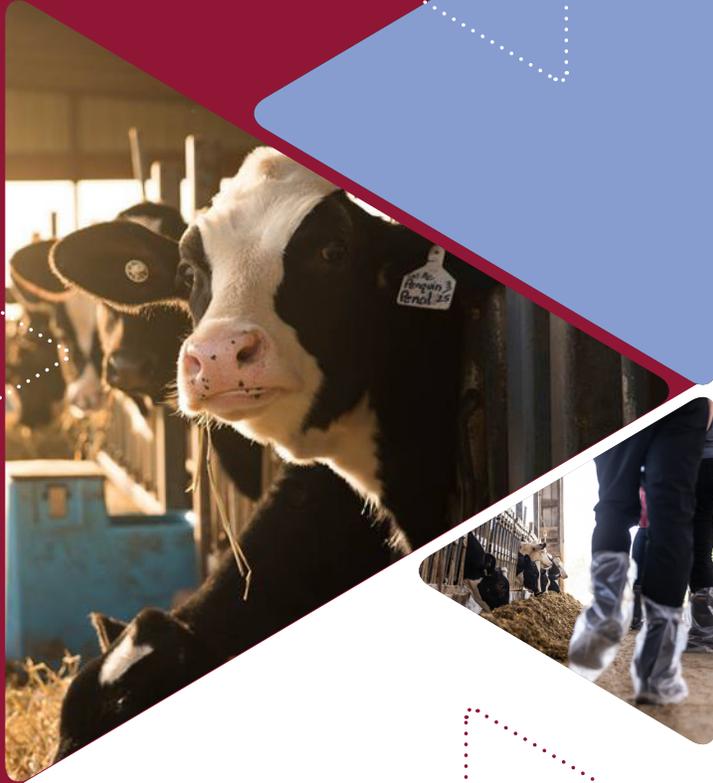


FARM BIOSECURITY — ENHANCED: PREP GUIDE



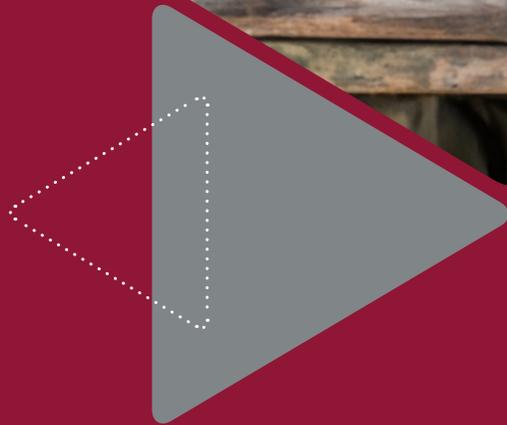
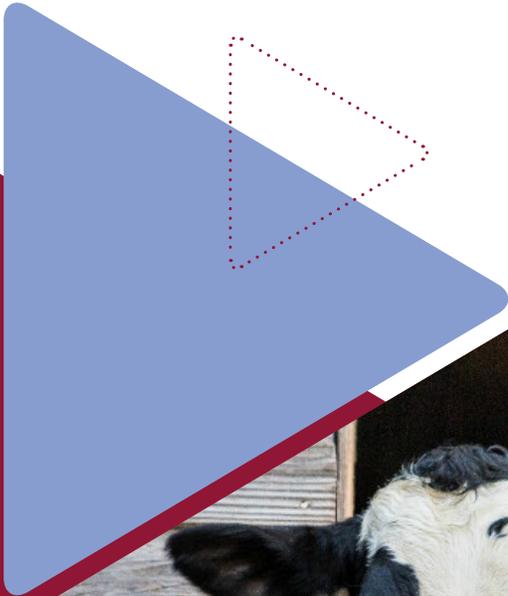


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▶ ABOUT FARM BIOSECURITY

The National Dairy Farmers Assuring Responsible Management (FARM) Biosecurity Program provides producers with the steps to **get started** and **build additional protections** for their cattle. FARM Biosecurity has two parts: Everyday Biosecurity for common disease threats and Enhanced Biosecurity for highly contagious foreign animal diseases (FAD). The FARM Biosecurity resources aim to protect cattle, build resiliency, and ensure future business continuity opportunities for the dairy industry.

