

Self-Assessment Checklist for Enhanced Biosecurity for FMD Prevention: Dairy



Target Audience

This checklist and corresponding Information Manual for Enhanced Biosecurity applies to:

- Dairy operations with lactating cattle either raising, or shipping, heifers and bull calves off-site for rearing.
- Dairy operations with other susceptible species (beef cattle, pigs, sheep, goats) kept on the premises.
- All individuals delivering, servicing, or working on the operation, including family members and/or non-family employees responsible for animal care and husbandry.
- Dairy operations that have **never been infected with or vaccinated for** foot and mouth disease (FMD).

Introduction

In the event of a foot and mouth disease (FMD) outbreak in the United States (U.S.), maintaining business continuity for the dairy industry is critical to the agricultural economy, food security, as well as animal health and well-being. The goal of the Secure Milk Supply (SMS) Plan is to provide a workable business continuity plan for dairy producers that have cattle with no evidence of FMD infection and associated industries that is credible to State and Federal animal health officials. In an actual FMD outbreak, decisions will be made by the Responsible Regulatory Officials (local, state, tribal, and federal officials, as appropriate) based on the unique characteristics of each outbreak.

During an FMD outbreak, it is the producer's responsibility to keep their animals from becoming infected, focusing on what they can control on their premises. Biosecurity approaches are both structural and operational. Structural biosecurity is built into the physical construction and maintenance of a facility. Operational biosecurity involves management practices designed to prevent the introduction and spread of disease agents onto or off of an animal production premises. FMD will test the effectiveness of operational biosecurity because FMD virus is highly contagious. Successful implementation of the biosecurity practices depend on the awareness and behavior of individuals on the operation.

FMD is highly contagious and has a major impact on animal health and international trade; however, it does not pose a food safety or public health concern. Existing biosecurity plans for dairies may offer protection against endemic diseases but heightened precautions are needed for FMD. The enhanced biosecurity recommendations outlined in this document are based on the known exposure routes for FMD. Operations with susceptible species raised outdoors (on pasture, dry lots) may have more difficulty preventing FMD exposure depending on their proximity to infected premises and the presence of wildlife in the area.

This document emphasizes three concepts that all dairy operations should be ready to implement in the event of an FMD outbreak in the U.S.:

1. A Biosecurity Manager,
2. A written operation-specific enhanced biosecurity plan, and
3. A Line of Separation.

This enhanced dairy biosecurity checklist and the corresponding Information Manual can be used to develop an operation-specific, written, enhanced biosecurity plan prior to an FMD outbreak. All dairy premises should designate a Biosecurity Manager; this is item number 1 in the checklist below. The Biosecurity Manager develops the biosecurity plan **PRIOR TO** an outbreak; the plan should address items 2-11 on this checklist. The biosecurity plan should describe the scope of the operation, contain forms for documentation of training and signatures, explanations of procedures and signage used on the premises, and protocols written and communicated effectively in languages that are fully understood by the individuals responsible for implementation.

Implementing the biosecurity plan, including training individuals, before an FMD outbreak occurs provides the best chance to prevent animals on the operation from being exposed. However, implementing effective biosecurity to protect outdoor raised animals from FMD can be expensive and inconvenient. However, a failure of biosecurity resulting in FMD infection of the herd can be devastating. Once the biosecurity plan is written, dairy farm owners/managers may use the checklist in one of the following ways:

- **In the absence of FMD in the United States**, dairy farm owners/managers should decide which items (#2-11) they will implement. The biosecurity plan should describe the strategy for how each item could be implemented (supplies needed, changes in management practices, etc.).
- **If FMD is diagnosed anywhere in the U.S.**, dairy farm owners/managers should immediately implement ALL of the items in the checklist to minimize the risk of exposing their animals.
- **If the dairy operation is located in an FMD Control Area**, Responsible Regulatory Officials may require that ALL of the items on the checklist, and possibly others, be implemented before animal movement is permitted, and perhaps before raw milk movement to processing is permitted.

Scope of Biosecurity Plan

Each operation (premises) should have its own biosecurity plan. Begin by defining your premises, clearly describing the animals (all species) and animal housing (buildings, pastures, and dry lots) associated with the dairy operation. Additionally, other businesses operated from the same premises will need to be accounted for in the biosecurity plan (e.g., distribution or sales of milk or milk products, eggs, fruits, vegetables, feed, mineral, fertilizer, compost, seed, or equipment; petting zoo; hosting farm tours; repair shop; etc.). Animals owned by the operation but reared off-site and accessed via a public road may be considered a separate premises, have a separate Premises Identification Number (PIN), and therefore, a separate biosecurity plan. Biosecurity plans for premises owned/managed similarly may have significant overlap. Having a PIN may be required to request movement permits during an outbreak. A PIN includes a valid 911 address and a set of matching coordinates (latitude and longitude) reflecting the actual location of the animals on the premises. Request a PIN from the office of your State Animal Health Official.

