Swine Breeder Farm Establishment criteria for Multiplier Farms in Sri Lanka

Department of Animal Production and Health

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Acknowledgement

Acknowledgement

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1. Objectives

Develop criteria to ensure availability of quality swine breeding materials for fattening to sustain the Swine industry in Sri Lanka.

Establish standardized swine multiplier farms in Sri Lanka

Facilitate registration system for Swine Breeder farms (Multiplier) under the Department of Animal Production and Health.

2. Breeding policy

According to the swine breeding policy in Sri Lanka ***three way crossing*** of pigs should be practiced, in which cross Large white or Landrace pure lines to produce F1 cross bred female where F1 female cross with Duroc male to produce commercial fattener piglings.

3. Definition of swine breeder farm

3.1.Nucleus farms

Swine breeder farm is the farm where animals are bred for maintain pure lines of Large White ,Landrace and Duroc and producing F1 generation by crossing large white land and Landrace vice-versa.

3.2. Multiplier swine breeder farms

Farms which bred F1(Female) with Duroc (male) to produce piglings for sale is called Multiplier farms.

Note: Criteria mentioned in this book valid multiplier farms only

4. Criterion to be consider in Multiplier swine breeder farms

4.1. Location:

- **No future issues:**Selected site should be free of environmental ,socioeconomic and socio-cultural issue in future
- **Establishment:** Farm shouldestablish in non-industrial zones of the urban development plans available in the area andalways establish in an un-urbanized areas.
- **Effect on Natural Environment:** Selected site should minimize the effect on natural environment, agricultural lands, and surface and ground water sources.
- **Approval:**Approval should be granted from Central Environmental Authority prior to the farm establishment
- **Recommendation:**Site suitability should be inspected and recommended by the respective veterinary surgeon of the division.
- **Shape/Drainage of the land**: Selected site should be well drained and not very steeply, squareshape land is ideal. Area should befree of flooding.
- **Water:**Water supply should be available adequatelyfor the land selected, and it should be proper disposal the waste water generated.
- **Solid waste:** There should be enough space for solid waste disposal(temporally/permanently)within the farm
- **Infrastructures:**Selected site should be facilitated with road network electricity and other infrastructures.
- **Law & regulations:**All the activities carried out the site should be according to the laws and regulations set by the Department of Animal Production and Health, Central Environmental Authority, Ministry of Health, local government and other relevant institutes.
- **Licensing:** Environment Protection license should be obtained by the respective authority on or before the farm operation.
- **Type of Operation:**If the operation is mixed (with Fattening/slaughter/processing) each unit should be established separately

4.2. Housing

Standard house: The swine breeder house should be built as per the specifications given by a veterinary surgeon compiling with minimum standards. The housing arrangement should facilitate the efficient functioning of farm operation. The house/s should be built in accordance with the standards recommended for the climatic zone of the country.

- **Floor:** Slattered or non-slippery concrete floor free of cracks.
- **Roof:** should be built with suitable design, adequate height & suitable material to minimize the heat inside and facilitate the ventilation.
- **Feeding space:** Should be adequate to the given age and physiological status/condition of the animals.
- **Ventilation:** should be adequate for animal comfort and keeping the house dry and clean.
- **Water supply :** Adequate clean water supply for every pen
- **Drainage system:** This system should facilitate the efficient disposal of effluent generated in the farm.
- **Corridors:** Corridors should be adequately designed for easy operation.
- **Walls or partitions:** Walls should be built with sufficient height, strength and with suitable materials which assure proper grouping while providing comfort.
- **Gates:** should be built with iron bars or wooden planks.
- **Animal order**: Placement of the animal groups within the house should facilitate the bio-security.

4.3. Feeding:

- **Feed:** Formulated or compound feed from an approved feed manufacturer should be fed. swill feeding is not recommended.
- **Ration:** Specific ration should be given to different age groups and physiological needs fulfilling nutritional requirement. Ideally the ration should be prepared by an animal nutritionist.
- **Raw material:** If self-mixing is done in the farm, quality raw material should be used originated from known reliable source. The self-mixing ration should be formulated by a qualified animal nutritionist.
- **Water:** Clean water should be available adlib.

