Biosecurity Guidance for Dairy Operations

Center for Food Security and Public Health

College of Veterinary Medicine

Iowa State University

The Center for Food Security & Public Health

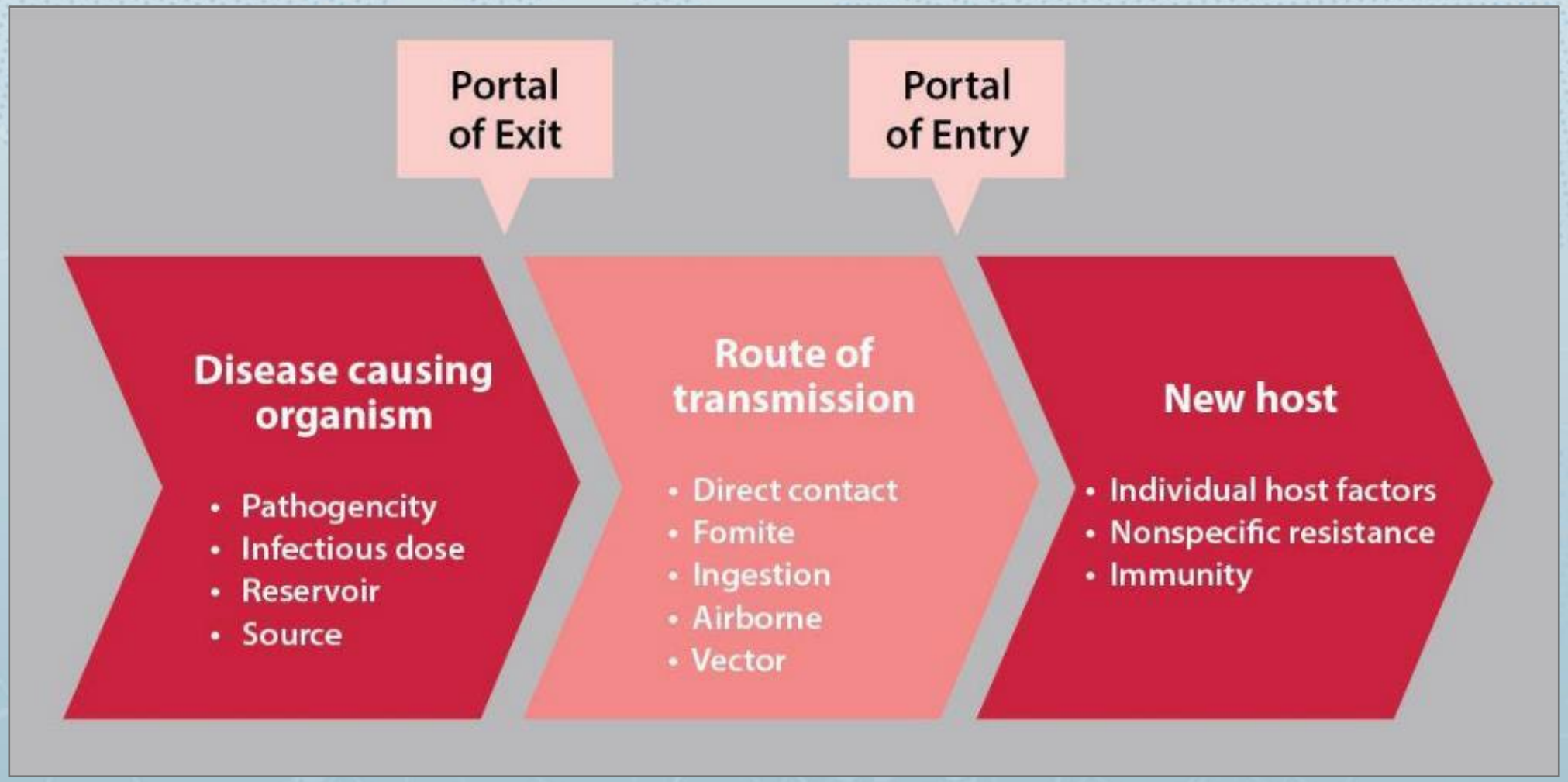
