

National Dairy Development Board



Standard Operating Procedures (SOPs) for brucella control

Standard Operating Procedure for vaccination

1. Only **female calves** (both cattle and buffalo) are to be vaccinated with S-19 vaccine between 4-8 months of age (or as instructed by the manufacturer) once in their life time.
2. All personnel involved in vaccination should wear protective apparel which includes:
 - Gloves.
 - Protective goggles
 - Apron
 - Boots
3. The vaccine should be given only sub-cutaneously at the prescribed site (Fig A) by injecting at the base of a 'tented' loose skin lifted away from the animal with the free hand (Fig B). A separate needle is to be used for each animal.
4. Avoid vaccine aerosols due to loose attachment of needle to syringes while vaccinating.
5. Female calves vaccinated should be ear tagged and information is to be stored in prescribed format and in the central database.
6. Cold chain of the vaccine should be ensured till the time of vaccination.

Fig A. Vaccination site

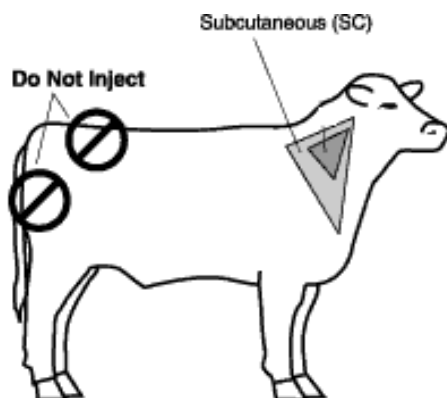
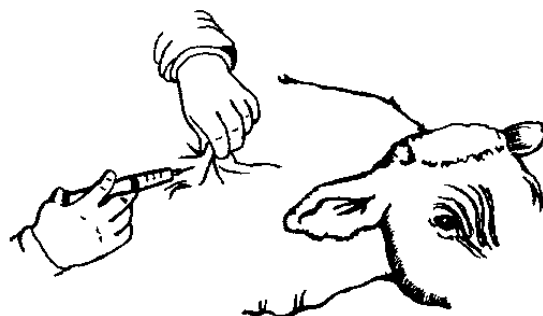


Fig B. Vaccination method



Note: Utmost care should be taken while vaccinating the animals. As the vaccine strain is live and they are not fully attenuated it can cause disease in human beings. Immediate medical attention should be taken in such situations.

Standard Operating Procedure for vaccine preparation & usage

1. Male calves should not be vaccinated.
2. Female calves (both cattle and buffalo) between 4-8 months of age only should be vaccinated.(or as indicated by manufacturer)
3. Brucella vaccine should be stored and transported between 2 and 8°C.
4. The brucella vaccine comes in 2 vials, one containing the freeze-dried vaccine and another vial containing diluent.
5. Use only the diluent provided with the vaccine for reconstitution.
6. Chill the diluent prior to reconstitution.
7. Transfer a small amount of chilled diluent to the vial containing the freeze-dried preparation and mix well to ensure uniform suspension.
8. Transfer the suspension to diluent vial and mix well.
9. Utmost care to be taken while mixing to avoid vaccine aerosol due to needles being loosely attached to the syringe.
10. Keep the reconstituted vaccine on ice.
11. Use reconstituted vaccine immediately.
12. Each reconstituted vial contains 5 doses (10 ml).
13. Each animal should receive 2ml of the reconstituted vaccine through sub-cutaneous route only.

14. First determine the number of animals to be vaccinated in a village before reconstituting the vaccine.
15. Part use of vial and storing in refrigerator is not recommended.
16. Always use gloves and goggles while preparing the vaccine and while conducting vaccination.
17. The goggles should be disinfected using a suitable disinfectant (70% ethanol, isopropanol etc) after each use.
18. Do not use the vaccine after its expiry date.
19. Syringes, needles, gloves, masks, used vials etc, should be properly immersed in a suitable disinfectant (1% NaOH, 5% Phenol, 1-2% formaldehyde or gluteraldehyde, 5% sodium hypochlorite etc) before disposal by deep burial or any other suitable method.

Standard Operating Procedure for Disinfection

Prevention of spread of infection is equally important as the process of vaccination in controlling brucellosis in endemic areas. Therefore, any abortions occurring between the 5th to 7th month of age (may extend a month on either side), may be suspected for brucellosis and the following disinfection procedures carried out:

1. The aborted animal should be separated from other animals immediately.
2. Premises where animal has aborted and being maintained should be disinfected.
3. Disinfection should be done with 1% caustic soda (NaOH) twice daily.
4. NaOH should be added to water and never vice versa.
5. The practice for disinfection should be continued for minimum 15 days from abortion or until the uterine discharges cease.
6. Isolation of the infected animals should be done for at least one month.
7. All the aborted material as well as discharge contaminated materials i.e. bedding material, feed, soil etc should be buried deeply (minimum 4 feet) with liberal sprinkling of lime powder over it.
8. Utensils used for feeding/drinking of the affected animal should be cleaned and disinfected.

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