ECF Immunization Training for private and Government vets.
(ITM-Muguga cocktail)

CPD Thika November 2013
Brief history of the Use of Muguga Cocktail in Kenya

• VETAID have been providing immunization against ECF in the Maasai ecosystem since 2004 and in the dairy sector as from 2011.
• Adoption has been improving annually to over 40,000 in 2012.
• The Muguga cocktail stabilate obtained from ILRI was being used.
• The DVS has now allowed the use of the vaccine in the Maasai ecosystem and dairy production systems.
Training background

• Following the successful trials of ITM-Muguga cocktail in dairy cattle, more and more dairy farmers have continued to ask for vaccination from VETAID.

• There are now 3 distributors actively providing ECF vaccination through ITM in Kenya but the coverage is way below adequate.

• Most areas are still uncovered and we continue to receive requests from the Coast region, Western, Nyanza and Central Rift valley.
• There is a need to train more private veterinarians and link them to the appointed distributors to continue providing the service in their area of operation.

• The ECF immunization taskforce recommended that all veterinarians receive training before they can provide the ECF vaccine through ITM.

• VETAID proposes a series of regional trainings for all willing private and Governments Vets in order to improve access to the vaccine in these regions.
Proposed training on ECF immunization-Infection Treatment method (ITM):

- VETAID and KARI have designed a protocol for ECF Immunization and post immunization monitoring to be offered to all willing vets in the Northern Rift valley region and parts of central province.

This protocol was used in all the vaccine trials and is the same in other countries.
Step 1: Preparation

• Make sure everything is available before setting out to the field to immunize. Ideally you should have a check list of the all the items required for the exercise. These include stabilate, diluent, blocking agent, anti-histamine, needles, syringes, serum tubes, weigh band, ear tags, immunization record sheets, assistants etc.
Preparation

• The diluent must be kept in a freezer (-20°C) at all times. Remove the diluent from the freezer when going to the field and keep it in a cool box full of ice. The Stabilate must be kept in Liquid nitrogen at all times.
Step 2: Full clinical examination of the animal to be immunized

- Do a full clinical examination of the animal before immunization, including taking the rectal temperature. Record the necessary details in the prescribed form.

- The following animals **should not** be immunized:

- Animals showing symptoms of ECF
Step 2 continue...

- Animals with a febrile reaction (rectal temperature above 39.4 °C)
- Animals in poor body condition
- Calves less than one month old
- Animals in the last month of pregnancy
- When there is an outbreak of viral diseases such as FMD and LSD in the farm
Step 3: Take the weight of the animal.

- Weigh the animal using a weigh band and record the animal’s weight in the prescribed form.
- You may choose to take some samples for monitoring or surveillance purposes.
Step 4: Ear tag the animal

- Ear tag the animal and record the ear tag number in the prescribed form.
- De-worm it with Albendazole...not Levamizole.

It has been observed that animals that have been treated with the antihelmintic Levamisole have a higher risk of becoming reactors following immunization. You might want to avoid immunizing animals that have been treated with this antihelmintic in the last one month if you are able to establish.
Step 5: Thaw the diluent.

- The diluent can be thawed by leaving the bottle at room temperature. The process can be hastened by placing the diluent bottle in water at 37°C. After thawing the diluent should be kept on ice through out.
Step 6: Thaw the stabilate

- Take out one straw from the liquid nitrogen and thaw it by rolling it between the hands for 1-2 minutes. One straw is used for one diluent bottle. Note there are 32 doses (new batch has 40) of the vaccine from one bottle and once reconstituted the vaccine must be used within 5 hours. When recruiting the animals to be immunized this fact must always be borne in mind.

- More than one straw can be used at once as long as the vaccine is used with the 5 hours.
Step 7: Reconstitute the vaccine

Pour all the contents of the straw into a serum tube. Draw 0.4-0.45 mls of the stabilate from the serum tube using a 1 ml syringe and inject this into the diluent bottle by first drawing a small amount of diluent into the syringe and allowing for slow mixing of diluent and stabilate. Repeat this several times. Keep the diluent bottle upside down during mixing to avoid air bubbles. Record the time of reconstitution in the prescribed form.
Step 8:

• Allow the reconstituted vaccine to equilibrate.

• Allow the stabilate to equilibrate while on ice for 30 minutes.

• The stabilate is now ready for use.
Step 9: Inject the 30% OTC (Alamycin) first.

- First inject the 30% Oxytetracycline-Long acting (OTC-LA) (1ml/10kg) intramuscularly.
- Note that if the volume of OTC-LA exceeds 15ml it must be injected at different sites.
- Calves below 50 kg receive a standard 5ml of the drug.
Step 10: Record start and end times.

• Note the time when the first animal is immunized and the last. Also note the order in which the animal are immunized in the prescribed form.
Step 11: Inject the stabilate.

- Inject 1ml of the reconstituted vaccine subcutaneously close to the parotid gland.
Step 12: Observe immunized animals for 20 minutes.

- Monitor the immunized animal for about 20 minutes to observe for possible allergic reactions. If any animal shows signs of allergic reactions (skin rush, lachrymation, salivation, swollen eyelids, rapid breathing) treat the animals with adrenaline or atropine at the manufacturer’s recommendations. Any vaccine that remains after the last animal has been immunized should be discarded.
Step 13: Complete the immunization record sheet.

- Make sure the immunization record sheet is completed.
- Always keep a file of these forms
Step 14: Post immunization monitoring.

The farmer should be advised to monitor immunized animals closely for one and half months when reactors are expected. If any animal shows signs of ECF the farmer should contact the person who did the immunization immediately.
Step 15: Tick control after immunization.

- Tick control should not be changed for two months following immunization. After that farmers can reduce tick control to once every three weeks. (Note immunization prevents only ECF and not all tick-borne diseases). But reducing tick control allows animals to develop immunity against the other tick-borne diseases.
Tick control

• Even if there is a slight increase in the number of cases of the other tick-borne diseases initially, in the long run they will become fewer when calves are allowed to be infected by ticks when they are still young.

• Further more reducing tick control allows immunity against ECF to be boosted and removes the need to repeat immunization.
Vaccine availability...

- Vaccine is available in our office
- We would like to work with you at the coast to serve our livestock farmers
Thank you all

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