Everyday Biosecurity

The FARM Biosecurity – Everyday program includes a manual, worksheets, and a biosecurity plan template for producers to demonstrate the steps they take daily to protect the health of their animals. The Everyday Biosecurity Manual builds on the foundation for animal health described in the FARM Animal Care program. The Manual includes practical and effective management practices to protect cattle and people from disease exposure. The Step 1 worksheet identifies movement risks. The Step 2 checklist finds biosecurity strengths and gaps. The Step 3 template guides producers through writing an everyday biosecurity plan specific to their farm. All resources align with the Enhanced Biosecurity steps. The goal of FARM Biosecurity – Everyday is to prevent or lessen the impact of common disease threats like contagious mastitis, respiratory infections, and calf scours. More information at: <https://nationaldairyfarm.com/dairy-farm-standards/farm-biosecurity/>

Enhanced Biosecurity

The FARM Biosecurity – Enhanced program includes an online database to develop an enhanced biosecurity plan (EBP). Stronger, or enhanced, levels of biosecurity will be needed to protect cattle against the highly contagious foot-and-mouth disease (FMD) found in two-thirds of the world. One FMD case in the U.S. could shut down movement of cattle and their products across the nation for at least 72 hours. The Secure Milk Supply (SMS) Plan for Continuity of Business was developed to help the dairy industry prepare for this situation. The SMS Plan provides enhanced biosecurity guidance for producers to voluntarily prepare before an outbreak. This is the basis of the FARM Database – Enhanced Biosecurity. Creating a dairy-specific plan and putting it in place will be needed in an FMD outbreak to prevent exposure. The database also gives producers the option to share a completed copy of their SMS EBP with state officials for review. More information at: <https://securemilksupply.org/>





PREPARING TO CREATE AN SMS ENHANCED BIOSECURITY PLAN

The first step is to complete the online training: FARM Biosecurity – Enhanced (estimated time: 45 minutes). This is available to anyone with dairy knowledge and experience. Dairy producers, FARM Evaluators, veterinarians, and more can request access by emailing: dairyfarm@nmpf.org.

Next, gather the resources to streamline developing an SMS Enhanced Biosecurity Plan. Many were pointed out in the training. Make sure to:

- Bring printouts from the training modules that will help you during the dairy visit.
- Prepare the SMS EBP packet – print and/or send to the dairy prior:
 - SMS handout: **English | Spanish**
 - FMD handout: **English | Spanish**
 - Dairy Operation Inputs/Outputs Worksheet: **English**
 - SMS Self-Assessment Biosecurity Checklist: **English**
 - SMS Enhanced Biosecurity Plan template: **English**
- Encourage the dairy to get a Premises Identification Number (PIN) if they do not have one.
 - Send them a copy of the Dairy Premises Identification handout: **English**
- Find and print out an aerial view of the dairy and any associated livestock holdings.
 - Review the SMS Creating a Premises Map for a Biosecurity Plan handout for satellite image options: **English**
- Bring a copy of Premises Map Checklist and Legend to ensure all items are noted on the labeled premises map: **English**
- Ask the dairy if you can bring a camera to take photos of key farm areas (farm entry, people entry, animal loading, milk truck area, milk house).
 - Explain that the images can be uploaded into a database to be included in their EBP if they are interested in a state official review.
- Find out if the state plans to stop milk movement in an outbreak (contact the office of the **State Animal Health Official**).
 - If yes, review and provide the dairy with a copy of the SMS Biosecurity Performance Standards for Raw Milk Collection and Transport: **English**

DAIRY VISIT

Once you are ready to visit the dairy, it is important to:

- Be polite and courteous.
- Bring all forms, resources, and guidance documents.
- Maintain and safeguard the confidentiality of the dairy facility's information.
- Ensure the dairy producer signs the **Pledge of Participation** (either digitally or a picture of the signature can be uploaded).
- Compare the satellite aerial image of the dairy with actual farm layout. Make note of any differences to include on the labeled premises map.
- Take photos if granted permission. Avoid taking photos of people's faces. Share images with the dairy prior to uploading into FARM Biosecurity Database (if requested).
- Assist the dairy facility in completing the EBP in the FARM Biosecurity Database (if requested).
- Follow all safety guidelines set forth by the FARM Animal Care Program and the dairy producer.

Biosecurity Best Management Practices

- Follow biosecurity steps as requested by dairy producer.
- Park your vehicle in as clean of an area as possible.
- Wear clean clothes.
 - When visiting multiple farms, bring disposable coveralls or a change of clothes.
- Wear disposable plastic boots or rubber boots.
 - Put on before entering the farm.
 - After farm visit, wash manure off plastic boots/rubber boots to prevent tracking of manure into vehicle.

