

Biosecurity Standards and Practices

For Ag-Professionals
and Service Providers



MICHIGAN STATE
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Table Of **Contents**

Overview

Disease-Specific Downtime Guidelines

Prior to Visiting the Farm

Communication with Farmers

During the Farm Visit

Arrival at the Farm

Following the Farm Visit

Disinfectant Information

Biosecurity Kits

Planning for Events that Support Animal Health

Overview

The prevention and control of livestock disease outbreaks is a shared concern across agricultural communities, especially those who visit farms regularly (e.g., Extension personnel, consultants, inspectors, delivery personnel and veterinarians). Employing biosecurity practices that reduce the risk of disease transmission helps protect farms and animals from viruses, bacteria, parasites, and other pathogens. This is especially critical when highly-consequential diseases such as Highly Pathogenic Avian Influenza (HPAI) are present and with the potential threat of African Swine Fever (ASF), or Foot and Mouth Disease (FMD) spreading from other countries.

Diseases can spread in many ways: including direct contact from animal to animal, human to animal, indirect contact with fomites such as tools, equipment, footwear, clothing and vehicles and through aerosol droplets. Negative outcomes from clinical disease outbreaks include illness in people and animals, animal death, and loss of farm revenue.

Many farms have incorporated biosecurity protocols focused on protecting animal health into their management plans. This includes standard operating procedures focused on reducing disease from entering the farm. In some cases, small or lifestyle farms may not have developed a biosecurity plan. As a stakeholder in agriculture, it is critical that you, as a visitor, follow basic protocols to avoid inadvertent disease spread, even if instruction is not given from the host farm you were visiting.



Photo 1: Farmer washing their hands to help prevent disease spread.

Ag-professionals who travel between farms have a responsibility to practice biosecurity standards when visiting farms. This not only protects animal health but also demonstrates professionalism and awareness of the economic importance of disease prevention in the livestock industry.



Photo 2: Farmer cares for their flock.

Disease-Specific Downtime Guidelines

In livestock farming, downtime refers to time personnel or visitors should wait between visiting different farms to prevent the transfer of pathogens. Typical downtime guidelines are 48 hours between farm visits. This timeframe can be adjusted depending on health status of animals, during times of disease outbreak or when visiting a high health, or disease-free herd.

Guidelines for disease specific downtimes are typically established by herd veterinarians for the farms. If these have not be established for a farm you can refer to USDA-APHIS guidance for updates on other disease protocols.

Highly Pathogenic Avian Influenza (HPAI): Avoid contact with poultry and/or cattle of unknown disease status for 3 days; avoid contact with known infected animals for 5 days.

Foreign Animal Diseases (FADs): Anyone recently exposed to livestock, wild pigs, or slaughter facilities in ASF, Classical Swine Fever (CSF), or FMD-positive countries should observe a two-week downtime before visiting U.S. farms.

New World Screwworm: If traveling in Central and South American and the Southern United States, precautions should be taken to make sure that you are not transporting the pest at any life stage.

Prior to Visiting the Farm

Biosecurity standards vary based on the purpose of the farm visit, the level of animal contact, and current disease risks. The following guidelines apply when visiting farms with livestock or poultry:

- Understand your schedule!
- Plan downtime between farm visits, 48 hours from one livestock site to another. This may vary during disease outbreaks this includes your contact with animals made during personal time.
- If 48-hour downtime is not possible visit farms with healthy animals first.
- Source Personal Protective Equipment (PPE) and create your car biosecurity kit for your personal use.
- Have a plan to dispose of PPE either at the farm or in a designated trash bag/container in your vehicle.
- If possible, know the disease outbreak status of the area, most state governments include disease outbreak notifications on their websites. If a current disease outbreak is ongoing, USDA-APHIS will track cases of disease outbreaks.
- Clean and disinfect all tools, equipment, and materials before and after visits. For example, this includes cellphones, writing utensils, clip boards, and various tools and equipment.

