lesotho**, no FMD was detected in the period under review.

In **Malawi**, 18 FMD outbreaks had been recorded since 1957. Only two of these outbreaks have occurred in the past five years. Almost all of the outbreaks originated from neighbouring countries. The one exception is the FMD outbreak in southern Malawi in 2003, believed to be of Malawi origin, most likely from the African buffalo population within Lengwe National Park.

Malawi has been vigilant in avoiding the establishment of endemic status of FMD. An FMD outbreak in Malawi constitutes a national emergency because the disease could potentially close agricultural export markets.

FMD outbreaks disrupt local market systems, as well, because movement restrictions are implemented in the face of an outbreak. Such disruption has far-reaching socio-economic implications. The hardest-hit sector is that of traditional cattle keepers, who are unable to move or sell their cattle. Another major expense is the very high cost of controlling and recovering from FMD outbreaks.

There had been no outbreaks reported in **Mozambique** for 17 years, until November 2002, when FMD broke out in the Provinces of Gaza, Manica and Maputo. Twenty foci were recorded between November 2002 and July 2003 (see map, p. 4).

In addition to outbreaks indicated on the map, in 2003, outbreaks were also recorded in Bobobo M. Ribwe (April), Nalazi (May), Chicotane (August) and

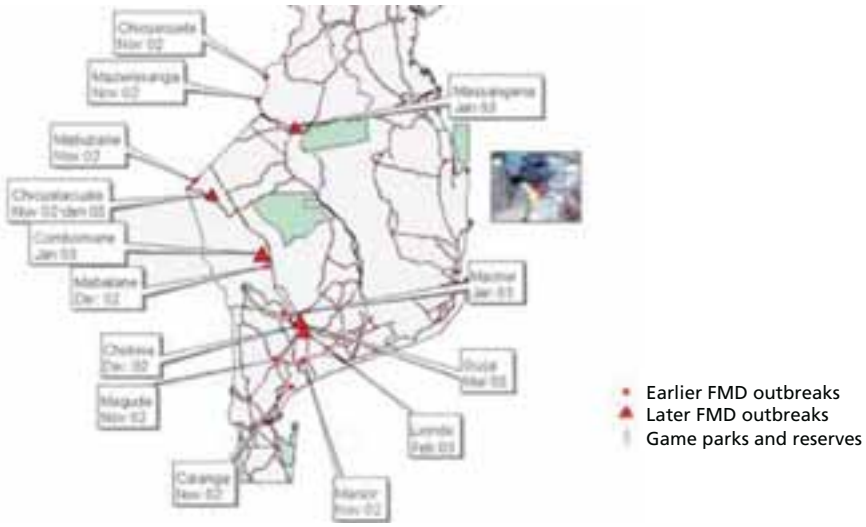
Foot-and-mouth disease outbreaks suspected or confirmed in **Malawi**, 2000–05, by year of occurrence

District	Year	Month of first case	Serotype
Mzimba	2000	April	SAT-1
Chikwawa	2003	April–May	SAT-2

Source: D. Chinombo. Presentation at OSRO/RAF/404/SAF workshop, Onderstepoort, South Africa, 3–4 May 2005

In Mozambique, surveillance continues to target areas at risk

Foot-and-mouth disease outbreaks in **Mozambique**, 2002–03



Source: A. Mavale. Presentation at OSRO/RAF/404/SAF workshop, Onderstepoort, South Africa, 3–4 May 2005