Contact with livestock is not part of a biosecurity farm visit or necessary for development of the enhanced biosecurity plan. If contact is required for another reason, ensure hands are washed before and after.

FARM DATABASE – ENHANCED BIOSECURITY

The FARM Database – Enhanced Biosecurity includes each item in the SMS Biosecurity Checklist (listed below). One of the SMS Plan movement permit guidance criteria for cattle, semen, and embryos is: “The biosecurity measures listed in the SMS Plan Biosecurity Checklist must be in place and acceptable to Regulatory Officials.” If a permit is required by a state to move raw milk, one of the criteria to meet is: **“Biosecurity Performance Standards for raw milk collection and transport are in place and acceptable to Responsible Regulatory Officials.”**

The Database User Guide and video prepares users to efficiently enter information into the online tool. The SMS Information Manual for Enhanced Biosecurity also has guidance for addressing each item.

- Biosecurity Manager and Written Plan
- Training
- Protecting the Dairy Herd*
- Vehicles and Equipment*
- Personnel*
- Animal Movement
- Animal Product Movement*
- Carcass Disposal
- Manure Management
- Rodent, Wildlife, and Other Animal Control
- Feed

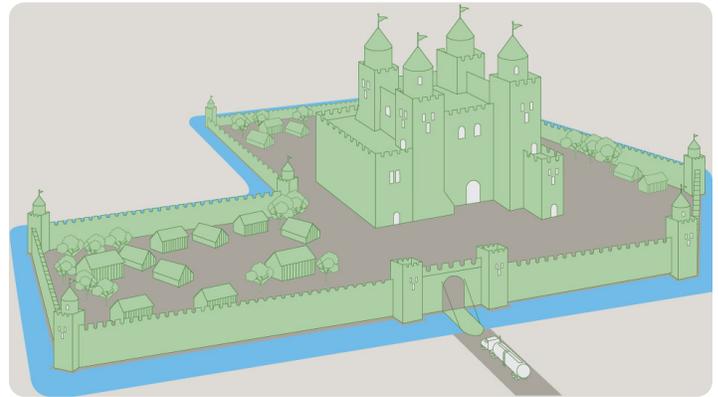
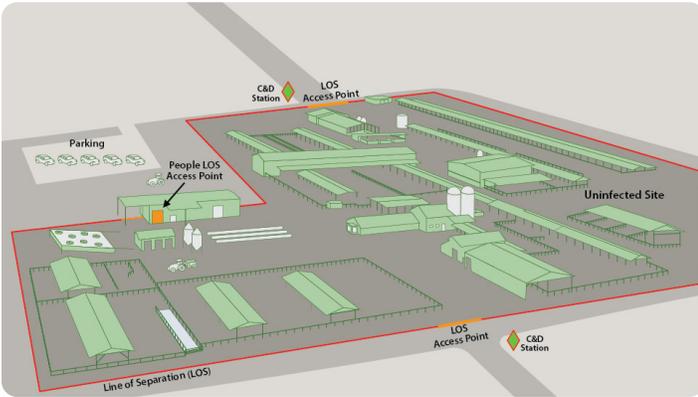
*Includes biosecurity performance standards for raw milk collection, transport

▶ ADDITIONAL GUIDANCE FOR PRODUCERS

Producers may benefit from additional guidance on some biosecurity items in the checklist when creating their plan. The online training modules provided some examples. More are included here. The visual examples are options for producers to use or modify to fit their dairy’s layout and resources.

