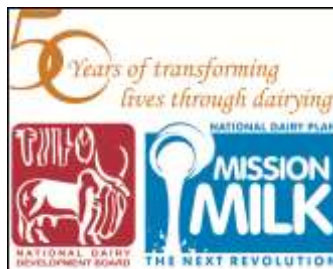


# National Dairy Development Board



## Standard Operating Procedures (SOPs)

**For**

## FMD Vaccination

## **Vaccine storage and shipment**

### **Storage**

- The vaccine should be stored in a refrigerator between +4 to + 8°C only.
- Keep the refrigerator locked at all times. The keys must be stored securely.
- Display 'DO NOT UNPLUG or SWITCH OFF' sign next to refrigerator socket.
- Defrost regularly (if not frost free) but only when the refrigerator is empty.
- Ensure that the refrigerator is under annual maintenance contract for speedy repairs.
- Ensure adequate space for air circulation.
- Do not store food, drinks or specimens etc. alongside vaccines.
- Open the refrigerator only when absolutely necessary.

### **Shipment**

- Properly document the receipt/issue of vaccine from store.
- Ensure adequate cold chain maintenance during transportation.
- Use appropriate packing materials (Cool box, thermo-cool box with ice pack) for safe shipment / temporarily storage of vaccine.
- Properly label receiver/sender details on top of the container if sending by post or by courier.

### **Storage at sites**

- Ensure use of cool box with ice-packs surrounding the vaccine vials.
- Avoid keeping ice-packs on top of the vaccine vials.
- Protect vaccine vial from exposure to light.

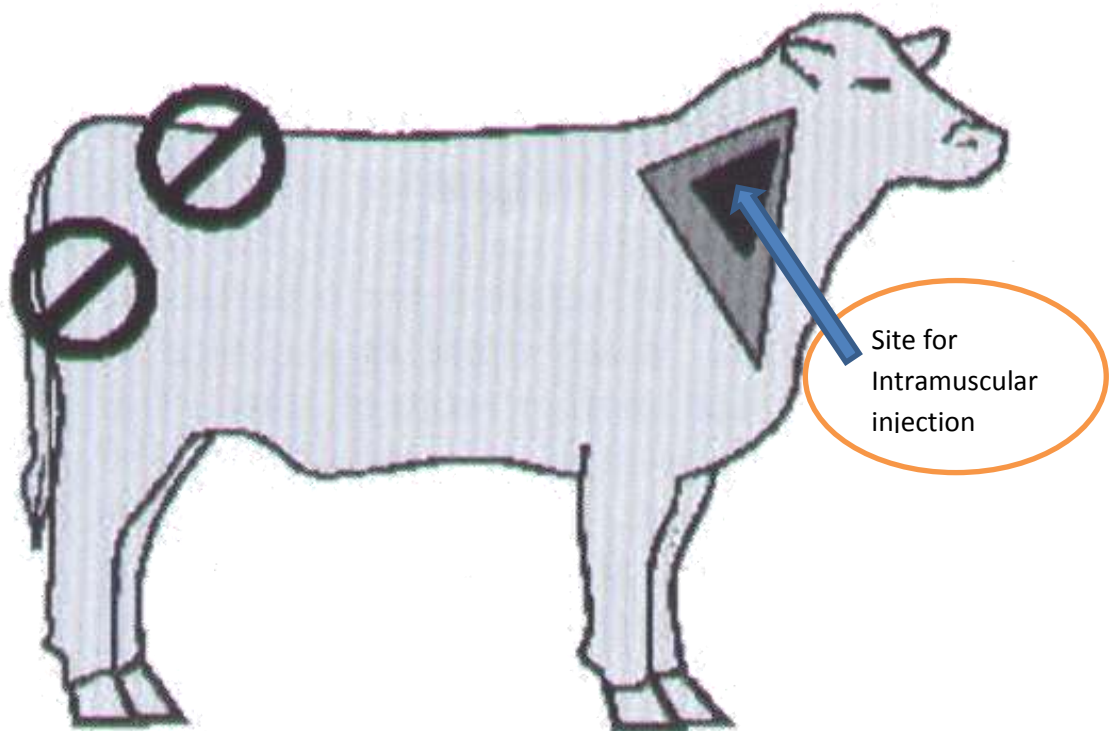
### **Vaccination**

- Cattle and buffaloes of age 4 months and above should be vaccinated for the first time.
- A booster dose should be provided one month later
- The vaccination should be repeated twice in a year
- Identify vaccinated animal by ear-tagging and store information in a database.
- Strictly follow manufacturers' instruction on the route and dosage.

*Intra-muscular injection site (for oil-based vaccine)*

Cattle: Deep in the muscle of the neck, in front of the shoulder, about one-third down from the top ridge of the neck and two thirds up from the lower edge of the neck.

### **Vaccine Site**



The needle should be inserted at 45° angle to the skin to avoid leak-back.

- Vaccine storage and administration  
Vaccine is to be stored between 2 & 8°C. The integrity of the cold chain for vaccine storage is important to maintain the potency of the vaccine. Only enough vaccine for about half hour's work should be taken from refrigeration.

Recommended needles for vaccinating the susceptible species is as below

<b>Animal</b>	<b>Size of needle</b>
Large ruminants	18 or 16G x 1 1/2 inch
Small ruminants	21 or 19G x 1 1/2 inch

- Gently shake bottle before withdrawing vaccine. Keep cool boxes shut when not withdrawing vaccine.
- Use a separate sterile needle for each vaccination.
- Needle used for injecting animals must not be inserted into vaccine vials. Two sterile needles are required for each vaccine vial – one for withdrawal of vaccine (21G x 1/2 inch) and the other to allow air into the vial to avoid creation of a vacuum (23G x 2 inch). Both needles remain in the vaccine vial plug.
- Seal empty and partly used vaccine bottles in separate transparent plastic bags and mark properly.
- Minimum vaccination coverage of 80% of population is required for proper control of the disease.
- Deworm animals 2-3 weeks before vaccination for better immune response.
- Vaccination should be carried out at least a month prior to the likely occurrence of the disease.
- Ensure proper restraining of animal before vaccination to avoid injury to the animal and the vaccinator.
- Vaccination of animals in advanced pregnancy may be avoided.
- In the event of accidental self-injection, allow the wound to bleed freely, do not squeeze, wash with soap and water, keep clean and dry, and seek medical advice immediately.
- Emergency medicines like Adrenaline, pheniramine maleate, dexamethasone etc. should be kept ready at the time of vaccination.
- The animal should be monitored for at least 1-2 hours after vaccination to detect and treat any cases of anaphylaxis that occurs.
- Vaccinated animals should be monitored for adverse reactions for at least a week post vaccination. All reactions must be reported.
- Precautions must be taken to ensure that FMD is not transmitted by the vaccination team.

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