



Training workshop REPORT

Achievement of freedom from FMD in vaccinated areas and requirements for proving to the OIE that freedom has been achieved

21 - 23 October 2009

Gaborone Sun Hotel, Gaborone, Botswana

Jointly organised by the SADC Foot and Mouth Disease Project and FAO-ECTAD, Gaborone

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1. BACKGROUND

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This report details proceedings of the third, and last, in a series of three training workshops organised and implemented under the auspices of the Food Agriculture and Natural Resources (FANR) directorate of the Southern African Development Community (SADC). The three workshops were jointly carried out by the SADC Foot and Mouth Disease Project (SFMDP) and the FAO-ECTAD unit for southern African.

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The three workshops were structured such that the participants were systematically provided with tools and ideas in the management of FMD under various scenarios. The first training explored various options available for management of FMD in an endemic situation whereas the second training equipped participants with strategies for managing an FMD outbreak. This last training provided the participants with the practical knowledge and strategies of how to attain FMD freedom with or without vaccination by following the guidelines as provided within the Terrestrial Animal Health Code of the OIE.

2. PARTICIPATION

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As with the first two workshops, the same group of participants were invited to this last training. These involved disease control managers mainly based in the field and who are frequently confronted with practical issues related to FMD management.

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The training workshop was attended by a total of 23 participants coming from Botswana (2); Malawi (2); Mozambique (3); Namibia (1); Swaziland (3); Tanzania (3); Zambia (3); Republic of South Africa (2); Lesotho (1) and Zimbabwe (3).

The workshop was facilitated through contributions from seven (7) experts comprising: Regional consultant (1); OIE sub-regional representation (1); SFMDP (2); FAO-ECTAD (1) and Botswana Vaccine Institute (2).

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3. METHODOLOGY

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As with the first two workshops, the training was carried out over a 3 day period and comprised of lecture presentations, discussions, scenario analysis and problem solving.

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The training comprised of interactive lecture presentations followed by discussions. Group based discussions were organised at the end of each lecture day with a plenary session the following morning.

4. SALIENT POINTS FROM DISCUSSIONS DURING THE COURSE

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This chapter highlights some of the main discussion points that were raised by resource persons as well as by participants during the course of the training workshop.

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- It was noted that the 2008 SAT 2 outbreak in Ghanzi district was a result of spill over from an ongoing infection within a vaccinated population in the neighbouring Ngamiland district, which experienced the outbreak since October 2007. Difficulties in managing

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movement of animals; poor vaccination coverage in some areas; destruction of disease control fences by elephants and inaccessible terrain fuelled the spread of the Ngamiland outbreak which eventually escaped into Ghanzi despite prior mitigation measures instituted to curb the intrusion.

- As a result of the outbreak Botswana lost its official OIE FMD disease free status and exports of beef from Botswana to external markets were temporarily suspended. The strategy for controlling the outbreak was primarily based on the need to regain the OIE official FMD free status without vaccination within the shortest time possible. Through stamping out of affected herds and those at risk, the district was able to regain its disease free status within three months in accordance with the OIE standards. This achievement was possible largely due to: early detection & response to infection; excellent farmer cooperation and good political support.
- It was noted that an outbreak of FMD has detrimental effects on affected communities, particularly where stamping out is involved. In view of this fact, the department of veterinary services ensured that farmers were compensated for destruction of their animals within the shortest possible time.
- It was further noted that where farmers are involved in livestock farming on a commercial basis, there is an increased likelihood that they contribute positively towards disease control as they see the benefits thereof.
- It was indicated that currently the OIE recognises disease status (countries, zones) for only four (4) diseases: FMD, Rinderpest, CBPP and BSE. It was further cautioned that the OIE Terrestrial Animal Health Code and the Terrestrial Manual are not reference textbooks for animal diseases but rather provide standards and guidelines for adoption and implementation by member countries and where possible integration into the national legislation of countries.
- The OIE Terrestrial Animal Health Code provides member countries with guidelines to allow trade in animals and animal products while avoiding unnecessary trade barriers whereas the Terrestrial Manual provides guidance on prevention, diagnosis and control of animal diseases.
- As regards the concept of a 'Containment Zone', it was clarified that this can only be applied when a country has a limited outbreak. The idea is to isolate the outbreak in a specific area for a limited time period to allow for trade to continue in the other disease free areas of the country. When establishing a containment zone, forward and backward tracing of animals is very important. Member countries must further note that a containment zone is just a temporary measure to facilitate continuation of trade. It was further clarified that the Terrestrial Code provides guidance for setting up of compartments and no additional conditions are needed other than the specific biosecurity measures required for the specific disease such as for example foot and mouth disease.
- It was indicated that the definition of a surveillance zone has been dropped from the Terrestrial Code and incorporated within the new definition of "protection zone" which replaced the previous definition of "buffer zone". However, it was emphasised that the setting up of a protection zone must be part of a zoning proposal rather than a country announcing that they have established a protection zone during the course of an outbreak.