Communication with Farmers

- Schedule visits in advance. Confirm whether livestock or poultry are present and whether you may come into contact with them.
- Know the health status of the animals. If there are signs of clinical disease on the farm, consider rescheduling the visit.
- Check parking instructions and see if there is a cleaning and disinfection station available.
- Let the farmer know that you plan to wear PPE, which may include disposable boots and coveralls at each site.
- Refer to the farm standards for downtime guidelines at least 1 week prior to farm visit. Downtime suggestions are highlighted above in this document.

Arrival at the Farm

When arriving at the farm, follow all posted signage, including parking locations.

- Park off-site when possible (e.g., farm office or outbuilding) and travel in a farm-owned vehicle to the livestock area.

Prior to exiting your vehicle, it is important that you wear recommended PPE.

- Wear PPE at each site.
- Minimal PPE includes disposable footwear or clean & disinfected boots or footwear.
- When clinical signs of disease are present on farm, wear disposable coveralls and gloves, in addition to cleaning or sanitizing your hands and wearing clean or disposable footwear.
- For high health herds or animals housed indoors a shower in/shower out system may be present. Visitors should adhere to farm guidelines when following biosecurity practices.

Wearing PPE

- When wearing disposable footwear, it is important to put on footwear prior to exiting the vehicle. Examples of this process are seen in photo 3 and 4 below.
- When walking to the livestock area, if crossing common paths (e.g., feed truck, manure tanker routes), consider:
 - Double booting: Wear shoe covers over disposable boots and remove the outer layer after crossing.



Photo 3. Service provider putting on shoe covers before exiting the vehicle.



Photo 4. Service provide with disposable shoe covers exiting vehicle.

During the Farm Visit

When participating in a farm visit, there are some best practices that support animal health that should be considered, these include:

- Limiting animal contact unless necessary.
- If possible, avoid contact with milk, feces, and organic materials.
- If animals are clinically sick, avoid handling animals feasible.
- Do not walk through feedstuffs unless unavoidable (i.e., pasture visits).
- When observing multiple animal groups, start with:
 - 1.) Young animals
 - 2.) Healthy adults
 - 3.) Sick animals (always last)

Following the Farm Visit

After visiting a farm, it is important to follow proper biosecurity practices. These practices, when implemented, will reduce the risk of transferring a disease from one farm to another.

- Remove all PPE worn at the farm. When removing PPE turn disposable footwear and coveralls inside out so that the dirty or exposed side of the PPE does not come into contact with anything. Clean and sanitizer hands after farm visit. Examples of this are shown in photos 5 and 6 below:



Photo 5. Following farm visit, service provider removing shoe covers before placing feet in the vehicle.



Photo 6. Service provider cleaning and sanitizing hands prior to touching steering wheel.

Following the Farm Visit

- Dispose of used PPE in farm trash receptacles or in a sealed bag in your vehicle.
- If footwear was worn, make sure to properly clean and disinfect footwear prior to entering your vehicle.
- Disposable floor mats can be utilized to help contain anything picked up on the farm.
- Wash or sanitize hands immediately.
- Clean and disinfect tools, equipment, and materials.
- If traveling to another site, use of new shoe covers to cross common areas, following the visit remove shoe covers before touching vehicle interiors.
- During disease outbreaks or challenges, clean and disinfect your vehicle (tires and undercarriage included). A car wash is typically sufficient unless more stringent measures are required.



Photo 7: Farm employee disinfects a wheel well on farm equipment.



Photo 8: Cattle in a pasture



Photo 9: Veterinarian provides care during a farm visit.



Photo 8: A farmer cleans tools prior to disinfection.

Disinfectant Information

Before Thinking About Disinfection: **Clean Thoroughly!** Disinfectants CANNOT work through dirt, manure, or organic matter. A disinfectant is a chemical agent that destroys or inactivates harmful microorganisms on **inanimate** objects. It is NOT the same as:

- **Antiseptic:** For use on living tissue (e.g., skin).
- **Sanitizer:** Reduces microbes to a safe level but may not kill all.
- **Cleaner:** Removes dirt but does not necessarily kill pathogens.

When applying disinfectant it is important to follow the recommended contact time. Contact time is the time required for the disinfectant to inactivate pathogens. This requires the disinfectant to remain wet for it to work properly.