IOWA STATE UNIVERSITY®

Overview

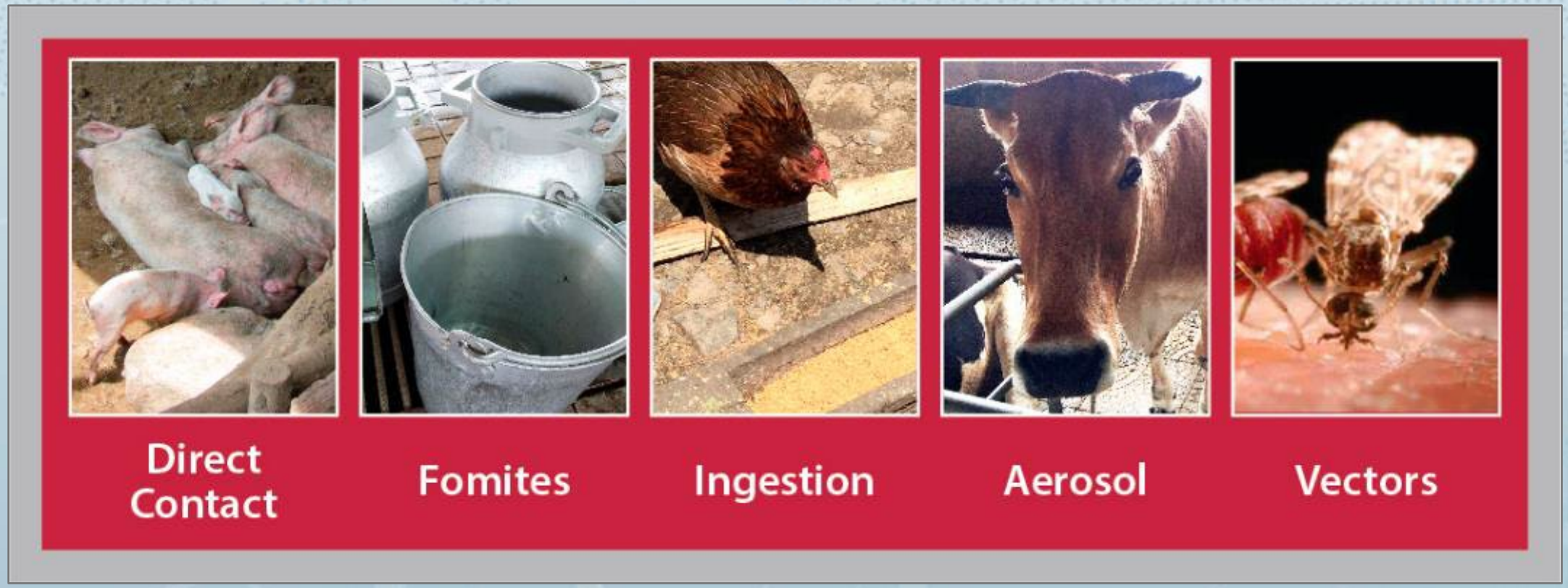
1. Disease spread
    1. Influenza A H5N1
    2. Foot and Mouth Disease
2. Biosecurity
    1. Daily vs. enhanced
3. Resources and outreach materials