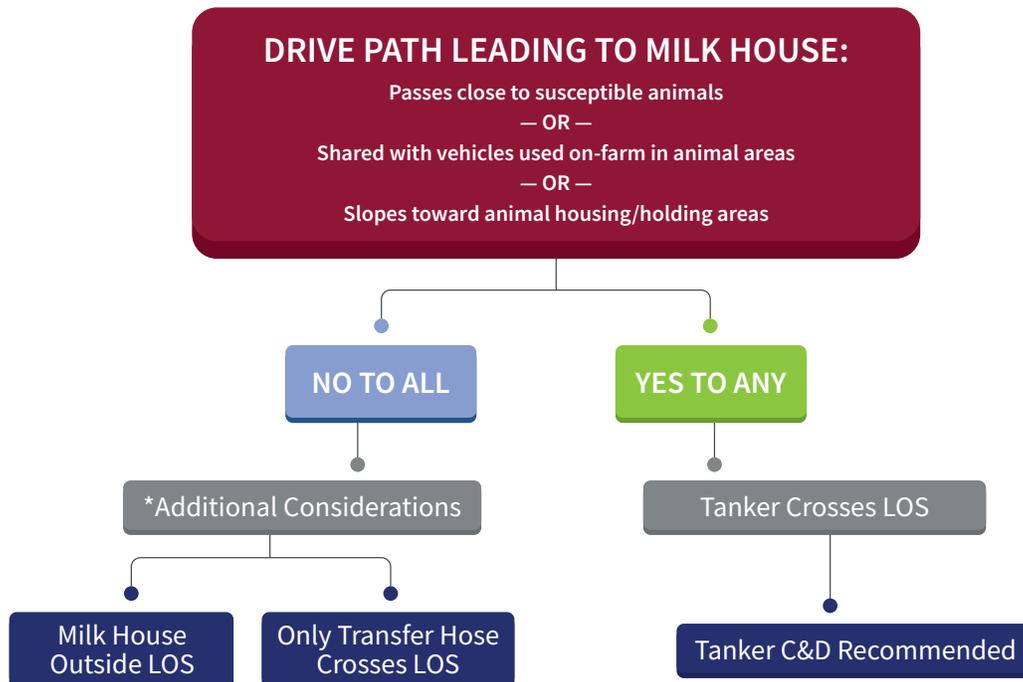
Protecting the Dairy Herd — LOS and LOS Access Points Resources

Module 3 provided guidance on determining the location of the Line of Separation (LOS, a.k.a. “moat”) and LOS Access Points (drawbridges). These images demonstrate the end goal.



TO Cross or NOT to Cross

Module 4 explored which items should cross the LOS after cleaning and disinfecting (C&D) or stay outside the LOS. Below is the “Determining the Line of Separation” flowchart and checklist. While specific to the milk truck, the same principles apply to any vehicle or equipment (livestock truck, feed delivery, manure removal, rendering, etc.).



*Additional considerations described on page 6



CHECKLIST

Begin by evaluating the drive path leading to the milk house:

Yes **No**

- 1.** Truck/tanker passes close to susceptible animals
- 2.** Shared with vehicles used on-farm in animal areas
- 3.** Area in front of the milk house slopes toward animal housing or holding areas

If NO to ALL of the above, proceed to question 4, *Additional Considerations.

If YES to ANY of the above, truck/tanker poses a risk of virus introduction, and tanker C&D is recommended. Read “Crossing the LOS: Milk Truck/Tanker, Hauler/Driver” for more information.

.....

*Additional Considerations:

Yes **No**

- 4.** Hauler/driver is trained in proper protective gear donning, doffing, and disposal

If YES, proceed to question 5.

If NO, hauler/driver should not exit cab and cross the LOS. Proceed to question 8.

Yes **No**

- 5.** Doors leading from the milk house can be established as controlled access points with signage, proper biosecurity steps posted, and all supplies required to meet the biosecurity steps

If YES, the milk truck/tanker NOT CROSSING THE LOS is an option for your dairy premises. Read “NOT crossing the LOS: Milk House Outside LOS” for more information.

If NO, proceed to questions 6–8.

.....

Yes **No**

- 6.** State requirements for a licensed weigher/sampler to perform milk collection duties can be met
- 7.** Transfer hose is available that is long enough to reach from the bulk tank to the milk tanker through a controlled access point and does not exceed pump manufacturers' recommendations
- 8.** Hauler/driver can work with farm personnel to accomplish milk collection activities

If YES, to questions 6–8, the CROSSING THE LOS: TRANSFER HOSE ONLY is an option for your dairy premises. Read “Crossing the LOS: Only the Transfer Hose” for more information.

If NO to ANY of the above, truck/tanker poses a risk of virus introduction, and tanker C&D is recommended. Read “Crossing the LOS: Milk Truck/Tanker, Hauler/Driver” for more information.