When disinfecting, use these steps to complete the process properly:

- Step One: **Remove:** Manure, bedding, feed, and dirt.
- Step Two: **Wash:** Use soap/detergent and water to scrub surfaces.
- Step Three: **Apply disinfectant** to items, following contact time label recommendations .

When choosing a disinfectant you should review the spectrum of activity, typically found on the label. This refers to the specific types of pathogens a disinfectant is effective against. Examples of disinfectants commonly used on livestock farms include.

- Virkon-S
- Accelerated hydrogen peroxide (i.e. Rescue, PREempt)
- Bleach at 1:32 ratio (½ cup per gallon of water)

Biosecurity Kits

When making farm visits, it is important to be prepared and support animal health by employing biosecurity practices. Prepare for farm visits by putting together a biosecurity kit with the proper supplies.

Recommended Biosecurity Supplies (Car Kit) include:

- Disposable PPE including coveralls, shoe covers and footwear
- Clorox or car cleaning wipes
- Hand sanitizer
- Trash bags
- Disposable floor mats
- Soap and brush
- Jug of water and wash basin
- Sprayable disinfectant
- Pump sprayer or spray bottle
- Sealed tote or pail for storage



Photo 9: Disinfectant and a hand sprayer are components of a biosecurity kit.

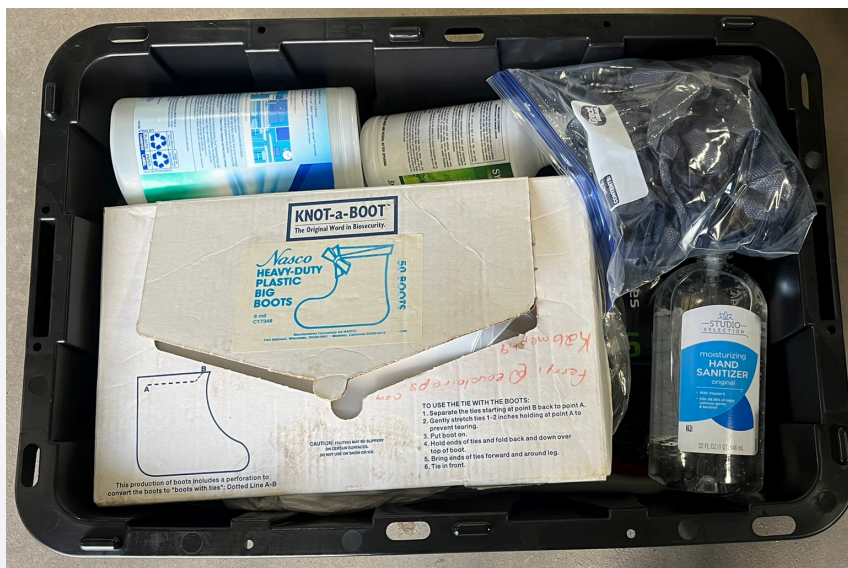


Photo 10: A properly stocked biosecurity kit.



Photo 11: Tools and supplies to wash boots after a farm visit.

Planning for Events that Support Animal Health

Supporting animal health isn't confined to farm visits. Pathogens can be transferred on fomites (clothing, footwear, equipment, vehicles), therefore, it is important to implement biosecurity practices into your event. Below are some suggested considerations when planning for events that include farmers raising livestock.

Event Planning: Livestock Owners Present (No Animals on Site)

- Encourage attendees to wear clean clothing and footwear via registration.
- Provide hand sanitizer at the event.
- Have a biosecurity kit available.
- During times of known disease outbreaks provide disinfectant spray for footwear.

Event Planning: Livestock, Poultry, Manure, or Pasture Present

- Source healthy, low-risk animals.
- Provide disinfectants for tools, equipment, and vehicles.
- Set up handwashing/sanitizing stations and offer disinfectant areas for footwear or shoe covers.
- Registration materials should:
 - Recommend clean clothing and footwear.
 - Suggest following a 48-hour downtime policy based on disease risk.
 - If international travel guests are expected, include a two-week downtime policy.
 - Include reminders about post-event biosecurity when returning home to herds/flocks.
 - Optionally, survey attendees about disease concerns.