Disease Spread

Chain of Infection



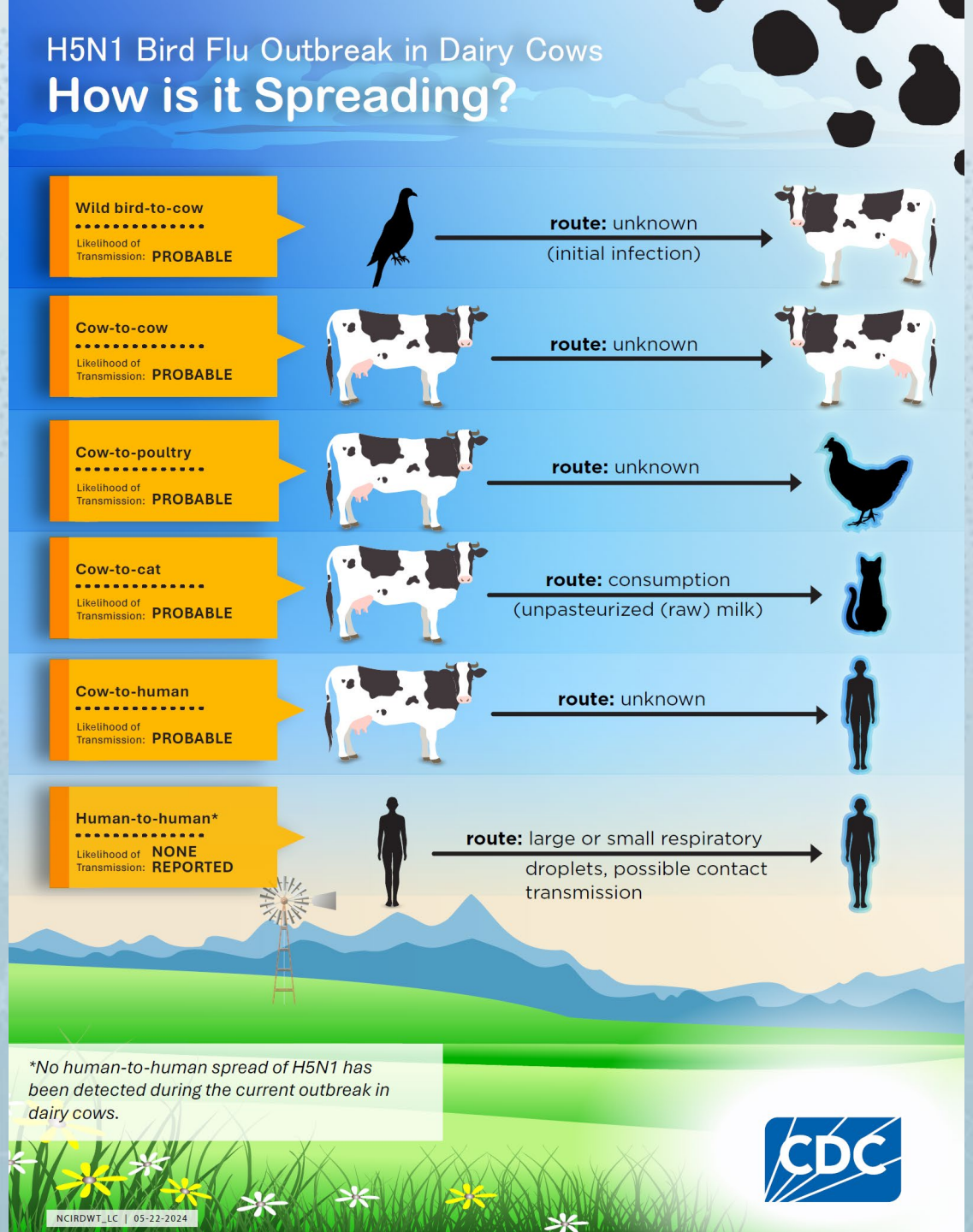
Routes of Transmission



Influenza A H5N1 Clinical Signs

- Birds
  - H5 and H7 are “Highly Pathogenic” (fatal) ***to wild birds, poultry***
  - Widespread in wild birds worldwide
  - Sporadic outbreaks of H5N1 in US poultry flocks since 2022
- ***Dairy cattle***
  - ***Decreased milk production, decreased feed intake, diarrhea, fever***
- Humans
  - Conjunctivitis, mild flu-like illness (fever, chills, coughing, sore throat)
  - No indicators of unusual flu activity in people, including H5N1 (CDC); ***risk to public is low***
- Other animals
  - Cats- respiratory signs and neurologic signs; some death
  - Other mammals- variable

Animals may not show obvious signs of disease (infected but undetected)


H5N1 Bird Flu Outbreak in Dairy Cows
How is it Spreading?
Wild bird-to-cow
Likelihood of Transmission: PROBABLE
route: unknown
(initial infection)
Cow-to-cow
Likelihood of Transmission: PROBABLE
route: unknown
Cow-to-poultry
Likelihood of Transmission: PROBABLE
route: unknown
Cow-to-cat
Likelihood of Transmission: PROBABLE
route: consumption
(unpasteurized (raw) milk)
Cow-to-human
Likelihood of Transmission: PROBABLE
route: unknown
Human-to-human*
Likelihood of Transmission: NONE REPORTED
route: large or small respiratory droplets, possible contact transmission
*No human-to-human spread of H5N1 has been detected during the current outbreak in dairy cows.
CDC
NCIRDWT_LC | 05-22-2024

Influenza A H5N1 Transmission

- Direct contact*, fomites, aerosol*, ingestion* (birds: fecal-oral)

- ***Intramammary– high levels of viral particles found in milk***
  - Also found on teat orifice, nasal secretions, and urine (feces- rarely)

