

National Dairy Development Board



Standard Operating Procedures (SOPs)

for

Vaccination

SOP for vaccine storage

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.
- Never store the vaccine in the ice chamber of the refrigerator unless indicated by the manufacturer.
- 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.

SOP for Vaccination (General)

- Ensure a proper vaccination schedule which should be adhered to diligently.

An ideal schedule is given below:

S.no	Name of Disease	Age at first dose	Booster dose	Subsequent dose
1	FMD	4 months and above	1 month after first dose	Six monthly
2	Haemorrhagic Septicaemia (HS)	6 months and above	-	Annually in endemic areas.
3	Black Quarter (BQ)	6 months and above	-	Annually in endemic areas.
4	Brucellosis	4-8 months of age (or as indicated by manufacturer) (Only female calves)	-	Once in a lifetime
5	Theileriosis	3 months of age and above	-	Once in a lifetime. Only required for crossbred and exotic cattle
6	Anthrax	4 months and above	-	Annually in endemic areas.
7	Rabies (Post bite therapy only)	Immediately after suspected bite.	4th day	7,14,28 and 90 (optional) days after first dose

- Identify vaccinated animal by ear-tagging and store information in a database.
- Strictly follow manufacturers' instruction on the route and dosage.
- Minimize opening of cool boxes to keep temperatures in the range of +2°C to +8°C.

- Withdraw vaccine doses from the cool box as required.
- 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. A separate sterile needle must be kept in place for withdrawing vaccine.
- 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.
- In case of FMD vaccination in endemic areas, there are chances of sub-clinical active infection with FMD on any of the premises visited. Precautions must be taken to ensure that FMD is not transmitted by the vaccination team.

SOP for Theileriosis Vaccination

- Only crossbred and exotic cattle need be vaccinated at the age of 3 months and above, once in their life time.
- No other vaccine should be administered for a period of 8 weeks after Theileriosis vaccine.

Vaccine preparation

- Remove the vial from liquid nitrogen container and thaw the vaccine concentrate in lukewarm (37°C) water.
- Transfer the thawed vaccine concentrate using a sterile needle and syringe to the corresponding vaccine diluent vial and mix gently.
- The reconstituted vaccine should be injected subcutaneously taking adequate precautions against contamination.

Vaccination

- Reconstituted vaccine should be used immediately (within one hour) and should not be frozen for reuse.
- Each animal should receive 3 ml of the reconstituted vaccine.
- Vaccine concentrate should be transported and stored in liquid nitrogen.
- The vaccine diluent should be stored in a cool and dark place.
- Vaccination of animals in advanced pregnancy should be avoided.
- A few of the vaccinated animals may develop mild pyrexia and slight enlargement of the nearest pre-scapular lymph node anytime from day 8 to day 20 post vaccination.

SOP for Ear Tagging

- All the animals to be vaccinated should be ear tagged.
- The ear tag is to be applied at the centre of the ear pinna of the right ear (for uniformity) using an applicator (Fig. B) with the female part of the tag on the inner side of the pinna (Fig. C). Choice sites for tag application are shown in Fig. D
- In case of any wound/bleeding occurring after tagging, proper management of wound to prevent infection or maggot infestation must be carried out.
- The details of the animal are to be recorded against the ear tag number on the tag in the prescribed format provided.
- In the event of the ear tag falling-off, a new tag must be applied within a period of 2 weeks and the new number noted against the old tag number in the prescribed format.

Fig. A Ear Tag



Fig. B Applicator Fig. C Correct application



Fig. D Choice sites of application