Acknowledgments

This Secure Milk Supply (SMS) Self-Assessment Checklist for Enhanced Biosecurity for FMD Prevention: Dairy was developed by the Center for Food Security and Public Health (CFSPH), Iowa State University (ISU), College of Veterinary Medicine and representatives from the dairy industry, state and federal agencies, and academia. This material was made possible, in part, by a Cooperative Agreement from the United States Department of Agriculture's Animal and Plant Health Inspection Service (APHIS).

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Recommendations for Biosecurity

Each self-assessment checklist item has three possible responses, described below. Implementation of each component is essential to prevent virus entry and protect the health and well-being of the animals on the operation.

- **In place:** All items are addressed in the biosecurity plan are implemented on the dairy operation as evidenced by visual inspection or by signed and/or dated documentation, as applicable.
- **In progress:** Some, but not all, of the items are addressed in the biosecurity plan and are, or are capable of being, implemented on the dairy operation as evidenced by visual inspection or by signed and/or dated documentation, as applicable, or as described.
- **Not in place:** The items have not been addressed in the biosecurity plan or are not capable of being implemented on the dairy operation.

1. Biosecurity Manager and Written Plan

The Biosecurity Manager is identified for the operation. This individual is responsible for developing the biosecurity plan with the assistance of a veterinarian (if they are not a veterinarian) and ensuring biosecurity training of, or communicating biosecurity measures with, all individuals who enter the operation. The Biosecurity Manager have the written authority to ensure compliance with biosecurity protocols and take corrective action as needed.

- In place In progress Not in place

An operation-specific, written, enhanced biosecurity plan has been developed by the Biosecurity Manager. The plan is reviewed at least annually and whenever the operation goes through a change that affects biosecurity (expands, adds a new aspect of the business, etc.). The biosecurity plan clearly defines the scope of the operation and includes biosecurity for other susceptible species kept on the premises. The biosecurity plan includes a premises map labeled with the Line of Separation (LOS), LOS Access Point(s), cleaning and disinfection (C&D) station(s), designated parking area, and carcass disposal/pickup location. The map indicates vehicle movements (milk truck, animal transport vehicles, deliveries, etc.) and carcass removal pathways. The Biosecurity Manager ensures that all individuals entering the operation frequently (weekly or more often) have access to a copy of the biosecurity plan. The Biosecurity Manager is capable of implementing the written plan if FMD is diagnosed in the U.S.

- In place In progress Not in place

2. Training

The Biosecurity Manager(s) and essential personnel are trained at least annually about the biosecurity measures necessary to keep FMD out of the herd; training is documented. The Biosecurity Manager(s) informs individuals entering the operation of the biosecurity measures they are to follow in a language they understand. Individuals are aware of the biosecurity concepts and procedures that apply to their specific areas of responsibility. The biosecurity plan describes the training required before entering this operation.

- In place In progress Not in place

3. Protecting the Dairy Operation

Line of Separation (LOS)

The biosecurity plan includes an LOS, which is established as an outer control boundary around, or within, the premises to limit movement of virus into areas where susceptible animals can be exposed. The LOS is clearly defined in the biosecurity plan and is clearly marked on the premises. Animals, vehicles, people, or items only cross the LOS through clearly marked and controlled LOS Access Points(s), following appropriate biosecurity measures. Cattle are prevented from nose-to-nose contact from livestock on adjacent premises. Cattle do not have access to streams, waterways, or runoff water that may have come from other premises.

- In place In progress Not in place

LOS Access Point(s)

Entry to the dairy operation is restricted to a limited number of controlled LOS Access Points. These LOS Access Points are protected with a suitable barrier (e.g., gate, cable, rope) to prevent unauthorized vehicles from entering. Each LOS Access Point is clearly marked with a sign in a language understood by all entering. Vehicles moving through an LOS Access Point are cleaned to remove visible contamination and then disinfected. People and items moving through LOS Access Points follow specific biosecurity steps. The animal loading/unloading area does not serve as a people entry point. All movements (animals, vehicles, equipment, people) across the LOS are recorded and available for review upon request. Deliveries not essential to the dairy are made outside the LOS at a designated area indicated on the premises map.

- In place In progress Not in place

Cleaning and Disinfection (C&D) Station

There is an operational, clearly marked, and equipped C&D station with the means to remove visible contamination and then disinfect vehicles, equipment, and items needing to cross the LOS. The C&D station is operated by individuals who have received documented training in proper selection and use of personal protective equipment and the principles of C&D. Runoff from the C&D station is managed following state and local regulations, ensuring it does not enter waterways, animal housing, or on-farm traffic areas. The biosecurity plan contains contingency plans for vehicle and equipment C&D in inclement weather.

- In place In progress Not in place

Designated Parking Area

There is a clearly marked, designated parking area outside of the LOS, away from animal areas, for vehicles that will not enter the operation and have NOT been cleaned and disinfected.

- In place In progress Not in place

4. Vehicles and Equipment

Vehicles and Equipment (non-animal transport)

All vehicles and equipment (not containing live animals) are cleaned and effectively disinfected prior to crossing the LOS, otherwise entry is prohibited.

- In place In progress Not in place

Livestock Truck/Trailers (animal transport vehicles)

All empty animal transport vehicles are cleaned and disinfected prior to arrival at the operation (outgoing loads) or before animals are loaded for delivery to the operation (incoming loads).