- ***Close contact and closed environments***

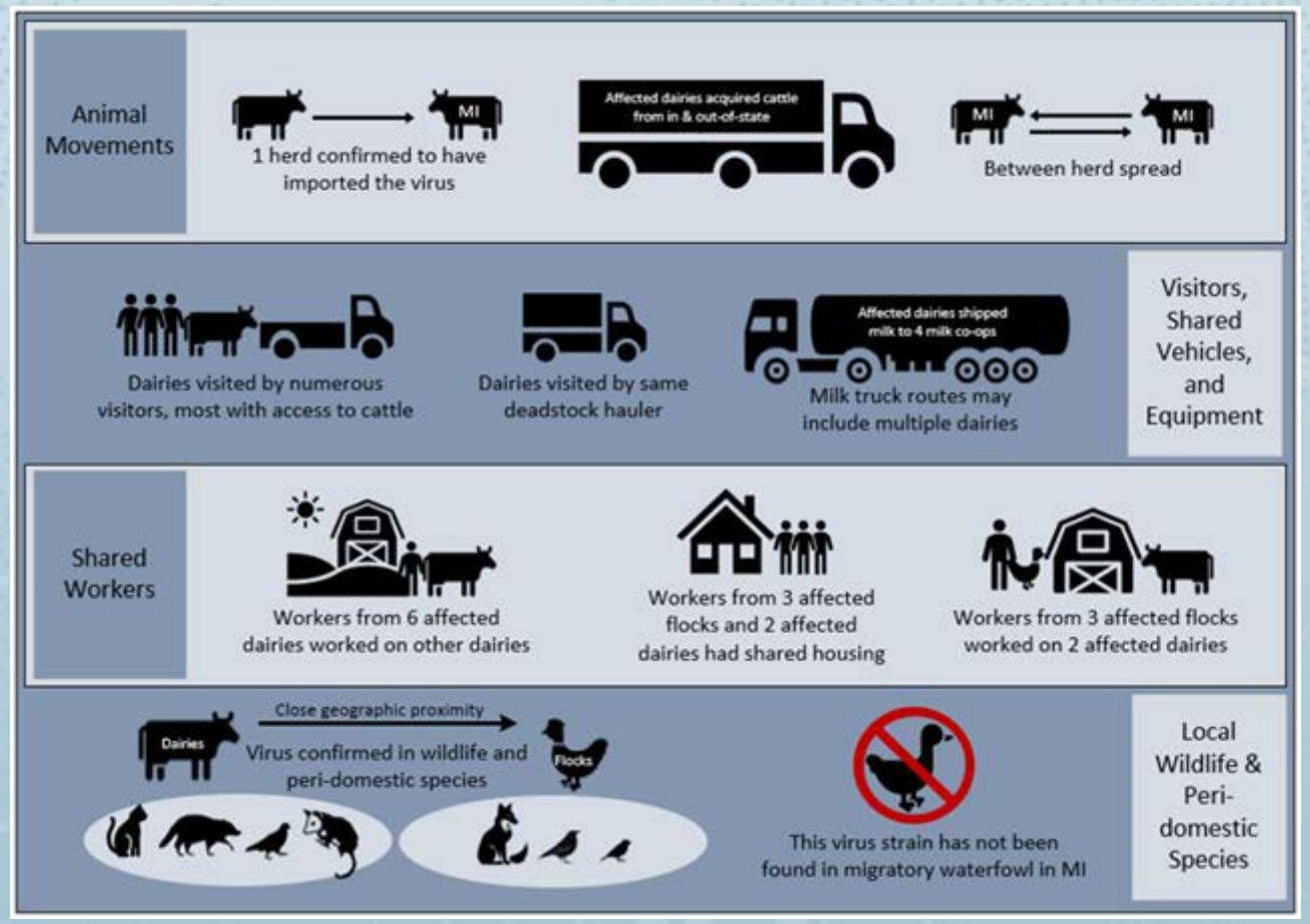
- Movement of lactating dairy cattle
- Local spread between dairies and poultry operations

*Research is needed to fully understand exposure

H5N1 Confirmed Cases in Livestock

- https://www.aphis.usda.gov/livestock-poultry-disease/avian/avian-influenza/hpai-detections/hpai-confirmed-cases-livestock