- To assist member countries in submitting data in a logical format in their application for disease freedom, the OIE has prepared different questionnaires for different disease status. The questionnaires require member countries to provide: (1) proof of compliance with specific requirements in the FMD chapter; (2) validated data on the outcome of surveillance to demonstrate absence of disease / virus circulation and (3) compliance with minimum requirements for veterinary service delivery.
- The meeting noted the importance of surveillance designs and methodologies, including proper documentation and enabling preparation of a well argued request to the OIE for disease freedom. The processes followed by the Botswana DVS to apply for FMD disease freedom without vaccination for zone 4a was used as an example to demonstrate the various requirements when designing the surveillance strategy to prove absence of disease and/or virus circulation.
- Regarding the establishment and expansion of Transfrontier Conservation Areas (TFCA's), it was noted that the zoning status of some member states could be affected. This will certainly affect the aspirations of some member countries in their efforts to access lucrative markets through creation of FMD free zones.
- In view of the fact that eradication of FMD in the region is not feasible in the near future, the participants agreed that there was a need for the OIE to consider de-linking the status of wildlife & domestic livestock populations with respect to SAT serotype infections. This has already been achieved with regards to Highly Pathogenic Influenza, as the presence of virus in wild birds does not affect the status of domestic birds. The same argument is therefore being made with regards to the presence of SAT type viruses within buffalo populations.
- Another option for facilitating trade of livestock products from countries where FMD cannot be eradicated, as is the case for most southern African countries, is through the concept of commodity based trade. Exported products such as de-boned, de-glanded beef could be subjected to risk mitigation measures through application of HACCP principles in the upstream and downstream phases of production. It was emphasised that adoption of the commodity based trade principle would not absolve countries from ensuring proper livestock disease control. It must be remembered that it is a fundamental requirement that only disease free animals enter the human food chain.
- It was noted that the SADC region has historically depended on vaccination as a principal control measure to manage FMD. However, since 2000, there have been numerous outbreaks of FMD in some member countries. The major concern has been that most of these outbreaks were in vaccinated cattle populations. Evaluation of vaccine production and its performance/application in the field has indicated that the problem is multi-factorial. Limited field trials have indicated that naïve animals must be vaccinated as per manufacturer's recommendations. Furthermore, there is a need for veterinary services undertaking vaccinations to ensure that there are mechanisms in place to evaluate the levels of herd immunity achieved (post vaccinal sero-monitoring).
- Through government initiatives, supported by strong political will, the Zambian Ministry of Livestock and Fisheries has embarked on a roadmap to establish a disease free zone (FMD & CBPP). Through a phased approach, it is hoped that a certain delineated disease

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free zone will be established by following the OIE guidelines. The designated zone will be used as a pilot that could guide establishment of more disease free zones. These initiatives will enable Zambia to gain access to lucrative livestock markets.

