Biosecurity guidelines for cattle and buffalo breeder farmers

The Department of Animal Production and Health (DAPH) provides the following biosecurity guidelines for cattle and buffalo breeder farms in Sri Lanka. Registration in the Breeding Division of the DAPH is mandatory for all cattle and buffalo breeder farms.

Selection of the site / location

1. A minimum distance of 500 meters from other livestock farms is recommended. However, this distance may vary depending on the species and density of surrounding livestock populations and the prevailing disease risk in the area.
2. Easy access to roads.
3. Availability of continuous and sufficient supply of water from a reliable and safe source.
4. Select a location that is not prone to flooding.
5. Obtaining of the necessary approvals from the relevant environmental and local authorities.

Physical and functional separation from the outside environment

1. The farm should be surrounded by a security fence or wall.
2. No vegetation around the perimeter fence.
3. A single controlled entrance to the farm.
4. Clear "***Restricted Entry***" signage is displayed at the main entrance.
5. Access to the farm is permitted only for farm staff and authorized visitors.
6. Visitors, recently contacted with high-risk livestock or farms affected by any contagious diseases are not permitted to enter the farm.
7. Farm authority provides a self - declaration to visitors at the entrance, on previous visits to any livestock farms.
8. Provide a vehicle tire dip (4.5 - 5m × 3–3.5 m × 20 - 30cm; disinfectant depth 15cm) and vehicle spray facility at the entrance for permitted vehicles. All other vehicles to be parked outside the farm premises.
9. Establish a foot bath (1 m × 0.5 m × 12–15 cm with 5 cm disinfectant level) at the main entrance.

10. Replace the disinfectant solution in the tire dip and foot bath daily.
11. Provides hand washing facilities and changing area for boots and overalls, at the entrance.
12. Facilities for regular washing of uniforms are available and functional.
13. Display biosecurity guidance for farm staff and visitors at the entry.
14. Documented cleaning and disinfection procedure is available for all equipment including veterinary instruments brought from outside, prior to use.

Production area

1. The farm is managed as clean zone for animal housing and milking and a dirty zone for waste management, visitors, and vehicles.
2. Separate units/places are available for cow sheds, calf sheds, calving pens, isolation pens, quarantine pens, milking parlor, feed storage and mixing area.
3. Separate and secure storage areas/place available for veterinary drugs, vaccines, disinfectants, farm equipment, and other consumables.
4. Display clear signboards to indicate various actions/units (eg:milking parlour, dry cow sheds etc.) in the production area.
5. A dedicated on-farm vehicle should be available and exclusively used for the internal transportation of feed/bedding material.
6. Each unit in production area should be functionally separated and, managed with dedicated staff to minimize cross-contamination between animal groups.
7. Distance between milking parlor and cow sheds should be at least 5m.
8. Milking parlor should be designed to ensure hygienic milk production.
9. Availability of office room for administration, management and maintaining of records.
10. An appropriate method should be available for disposal of solid and liquid wastes (eg: covered compost pits, biogas systems etc.).
11. Manure pit should be 30m away from cattle shed and milking parlor.
12. Ensure the well is kept at least 50m away from manure pits and burial sites.

Cattle sheds

Animal housing is situated on elevated, well-drained land within the clean zone.

1. Align the building in an East–West direction.
2. A well-designed resting area is provided within the cattle shed, to ensure adequate lying space, comfort and reduced the stress for animals.

3. Sheds are positioned at least 15–20 m away from the perimeter fence.
4. Maintain 1.5 to 3 meters vegetation free area around the animal housing.
5. Construct the floor using concrete with a 1% to 2% slope to facilitate easy cleaning and efficient manure management.
6. Bedding materials, should be clean, dry, and stored in a way that prevents contamination by rodents, moisture, and manure.
7. Availability of hand washing and footwear disinfection facilities at the entrance of each unit.
8. The floor of the shed, feed troughs, and water troughs are cleaned daily.
9. Feed store is pest proofed and maintained dry.
10. Locate calf pens in the most isolated, cleanest zone of the farm (position these unit upwind from adult cattle) and maintain a minimum distance of 10–15 meters from the main herd.
11. Calving pens should be cleaned after each calving,
12. Isolation pens should be cleaned after each use, and full cleaning and disinfection should be carried out weekly or immediately after any disease occurrence.
13. Drinking water should be portable.
14. Water treatment and testing of water for quality and tested periodically for microbial and chemical safety.

Disease prevention and control

1. Implementing disease control programs for, FMD, LSD, Brucellosis and Bovine Tuberculosis.
2. Routine disease surveillance programs should be carried out for early detection of important reproductive and zoonotic disease (BTB, Brucella, BVD and IBR).
3. Only healthy animals should be introduced into the farm.
    a. All animals should be tested for BTB, Brucella, BVD and IBR, before introduction.
    b. All new introductions should be quarantined for a minimum of 30 days before introduction to the main herd.
4. Vaccination should be carried out according to the recommended national vaccination schedule for cattle and buffalos.

No.	Type of vaccine	Recommended vaccination schedule
1	Foot-and-Mouth Disease (FMD)	Primary vaccination: at 4–6 months of age First booster dose: 1 month after the primary vaccination Subsequent revaccination: every 6 months
2	Black Quarter (BQ)	Primary vaccination: at 4–6 months of age Booster dose: 9 months after the primary vaccination Optional revaccination: at 22–24 months of age to maintain extended protection
3	Lumpy Skin Disease (LSD)	Primary vaccination: at 4–6 months of age in calves born to vaccinated dams and at any age in calves born to unvaccinated dams Subsequent revaccination: every 6 months
4	Haemorrhagic Septicaemia (HS)	Primary vaccination: at 4–6 months of age Booster dose: 3–6 months after the primary vaccination Subsequent revaccination: annually

5. Dead animals must be removed from housing immediately and disposed using approved methods such as deep burial. (pit is 6–8 feet deep, treated with a layer of lime over the carcass, and covered securely once disposal is complete, disposal sites must be fenced and clearly marked)
6. Disease outbreak situations should be reported immediately to the relevant veterinary office by the farm authority.
7. Post-mortem examinations should be carried out by a veterinarian, and relevant samples are submitted to government laboratories (VIC/VRI) for confirmation.
8. No direct contact of farm staff with outside livestock.
9. Availability of a training schedule and implementing staff training program on biosecurity.
10. An assigned veterinary surgeon should make regular visits to the farm.

Record keeping

The farm shall maintain records on:

- Visitor movement and vehicle entry
- Animal introduction and quarantine observations

- Health records including treatment, deworming, vaccination, disease diagnosis (eg: mastitis, diarrhea etc.) and mortality
- Pest control
- Cleaning and disinfection procedures and program
- Laboratory reports related to, feed and water quality
- Waste disposal records/records on selling of manure
- Animal identification and movement/traceability records within and outside the farm
- Individual history cards record on disease history, growth, reproduction and milk production for individual animal