4.4. Bio-security

- **Boundary:** There should be a fence or parapet wall for the demarcation of a farm with a specified entry/exit points.
- **Entrance:** A board with clear instructions regarding entry to the farm should be displayed restricting entering of unauthorized people and vehicles. Maintaining of records for visitors & vehicles at the entrance is essential
- **Parking:** Parking facilities for vehicles should be located outside the farm.
- **Sign board:** Sign boards should be displayed at the relevant place (Ex: Restricted entry /No entry)
- Washing, changing & disinfecting facilities for visitors & workers should be provided at the entrance (Boots, Boots covers, Overall, etc.)
- **Workers:** separate workers should be employed for different sections/units for large farms. Facilities should be provided to clean & change when working in different sections/units.
- **Footbath**: footbath with recommended disinfectants should be provided at the entrance of each unit &replacement of disinfectants should be done at least daily
- **Vehicle dip and spray:** Vehicle dip or spray is recommended at the farm entrance (Optional)
- **Quarantine:** all new animals purchased/imported for the breeding farm should undergo specified period of quarantine under veterinary supervision.
- **Disinfection:** Regular disinfection procedure should be available and in practice in the farm prepared & recommended by animal health specialist.
- **Utensils & farm equipment:** Utensils and farm equipment should be available separately for each unit of the farm.

4.5. Waste management

4.5.1. Solid waste

Facilities should be available to separate different wastes types such as degradable (organic)non degradable (plastic and glass)

Solid waste (dung and sludge from big gas) should not be discarded to low land, wetland, riverbank or at natural reservoir which causes water or land pollute. Solid waste should never expose /mixed with rain/rain water drain.

Dung, food waste, dead animals, placenta and other excreta are considered as organic solid waste. There are several recommended methods for disposal of above waste.

1. **Bio Gas**: It is the most recommended method of disposal of solid waste in swine breeder farms. The biogas unit should be designed according to the number of animals in the farm.
2. **Incineration**: It is recommended to have an incinerator in the farm for disposal of dead animals suspected due to disease outbreaks.
3. **Dumping**: Solid waste accumulated in the farm should be removed daily or within maximum 3 days period using suitable
4. **Disposal pit**: Disposal pit should be available for discard dead piglings and organic materials incurred at furrowing.
5. **Burial:** There should be ideal and declared area of land for dead animal dispose.

Non degradable solid waste: Non degradable solid waste should be reused or handed over to recycle.

5.5.2. Liquid waste

Untreated Waste water should not be discarded to open land,stream, wet land or water body. There should be enough land available to discard treated waste water. Waste water should never expose /mixed with rain/rain water drain.

There are multiple options recommended for managing waste water. One of followings or mixed systems should available in the farm as effective waste water management methods.

- Collection of waste water to lagoons or tanks
- Aerating waste water tanks to accelerate the microbial action
- Series of lagoons or tanks which finally filter through sand beds /chlorine and discard to -vegetation
- Should have a Disposal pit
- Should have a Septic tanks
- Adopting Integrated farming
- Make Lagoons with Azolla plants
- Construction of Bio digester
- Should available a Waste water treatment plan

4.6. Breeding

All the breed types should be maintained according to the Breeding policy of Sri Lanka. New breeds should be introduced to the farm under the approval of the Department of Animal Production and Health.

1. Breeding herd should be originated from a registered nucleus farm which maintains the pure lines of breeds. Always replacement stock should also be obtained from a nucleus farm.
2. Pedigree details of the breeding herd should be maintained in the farm.
3. The breeding program should be prepared and followed under supervision of animal breeding specialist or veterinary surgeon
4. Specific breeding parameters for each type of breeds/crosses should be followed.
5. Proper animal identification method and breeding record keeping method should be maintained in the farm.
6. Facilities for natural or the artificial insemination (AI) should be available.
7. Proper selection and culling procedure should be followed before issuing animals for fattening.
8. Importation of Semen /boars should be recommended by the DAPH.

4.7. Health

There should be a disease investigation system prevention plan recommended by a Veterinarian. The data recording system should be available and all the important details about the animals and operation should be recorded.

- Documented vaccination schedule should be available
- Records of vaccinations should be available
- Vaccination efficacy should be monitored for at least economically important diseases.
- There should be a continuous monitoring system by a Veterinarian.
- The veterinary health record should be maintained.
- Separate sick pen should be available
- Disease diagnosis and Treatment should be done by under supervision of Veterinary.

5. Committee

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