- Namibia is one of three countries in the region that has been able to access international markets for the export of de-boned beef through establishment of disease control zones for FMD and CBPP. Despite this fact, a large proportion of the livestock population north of the Veterinary Control Fence (VCF) still remains excluded from national, regional and international livestock markets. The Namibian veterinary service has therefore developed a strategy whose ultimate objective is to declare the Northern Communal Areas (NCAs) free from FMD and CBPP. The strategy is based on improved animal health controls through institution of reliable animal identification and traceability systems; improved disease control infrastructure; creation of human capacity and improved food safety controls.
- The FAO/OIE GF-TADs initiative recognises that countries are at different stages in the management of FMD risk. Through the Progressive Control Pathway (PCP), Member States are encouraged to develop national risk reduction strategies that are supportive to the regional and global effort. While it is unlikely that FMD could be eradicated from southern Africa, the participants agreed that there was merit for member countries within the region to develop practical mitigation measures in order to improve the current FMD situation.

5. **OUTPUTS FROM GROUP WORK**

The following chapter summarises issues that arose from group discussions conducted at the end of each lecture day. Participants were divided into four groups and asked to do a SWOT based analysis of the region with regards to the following:

GROUP 1: SWOT analysis with regards to SADC member states attaining FMD freedom with vaccination

Through discussions the group agreed that overall, the region has more strengths than weakness when it comes to member countries attaining the status of FMD free with vaccination. The presence of two OIE reference laboratories (OVI and BVI), with the latter producing a suitable FMD vaccine, means that member countries wishing to apply for FMD free with vaccination already have the necessary technical support, particularly when it comes to sero-surveillance. Furthermore, most member countries have adequately trained personnel to undertake disease management. However, the group felt that there is still limited presence, participation and contribution by regional experts in the OIE standards setting processes.

Whilst the status of FMD free with vaccination would provide great opportunities for member countries to be involved in regional and international trade in livestock and livestock products, the group noted that the establishment of Transfrontier Conservation Areas (TFCAs) will certainly be a challenge in creating and maintaining the status of FMD free with vaccination zones

GROUP 2: SWOT analysis with regards to SADC member states attaining FMD without vaccination

In their deliberations, the group noted that some member countries, such as Lesotho and Swaziland, have been 'free without vaccination' for sometime and only need to apply to the OIE for official recognition. Some countries such as RSA, Botswana and Namibia already have zones that are officially recognised by the OIE as being free without vaccination. These countries could therefore serve as models for other countries in the region. The group also noted the presence of the two OIE reference laboratories for FMD as an advantage.

The group cited inadequate funding of veterinary services, which has resulted in poor veterinary infrastructure and consequently weak disease surveillance systems as the most important limitation in achieving the desired status of free without vaccination. It was further noted that political support and stability was important in maintenance of disease free status. The presence of the FMD reservoir host (buffalo) within the region means that there will always be a persistent risk of disease re-introduction into FMD free areas as has been observed in some countries.

GROUP 3: SWOT analysis with regards to SADC member states benefiting from Commodity Based Trade

The group noted that the concept of Commodity Based Trade (CBT) will not only facilitate trade for member countries, but will also provide value addition to livestock products. Some of the advantages cited include creation of downstream employment through establishment of processing and manufacturing industries. However, the group noted that member countries

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would still require efficient disease surveillance and control systems in order to participate in CBT.

GROUP 4: SWOT analysis with regards to SADC member states benefiting from compartmentalisation

During the discussions, the group noted the various advantages associated with establishment of compartments. Within a compartment, it is relatively easier to institute a system for early detection and response to a disease outbreak as opposed to an extensive area. In the event of an outbreak, it would be relatively easier to trace, identify, and isolate diseased and at risk animals. However, in southern Africa, where livestock farming is predominantly based on extensive communal grazing systems, establishment of compartments may not be easy or affordable.

Annex 1: Course programme

Training workshop: Achievement of freedom from FMD in vaccinated areas and requirement for proving to the OIE that freedom has been achieved