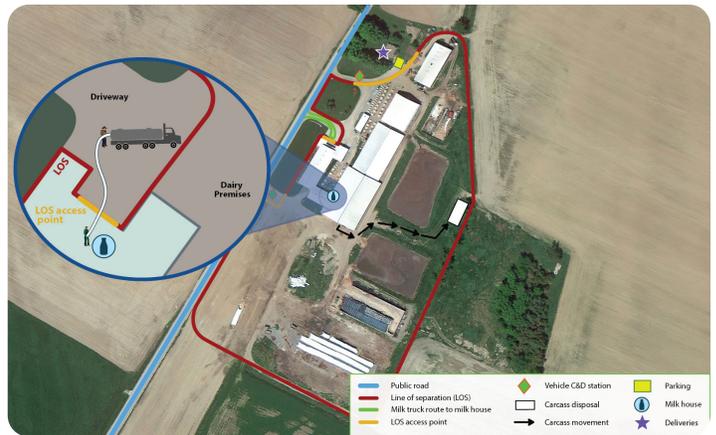
NOT Crossing the LOS: Milk House Outside LOS

- Tanker, hauler, and transfer hose do not cross the LOS
- Hauler enters the milk house to pump milk
- Doors leading from the milk house can be established as controlled access points with signage, proper biosecurity steps posted, and all supplies required to meet the biosecurity steps
- Dairy premises personnel are trained in proper C&D protocols for the milk house
- Dairy premises personnel are trained in proper protective gear donning, doffing, and disposal



Crossing the LOS: Only the Transfer Hose

- Truck/tanker and hauler/driver do not cross the LOS
- Farm staff handles the transfer hose on the milk house side of the LOS
- State requirements for a licensed weigher/sampler to perform milk collection duties can be met
- A transfer hose is available that is long enough to reach from the bulk tank to the milk tanker through an LOS Access Point and does not exceed pump manufacturers' recommendations
- The hauler/driver can work with farm personnel to accomplish milk collection activities
- The hauler/driver is trained in proper protective gear donning, doffing, and disposal
- Dairy premises personnel are trained in proper C&D for the milk transfer hose
- Dairy premises personnel are trained in proper protective gear donning, doffing, and disposal



Crossing the LOS: Milk Truck/Tanker, Hauler/Driver

- Milk truck/tanker is C&D prior to crossing the LOS Access Point
- Milk hauler/driver exiting the cab to collect milk does not contact people, animals, feed milk to susceptible animals, and wears proper PPE
 - Option: Haulers/drivers do not exit the cab
- Truck-mounted transfer hose is handled to prevent depositing raw milk and environmental contamination from previous farm pickups onto the dairy premises
 - Option: Use a farm-dedicated transfer hose



Marking the LOS and LOS Access Points

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. **[More in checklist.]**

Source: SMS Self-Assessment Checklist for Enhanced Biosecurity for FMD Prevention

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. **[More in checklist.]**

Source: SMS Self-Assessment Checklist for Enhanced Biosecurity for FMD Prevention

The LOS can be marked with many things. Existing barriers like fences, gates, building walls are all options. Having rope, caution tape, posts on hand to mark critical areas to indicate “keep out” in an outbreak is the goal. While spray paint cannot keep vehicles or people out, it is an option to inform those who may want to enter. Some options are in the pictures below. Posting signs is one way to mark the LOS and LOS Access Points. There are many signs on the SMS website that can be printed and laminated. <https://securemilksupply.org/milk-producers/signs-posters/>



Protecting the Dairy Herd — Cleaning and Disinfection (C&D) Station Resources

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.

Source: SMS Self-Assessment Checklist for Enhanced Biosecurity for FMD Prevention



Assembling the supplies needed to operate a C&D station is the goal. Many items you may already have. The SMS website has a C&D SOP: <https://securemilksupply.org/Assets/Establishing-Operating-Clean-Disinfect-Station-SOP.docx> Additional resources (supply list, photos of setting up a station, videos of truck C&D) are on the SMS website: <https://securemilksupply.org/training-materials/biosecurity/>

C&D Contingency Plan For Inclement Weather

Effective C&D can be difficult in the winter in northern climates or during severe weather events unless conducted inside a building. Create a contingency plan for inclement weather and include it in the biosecurity plan. Below are a few suggestions.

- Creating a sheltered C&D station,
- Having a mobile C&D station that can be stored inside when not in use,
- Using another structure on the premises (but outside of the LOS) as a temporary C&D station during inclement weather, or
- Designating an off-site location, such as a truck wash, for washing all vehicles and equipment arriving on site during inclement weather (freezing temperatures, thunderstorms, high winds).