Potential Transmission Pathways Supported by Epi Links



Source: https://www.aphis.usda.gov/sites/default/files/hpai-h5n1-dairy-cattle-mi-epi-invest.pdf

Foot and Mouth Disease Clinical Signs

- Susceptible species: cloven-hooved animals
  - Cattle, pigs, sheep, goats, many wild animals (deer, elk, bison)
- Fever, vesicular lesions, epithelial erosions
- Drop in milk production, lameness, salivation
- ~100% morbidity
- ~20% mortality in young animals

Foot and Mouth Disease Transmission

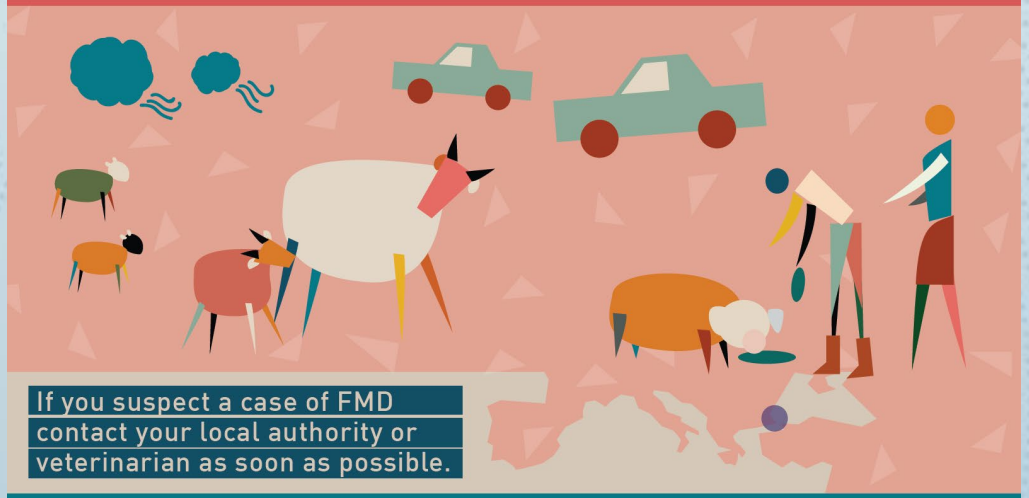
- Direct contact, fomites, aerosol
- Animal-animal contact
  - Pigs are amplifying hosts (excrete large amounts of virus)
  - Cattle can be carriers for several months or more, may infect other animals
- Air/windborne
- Fomites– feed, clothing, footwear, etc.
- Feeding contaminated animal products (meat, milk, waste)

Food and Agriculture Organization of the United Nations

eufmd
european commission for the control of foot-and-mouth disease

FOOT-AND-MOUTH DISEASE

HOW DOES IT SPREAD?



If you suspect a case of FMD contact your local authority or veterinarian as soon as possible.

TRANSMISSION ROUTES

Be aware . Be aware . Be aware .

Funded by the European Union

	**Direct animal contact.**	The most important transmission route.
	**Animal products.**	The second most important transmission route is through ingestion of infected animal products. E.g. feeding of waste human food or untreated milk to young animals.
	**Mecha-nical transmis-sion.**	Other routes of transmission can be through mechanical transmission from virus particles on inanimate objects such footwear, clothing, veterinary instruments or vehicles.
	**Wind.**	Transmission by wind is not as common but possible, especially if big pig farms are in the vicinity, and under certain weather condi-tions. Cool temperatures and higher humidity favor virus transmission by wind.

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CB4903EN/1/06.21

Biosecurity

Review: What is Biosecurity?

- On-farm management practices that:
  - Prevent disease introduction (keep disease off the farm – also known as bioexclusion), AND
  - Control disease spread (keep disease on the farm from spreading within the herd/flock and to other farms, also known as biocontainment)

Biosecurity

Bioexclusion

Biocontainment

Why is Biosecurity Important?

- Public health risk
  - Some diseases are zoonotic
- Direct costs: reduction in animal supply, products
  - Producers have fewer animals and/or products to sell
  - Transporters have fewer animals to haul
  - Slaughterhouses/processing plants have less animals/products to process
  - Public pays higher prices for meat/milk/eggs
- Indirect costs
  - Longer time to finishing, treatment, etc.