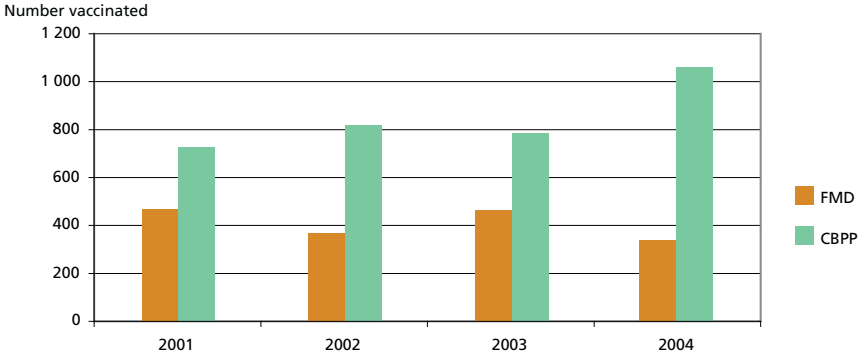
J. Nyerere, Gaza Province (September). Although this last FMD outbreak was the final one recorded, surveillance continues to target areas at risk.

Mozambique has reported that control measures combine vaccination and restriction of animal movement.

In **Namibia**, FMD is a priority animal disease. The last outbreak occurred in August 2000 and was eliminated by March 2001.

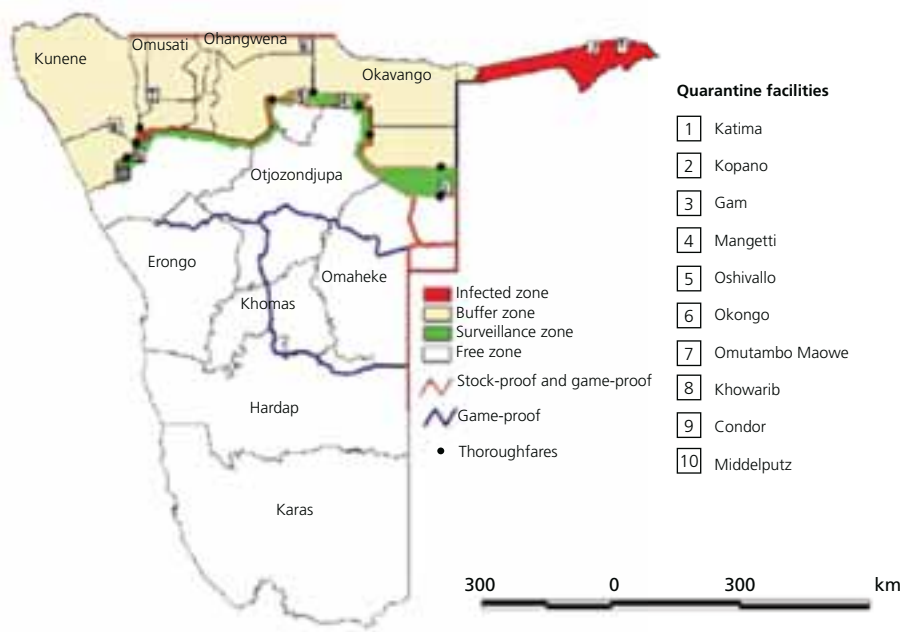
FMD control is based on vaccination and intensive surveillance of FMD zones (see map). The number of vaccinations for FMD (and CBPP) in the infected/buffer zone,

Foot-and-mouth disease and contagious bovine pleuropneumonia vaccinations in the infected/buffer zone of **Namibia**, 2001–04



Source: O. Hubschle. Presentation at OSRO/RAF/404/SAF workshop, Onderstepoort, South Africa, 3–4 May 2005

Foot-and-mouth disease zones and fences in **Namibia**



Source: O. Hubschle. Presentation at OSRO/RAF/404/SAF workshop, Onderstepoort, South Africa, 3–4 May 2005; Agro-ecological zone Programme, Ministry of Agriculture & Rural Development, Namibia

2001–04, is shown in the graph. By June 2005, some 9 000 sera had been collected for serosurveillance, and more are expected.

In 2000, there was an FMD type O outbreak in **South Africa** following introduction of the virus from outside the country. Swill from a ship that docked on the eastern coast of South Africa was suspected as the source. Since then, there have been FMD outbreaks only in the FMD control zone at Masisi (August–November 2003) and Mopani (June 2004–February 2005) (SAT-2).