C&D STATION SUPPLY CHECKLIST

✓	#	Item	Notes
		Gas/diesel generator	
		Pressure washer	
		Fuel container with appropriate fuel for generator, pressure washer	
		Extension cords	
		Outdoor work lights on tripod	
		Outdoor canopy tent	
		Signage – printed from Secure Food Supply Plan websites	
		Barrier(s)/gate(s)	
		Rubber gloves (2 pairs for each person plus extras)	
		Waterproof outerwear covering street clothing, skin, head, neck (2 sets in various sizes)	
		Safety glasses or goggles or face shield (2 pairs)	
		N-95 respirator (2 per person)	
		Protective footwear (in sizes: _____)	
		Plastic storage container with lid	
		Garbage bags	
		Medium-duty, 5/8-inch garden hose	
		Disinfectant product name: _____	
		Plastic storage container with lid for storing disinfectant solution	
		Backpack/handheld sprayer	
		24-inch wide push broom with telescoping handle	
		Long-handled scrub brushes	
		Cloth towels or paper towels for wiping off equipment	
		Disinfecting wipes for equipment, cab interior	
		Large heavy-duty tarps (minimum area 14 feet x 90 feet)	
		Berm materials: Drain tile, PVC pipe, 4 by 4 inch lumber, pool noodles. Length of each: _____	
		Submersible sump pump with bottom intake and discharge hose	
		Sump pump intake screen	
		Medium-duty, 5/8-inch garden hose	
		Reclamation water storage container (sealable)	
		Spigot to drain reclaimed water container	
		¾-inch hose bibb, ¾-inch washer, #11 rubber O-ring, flex seal (silicone caulk), ¾-inch nut, Teflon tape	
		Dolly (if needed, to move reclaimed water container)	

Mobile C&D Station

For dairies that may want a mobile C&D station or operate in a state where pressure washers cannot be connected to the same water line that supplies the milk house, here are two photos of one option. The trailer contains a blue tote with supplies in it (movement log for drivers crossing the LOS, clipboard, pen, and personal protective equipment for the people spraying disinfectant – gloves, waterproof coveralls, boots, tape, goggles). There are two recycled teat dip totes that have been thoroughly rinsed. One is dedicated to water only, and the other has a disinfectant solution. The USDA maintains a list of disinfectants that are effective against FMD: https://www.aphis.usda.gov/animal_health/emergency_management/downloads/fmd-virus-disinfectants.pdf.



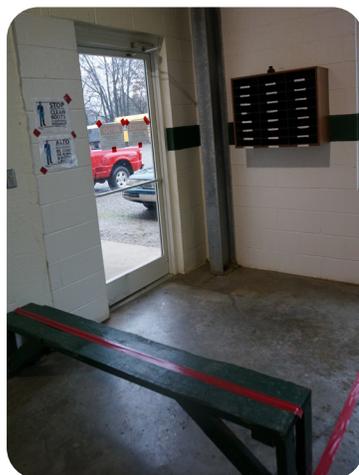
Personnel — People Entry Resources

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.

Source: SMS Self-Assessment Checklist for Enhanced Biosecurity for FMD Prevention

The Danish Entry System is one example of a biosecure entry procedure for people who are crossing at an LOS Access Point. This system includes a dedicated entrance area, which may be a shed, trailer, or other covered area that straddles the LOS. The LOS Access Point is identified with a disinfectable solid barrier (sealed plywood, plastic

bench, chairs, stools) that clearly demarcates the separation of off-farm from on-farm. Both sides of the barrier have clothing and footwear storage and supplies and/or facilities for handwashing. An example of a Danish or “bench” Entry is shown in the following figure.



Here are two examples from dairies — neither have solid barriers so care must be taken to keep dirty items from getting “inside” the LOS. These are set up in an office area (left) and the milk house (right).

▶ THE FARM PROGRAM AND BIOSECURITY GOVERNANCE

National Milk Producers Federation (NMPF) with support from Dairy Management, Inc., established the Farmers Assuring Responsible Management (FARM) Program in 2009. The goal of FARM is to unite the dairy industry around best management practices and demonstrate the excellence that occurs on your farm every day through science and outcome-based standards that are facility, size, and geography neutral. FARM helps earn the trust of everyone who makes dairy a part of their day by setting the highest standards when it comes to animal care, workplace settings, and environmental and antibiotic stewardship. Open to all farms, milk processors and cooperatives, FARM helps ensure the success of the entire industry by demonstrating to our customers and consumers that U.S. dairy farmers are committed to producing the best milk with integrity.