SFMDP/FAO Workshop: 21 - 23 October 2009

Venue: Gaborone Sun Hotel

Session	Topic	Resource person/s	Remarks
Day 1			
0830 - 0845	Registration		
Session 1 0845 - 0930	Welcome & course objectives Opening address	SFMDP - A. Masarelli SADC-SPM - B. Hulman	Short addresses
Session 2 0930 - 1015	Consequences of a FMD outbreak: The example of Ghansi (Botswana) in 2009 <ul style="list-style-type: none"> ✓ Nature of the outbreak ✓ Strategic management options & decision making ✓ What were the critical success factors? 	Representative of the DVS Botswana	
1015 - 1045	<i>TEA</i>	<i>TEA</i>	<i>TEA</i>
Session 3 1045 - 1145	Key OIE concepts in FMD management & practicality for SADC region <ul style="list-style-type: none"> ✓ Zoning ✓ Compartmentalisation ✓ Protection zones ✓ Containment zones ✓ Surveillance - change in OIE approach ✓ Containment zones 	Dr Gideon Bruckner	Power-point presentation with discussions
Session 4 1145 - 1215	The problem of wildlife in establishment & maintenance of geographic freedom from FMD <ul style="list-style-type: none"> ✓ SADC initiative ✓ The SAT virus data-base ✓ Is FMD in southern Africa eradicable? 	Dr Gavin Thomson	Power-point presentation

Session	Topic	Resource person/s	Remarks
Session 5 1215 - 1300	Specific documentation and relevant questionnaires required for gaining/regaining OIE recognition of FMD freedom (with or without vaccination) ✓ Preparation of the dossier	Dr Gideon Bruckner	Powerpoint presentation with discussions
1300 - 1400	<i>LUNCH</i>	<i>LUNCH</i>	<i>LUNCH</i>
Session 5 1400 - 1445	Surveillance and survey designs to obtain supporting data for FMD freedom ✓ Randomization & its importance ✓ Sample size determination	Dr Mokgamedi Mokopasetso	Power-point presentation with discussions
Session 6 1445 - 1515	Options in situations where achievement of zonal FMD freedom is impractical or impossible? ✓ Commodity-based trade ✓ HACCP approach	Dr Gavin Thomson	Power-point presentation
1515 - 1530	<i>TEA</i>	<i>TEA</i>	<i>TEA</i>
Session 7 1530 - 1700	Group session - SWOT-based analysis of FMD zonation in the context of the southern African FMD problem ✓ Strengths & opportunities	Groups: Group 1 - 'with vaccination'; Group 2 - 'without vaccination'	
Day 2			
Session 1 0830 - 0915	Report back on strengths & opportunities	Rapporteurs	
Session 2 0915 - 1000	Current status of FMD in the region ✓ Recent outbreaks ✓ Recent information with implications for vaccine campaign design	Dr Gavin Thomson	Powerpoint presentation with discussions
1000 - 1030	<i>TEA</i>	<i>TEA</i>	<i>TEA</i>
Session 3 1030 - 1115	OIE Regional Representation including GF-TADs & other current initiatives	Dr Patrick Bastiaensen	
Session 4 1115 - 1200	Country (Namibian) experiences with FMD zonation: Successes & challenges	Namibia	
Session 5 1200 - 1245	Country (Zambia) experiences: The roadmap to achieving FMD freedom - ongoing initiatives	Zambia	
1245 - 1400	<i>LUNCH</i>	<i>LUNCH</i>	<i>LUNCH</i>

Session	Topic	Resource person/s	Remarks
Session 6 1400 - 1445	Use of vaccination in achieving freedom from FMD <ul style="list-style-type: none"> ✓ OIE standards regarding quality of vaccines and mechanisms for quality assurance ✓ Use of purified vaccines ✓ Application of NSP tests - the current situation 	OVI/BVI	Powerpoint presentation with discussions
Session 7 1445 - 1700 (including tea)	Group session - SWOT-based analysis of FMD zonation in the context of the southern African FMD problem <ul style="list-style-type: none"> ✓ Weakness & threats 	Groups: Group 1 - 'with vaccination'; Group 2 - 'without vaccination'	
Day 3			
Session 1 0830 - 0930	Report-back on group session	Group rapporteurs	
Session 2 0930 - 1100	Group Work: Evaluation of current FMD status in SADC member countries in relation to GF-TADs roadmap	Groups	
1100 - 1130	<i>TEA</i>	<i>TEA</i>	<i>TEA</i>
Session 3 1130 - 1230	Group report back and way forward	Workshop facilitators	
1230 - 1400	<i>LUNCH</i>	<i>LUNCH</i>	<i>LUNCH</i>

Annex 2: List of Participants

LIST OF PARTICIPANTS

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