

Meeting on FMD for the East
African Regional Laboratory
Network (EARLN)

Addis Ababa, Ethiopia,

December 12-14th 2017



Group Photo with her excellence
Dr Misrak state Minister Ministry of Livestock
and fisheries



Participants visited NAHDIC



Participant at NAHDIC

Introduction

The meeting was arranged in consultation with IGAD and FAO under the auspices of an OIE Reference Laboratory Twinning Project between The FMD World Reference Laboratory (WRLFMD) of the Pirbright Institute, UK and the National Animal Health and Diagnosis Laboratory (NAHDIC) at Sebeta, Ethiopia.

Aims of the meeting

The main issues were

- Share information about the FMD situation in the region
- Review FMD laboratory diagnostic capacity in East Africa
- Decide on immediate training priorities for lab diagnostics
- Develop and encourage a more sustainable Network platform for regional FMD lab activities
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Participation

Representatives were presented from FMD laboratories of

- seven East African countries(Uganda, Somalia, Kenya, DRC, Tanzania, Sudan and Ethiopia)
- WRLFMD,
- Ethiopian Ministry of Livestock and Fishery,
- European Commission for the Control of FMD (EuFMD),
- Ethiopian National Veterinary Institute (NVI),
- Ethiopian Agricultural Transformation Agency (ATA) and
- The Pan African Veterinary Vaccine Centre (PANVAC)

The participant discussed on

- Overview of FMD Regional Situation
- FMD situation in each country
- Gap analysis questionnaire findings within the region
- Background on previous meetings and issues addressed
- Sample shipment
- Field Diagnostics Update
- Approaches to and implementation of laboratory support for vaccine use and quality control
- Vaccine production in Ethiopia
- Future ambitions for vaccine QC at PANVAC
- OIE Twinning between NAHDIC and TPI
- Networking and continuous professional education by virtual means like EuFMD online training

Improving sample submissions

- Need to raise awareness, buy-in, incentives and timely feedback to improve reporting and veterinary follow-up
- In-house sampling kits can be provided cheaply by labs and could include supplementary collection of samples into RNA preserving solutions ("lysis buffers")
- Training of field staff is required and pragmatic protocols are needed to guide sample and data collection, packaging and submission.
- Field staff (vets and animal health workers) should report FMD suspect cases using simple geo-referencing smart phone apps. The information derived could be used to target case investigations.

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- Active surveillance by collecting samples (swabs and probangs) for virological testing from apparently healthy animals, e.g. at abattoirs and markets, could complement case investigations
- WRLFMD can provide advice about the logistics of shipments of samples to OIE Reference Centers for analyses

Benefits of Networking and Actions Needed

There is great enthusiasm for improving the network and encouraging collaborations

- Benefits: core objective is exchange of information and experiences, e.g. on disease diagnosis, circulating serotypes and strains, diagnostic technologies, ongoing research, progress in FMD control; recognition of areas for improvements and next steps; strengthening functional linkage between professionals
- Challenges faced include: lack of consistent information and knowledge sharing systems; turn-over of participants; designation of responsibility; lack of budget to implement agreed action points; collaborative projects mainly with external partners and not with one another

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- Actions needed include: joint activities and projects to foster collaboration and familiarity; incentive mechanisms for focal points; clear terms of reference

Biosecurity needs and implementation in East African settings

Biosafety levels in FMD labs in East Africa are very variable but few meet stringency of international standards aimed at FMD free countries.

- More realistic targets and priorities are needed and one suggestion is to aim for a minimum requirement of BSL2 with specific additional precautions to mitigate the main risks for FMD dispersion (BSL2+).
- The FMD laboratory sub-network should elaborate a set of guidelines identifying the areas where additional controls are needed over and above BSL2. These would include: use of biosafety equipment (e.g. safety cabinets) and personal protective clothing; livestock access restrictions on staff;

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- laboratory access controls; waste disposal; sample submission; a designated biosafety officer; management commitment; training of personnel
- Existing guidelines from various sources can be reviewed, e.g. the EuFMD contingency lab guidelines.
- These principles should be incorporated into the quality systems being implemented in the laboratories. Best practices can be shared by exchange of standard operating procedures and quality management documents.

Quality assurance needs and implementation in East African Settings including proficiency testing

- The critical importance of training and proficiency testing (PT) are recognised.
- Quality assurance systems should be introduced in all of the labs and best practices for their implementation should be shared within the network.
- Funding should be sought for an annual, regional PT system. Such a recurring, joint activity can provide a focus for the FMD East African Laboratory Sub-network.

Laboratory roles in assuring the quality of vaccines and vaccination

- The core requirements are regular collection and characterisation of representative samples, independent evaluation of the quality and match of vaccines, and establishing reliable serological methods to measure post vaccination immunity and undetected virus infection, so as to monitor the effectiveness of vaccination.
- The involvement of vaccine producers as well as reference laboratories is needed to support the FMD lab network activities.

Overall Conclusions and Recommendations for the Network

- FMD remains endemic in all of the countries in East Africa and plans for improving control measures are mostly at an early stage of implementation
- The capacity to diagnose and characterise FMD varies widely in the region
- The National FMD labs in many of the countries of the region do not have sufficient access to quality diagnostic kits and reagents

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- Vaccination is set to be a critical element of National plans for FMD control in the region
- It has been difficult to maintain momentum and active engagement within the East African Regional Laboratory Network and this also applies to the sub-network dealing with FMD

The FMD sub-network of the East African Regional Laboratory sub-network should prioritise the following four areas in the coming year

- Establishing current focal points and exchanging information about FMD in East African countries to inform epidemiological patterns and regional risks
- Promoting standards and equivalence of laboratory tests for FMD
- Adapting existing international guidelines on laboratory biosafety to make them relevant and appropriate for the countries in East Africa
- Encouraging the development of laboratory capacity to help monitor the effectiveness of FMD vaccination programmes

NAHDIC to organise a FMD lab training in 2018 for participants from FMD labs in the East Africa region.

The focus to be on:

- (i) SP ELISA for post vaccination monitoring
- (ii) RT-PCR diagnosis of FMD including lineage and/or strain specific tests
- (iii) Antigen detection ELISA.

**Thank you for your
attention!!!!**