As in many other countries, FMD control is based on zoning (see map). A new system of control zones has been adopted based on: i) infected, ii) buffer, iii) vaccination area, iv) non-vaccination area, v) inspection area of the FMD free zone and vi) free zone without vaccination.

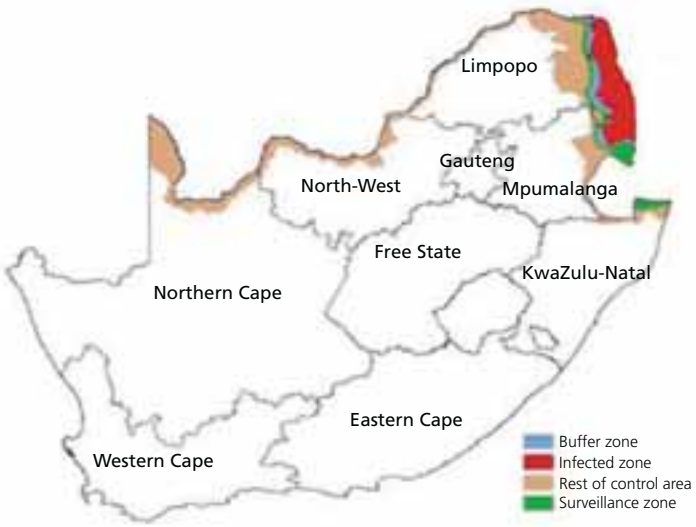
South Africa applies strict import controls, border control, movement control (especially in the control zones), vaccinations in the buffer zone, active surveillance (in the control zones) and passive surveillance (in the rest of the country) to detect and curtail the spread of FMD.

In **Swaziland**, there have been no outbreaks of FMD since 2000. This success was achieved through vaccination, slaughter and burial of clinically affected animals.

Swaziland was declared provisionally free from infection with FMD virus in June 2003

In 2003, a serosurvey undertaken in cattle populations in quarantine and surveillance zones, as well as those last vaccinated in March 1998, yielded negative results to tests for SAT-1, SAT-2 and SAT-3 viruses.

Foot-and-mouth disease control area in **South Africa**



Source: C. Garstenberg. Presentation at OSRO/RAF/404/SAF workshop, Onderstepoort, South Africa, 3–4 May 2005

General control measures include a permit system for livestock movement based on the diptanks network and import control through a permit system for imports, which has been intensified by introducing veterinary personnel at the ports of entry designated to receive imported livestock. Importation is allowed only from areas that are recognized as disease-free.

Surveillance through cattle inspections is carried out on dipping. It is performed fortnightly in the summer and monthly in the winter in the Highveld (high altitude areas), and weekly in the summer and fortnightly in the winter in the Lowveld (low-lying areas). In the areas bordering Mozambique and Mpumalanga Province, South Africa (south of Kruger National Park), inspection is carried out weekly. A cordon fence bordering Mozambique and Mpumalanga Province is still maintained.

In the **United Republic of Tanzania**, FMD was reported in 68 of the 121 districts of the mainland in 2004 (see table and map, pp. 7–8). The 56 610 cases reported included FMD virus types O, SAT-1 and SAT-2. Districts were advised to use vaccines containing the three serotypes and to institute regulations and guidelines for the control of FMD in their areas of jurisdiction.

Budgetary constraints have prevented implementation of a national strategy that includes: continuing the rehabilitation of the FMD Animal Health Research Institute laboratory at Temeke to enable the country to type FMD viruses; focusing control of FMD in the dairy sector, draught power cattle and commercial beef stock; and performing ring vaccination in the vicinity of the outbreaks, coupled with restricting animal movement.

In Zambia, disease monitoring and surveillance are ongoing

In **Zambia**, FMD outbreaks were recorded in Northern Province in 2000 (SAT-2) and 2002 (SAT-2 and O). In Eastern Province, FMD broke out for the first time in 2000 in Lundazi District.