Principles of Biosecurity

Daily vs. Enhanced Biosecurity

1. Biosecurity Manager and Written Plan

Biosecurity Manager

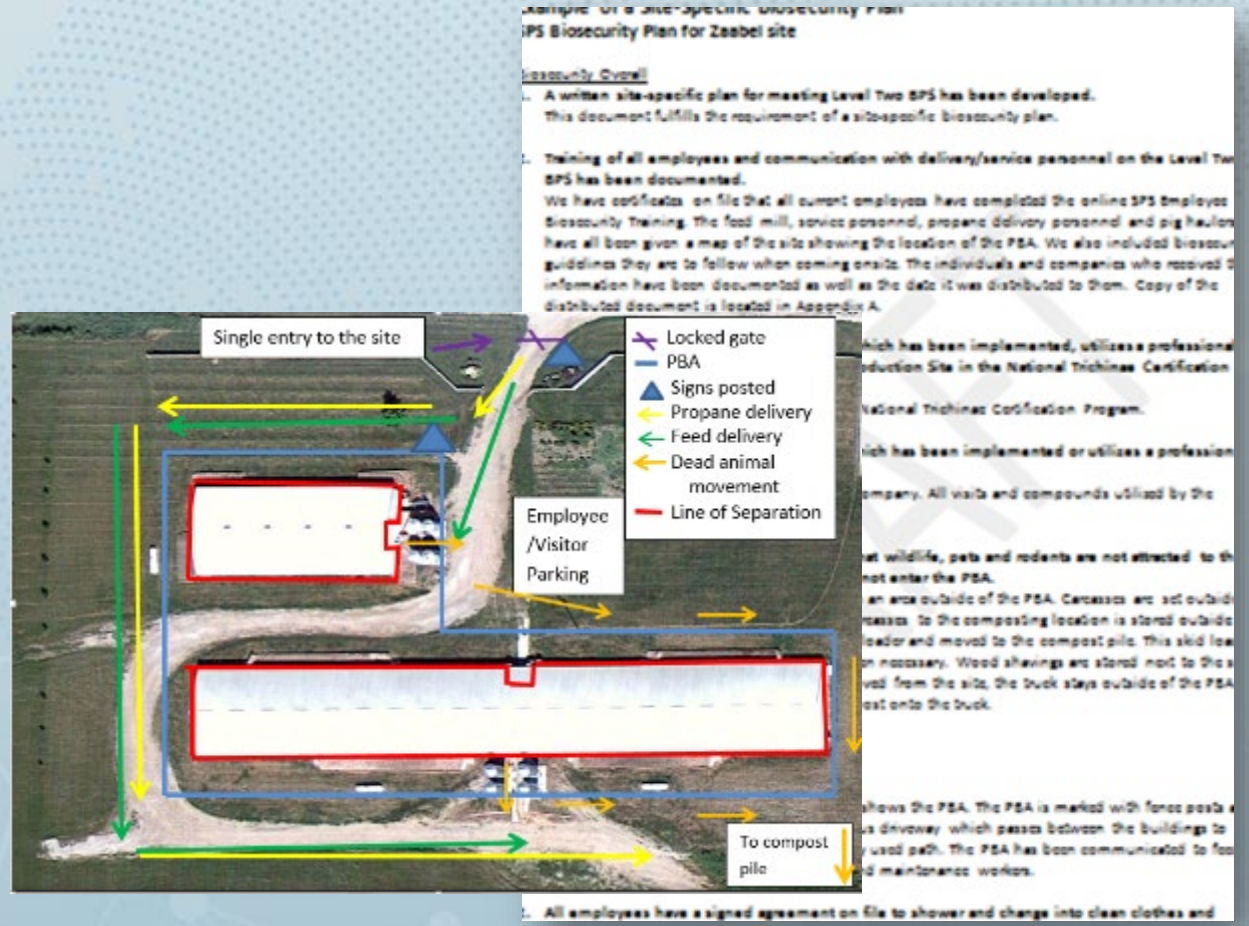
- Familiar with facility
- Develops plan with veterinarian
- Communicates biosecurity measures
- Monitors to ensure compliance

Site-specific biosecurity plan

- Includes labeled premises map
- Is communicated to employees and accessible to others
- Reviewed annually, as changes occur

Writing Biosecurity Plans

- Explain how site meets all biosecurity measures listed in checklist
- Critically and thoroughly evaluate each component
  - ❑In place: All items addressed and implemented
  - ❑In progress: Some items addressed, implemented
  - ❑Not in place: Items not addressed or implemented