- In place In progress Not in place

5. Personnel

Prior to Arriving at the Dairy

Access is limited to individuals who are essential to the operation of the dairy. Everyone crossing the LOS on foot or exiting their vehicle inside the LOS arrives at the operation having showered and wearing clean clothing and footwear since last contacting susceptible animals. All individuals crossing the LOS have a signed agreement on file agreeing to follow these instructions.

In place In progress Not in place

Entry Logbook

Everyone crossing the LOS Access Point(s) completes the entry logbook, unless they are a scheduled worker. The entry logbook is monitored by an individual working on the dairy to ensure accurate completion. The contact information and work schedule records for all workers are maintained.

In place In progress Not in place

Biosecure Entry/Exit Procedures

All individuals who cross an LOS Access Point on foot or exit their vehicle inside the LOS ensure that visible contamination on their footwear, clothing, or exposed skin does not enter or exit the operation, following the biosecure entry and exit procedures as specified in the biosecurity plan.

In place In progress Not in place

6. Animal Movement

Incoming Animals

Animals only come from sources with documented biosecurity practices and no current or previous evidence of FMD infection.

In place In progress Not in place

Pre-movement Isolation Period

No animals from an FMD Control Area are introduced onto the operation for at least 7 days prior to moving animals to another production site with susceptible animals.

In place In progress Not in place

Contingency Plan for Interrupted Animal Movement

A plan exists to manage animals (heifer and bull calves, cull cattle) in a biosecure manner on-site in the event animal movement is stopped for several weeks.

In place In progress Not in place

Loading/Unloading Animals

Animals leaving the operation only move in one direction across the LOS at an Access Point. The animal loading/unloading area is NOT a people entry point. Areas contaminated by personnel or animals after loading/unloading are cleaned and effectively disinfected according to the biosecurity plan.

In place In progress Not in place

7. Animal Product Movement

Milk Collection

The milk hauler/driver follows our farm-specific standard operating procedure that meets or exceeds the Secure Milk Supply Plan Biosecurity Performance Standards for Raw Milk Collection and Transport. The drive path to the milk house is labeled on our premises map. Our biosecurity plan describes the drive path to the milk house, whether the milk truck crosses the LOS or not, the use of single or commingled

tankers on this operation, the type of milk transfer hose used, and whether the milk hauler/driver exits the cab to load milk.

- In place In progress Not in place

The Biosecurity Manager ensures the milk truck/tanker hauling milk from other operations does not leak milk in an area that cannot be effectively disinfected.

- In place In progress Not in place
 Does not apply (explanation included in biosecurity plan)

Milk samples collected on-farm are transported in a container/bag that can be disinfected to remove visible contamination on the exterior.

- In place In progress Not in place
 Does not apply (explanation included in biosecurity plan)

Feeding Dairy Products

Calves on the operation are fed either colostrum/milk originating from the operation where they are housed or colostrum/milk replacer manufactured according to World Organization for Animal Health (OIE) recommendations for inactivation of FMD virus for animal consumption.

- In place In progress Not in place
 Not applicable (explanation included in biosecurity plan)

Adult cattle on the operation are fed waste milk that has been treated to World Organization for Animal Health (OIE) recommendations for inactivation of FMD virus for animal consumption.

- In place In progress Not in place
 Not applicable (explanation included in biosecurity plan)

Milk Disposal

A milk disposal plan exists in the event raw milk cannot be moved to processing off-farm.

- In place In progress Not in place

Semen, Embryos

Semen and embryos collected after FMD has been diagnosed in the U.S. come from sources with documented, enhanced biosecurity practices and have no current or previous evidence of FMD infection. Semen and embryos are transported in containers whose exteriors can be cleaned and effectively disinfected to minimize the risk of virus transmission.

- In place In progress Not in place
 Not applicable (explanation included in biosecurity plan)

8. Carcass Disposal

Dead animals are disposed of in a manner that prevents the attraction of wildlife, rodents, and other scavengers. Rendering trucks and other vehicles hauling dead animals to a common disposal site do not cross the LOS.

- In place In progress Not in place

9. Manure Management

Manure is stored and removed in a manner that prevents exposure of susceptible animals (either on or off the premises of origin) to disease agents and meets state, local, and Responsible Regulatory Officials' regulations.

In place In progress Not in place

A plan exists for storing manure on-site in the event it cannot be permitted to move off-site during an outbreak.

In place In progress Not in place

10. Rodent, Wildlife, and Other Animal Control

Control measures are in place to minimize interaction between cattle and other animals (deer, feral pigs, rodents, dogs, cats, horses, etc.).

In place In progress Not in place

11. Feed

Feedstuffs are delivered, stored, mixed, and fed in a manner that minimizes contamination, and feed spills are cleaned up promptly to avoid attracting wildlife.

In place In progress Not in place

Comments

Please send comments or suggested edits for improvement to: smsinfo@iastate.edu

Additional Resources

The Secure Milk Supply website has additional resources available at: www.securemilksupply.org