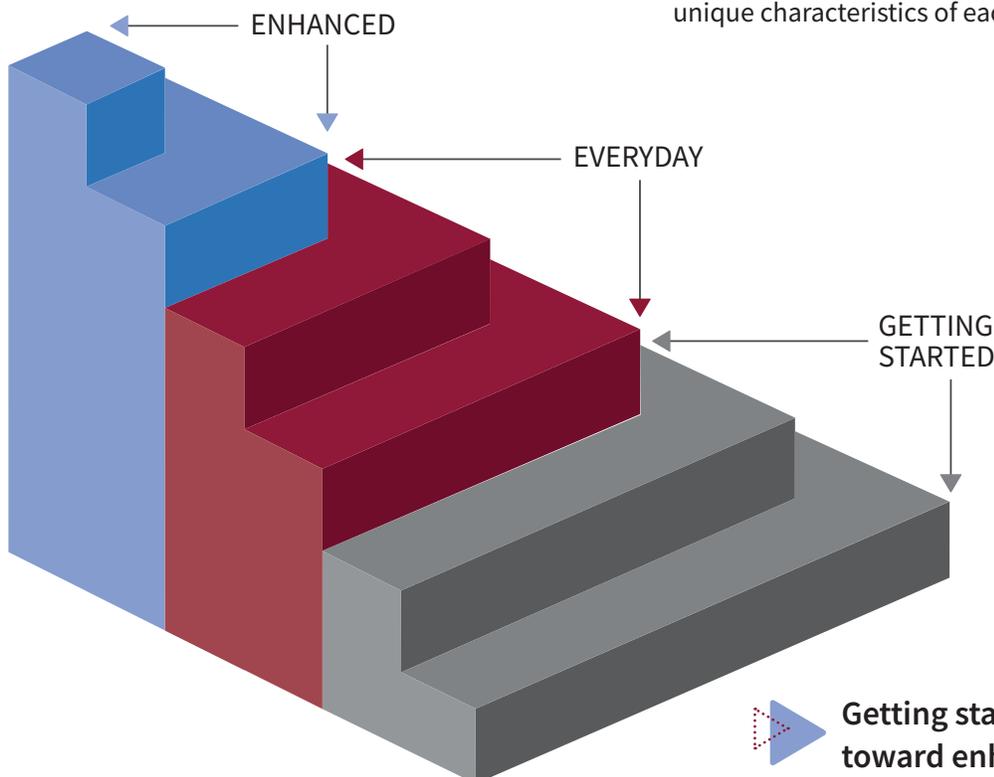
FARM Biosecurity is not a traditional evaluation program like FARM Animal Care. It builds upon a strong foundation of excellent animal care and husbandry practices to make the dairy industry more resilient in the event of an FMD outbreak.

FARM Biosecurity – Everyday

The FARM Biosecurity Task Force (dairy farmers, the veterinary community, co-ops, processors, dairy organizations, state animal health officials and university biosecurity experts) guides the Everyday program. They ensure it fosters a culture of continuous improvement and that the best biosecurity management practices, which are the cornerstone of the program, evolve with the latest biosecurity research.

FARM Biosecurity – Enhanced

The FARM Biosecurity – Enhanced program is based on the Secure Milk Supply (SMS) Plan enhanced biosecurity guidance resources. The SMS Plan is the result of a multi-year collaborative effort by industry, state, federal, and academic representatives. Field exercises on dairies throughout the U.S. shaped the biosecurity guidance and resources. Funding for its development was provided by U.S. Department of Agriculture (USDA) Animal and Plant Health Inspection Service (APHIS). The SMS Plan provides guidance only. In an actual outbreak, decisions will be made by the responsible regulatory officials based on the unique characteristics of each outbreak.



▶ Getting started is the first step toward enhanced biosecurity.

 **NOTES**



ACKNOWLEDGMENTS

Development of the FARM Biosecurity Program was made possible through a grant provided to the National Milk Producers Federation from USDA APHIS through the National Animal Disease Preparedness and Response Program (NADPRP). It may not necessarily express APHIS' views.

RESOURCES

To learn more about the FARM Program or access protocol templates and training aids, visit the FARM website: nationaldairyfarm.com

To learn more about the Secure Milk Supply Plan, access templates, SOPs, movement logs, and more, visit securemilk.org