2. Training

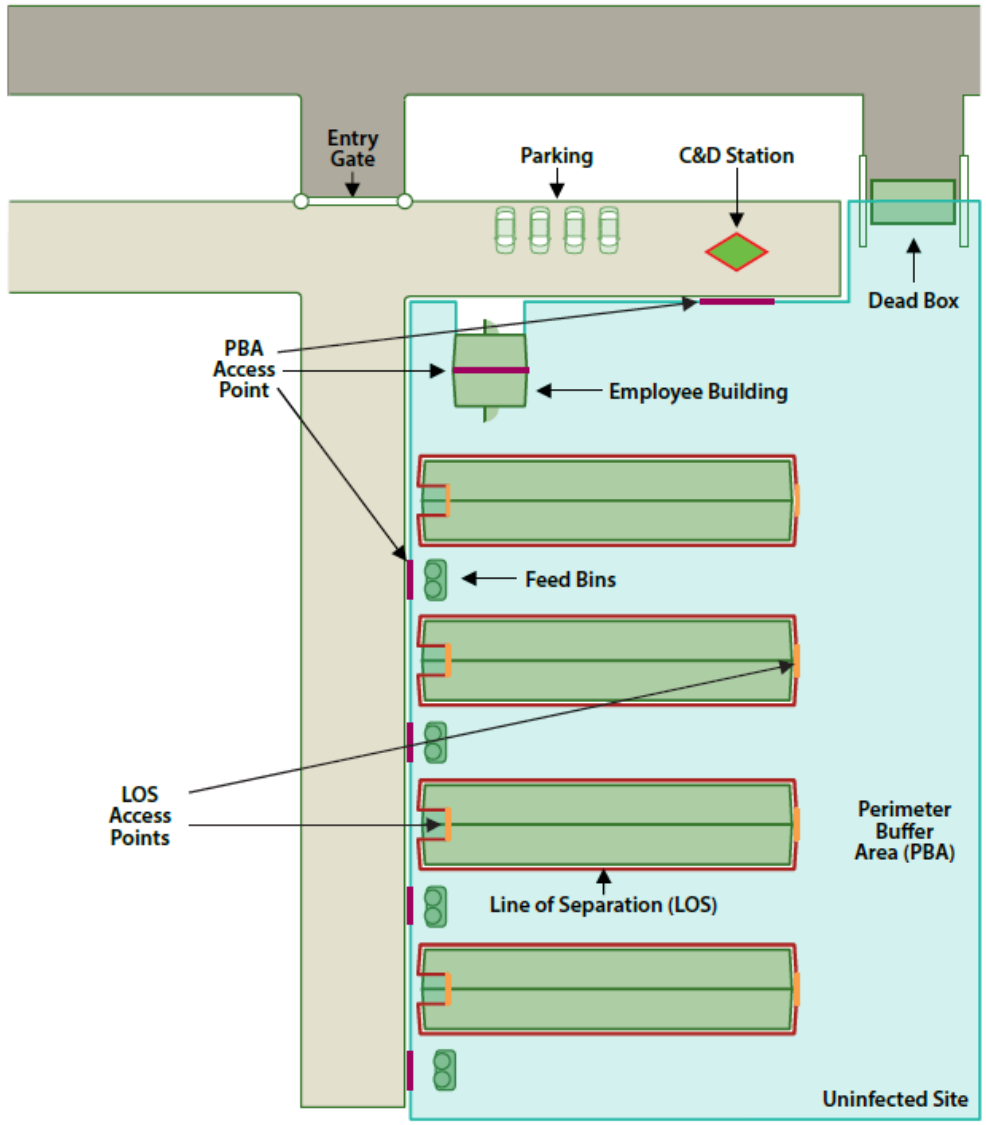
- Biosecurity Manager, essential personnel trained at least annually; documented

3. Farm Access

- Daily Biosecurity
  - Gates, fencing, barriers
  - Signage
  - Limiting entry to essential personnel
  - Record movements
  - Parking away from animal areas

- Enhanced Biosecurity
  - Line of Separation (LOS): outer control boundary to minimize contamination near animals; separate off-farm from on-farm movements of vehicles, people, animals OR walls of building separate animals from all possible sources of infection
  - Perimeter Buffer Area (PBA): outer control boundary to minimize contamination near animal building(s); separate off-farm from on-farm movements of vehicles, people, animals

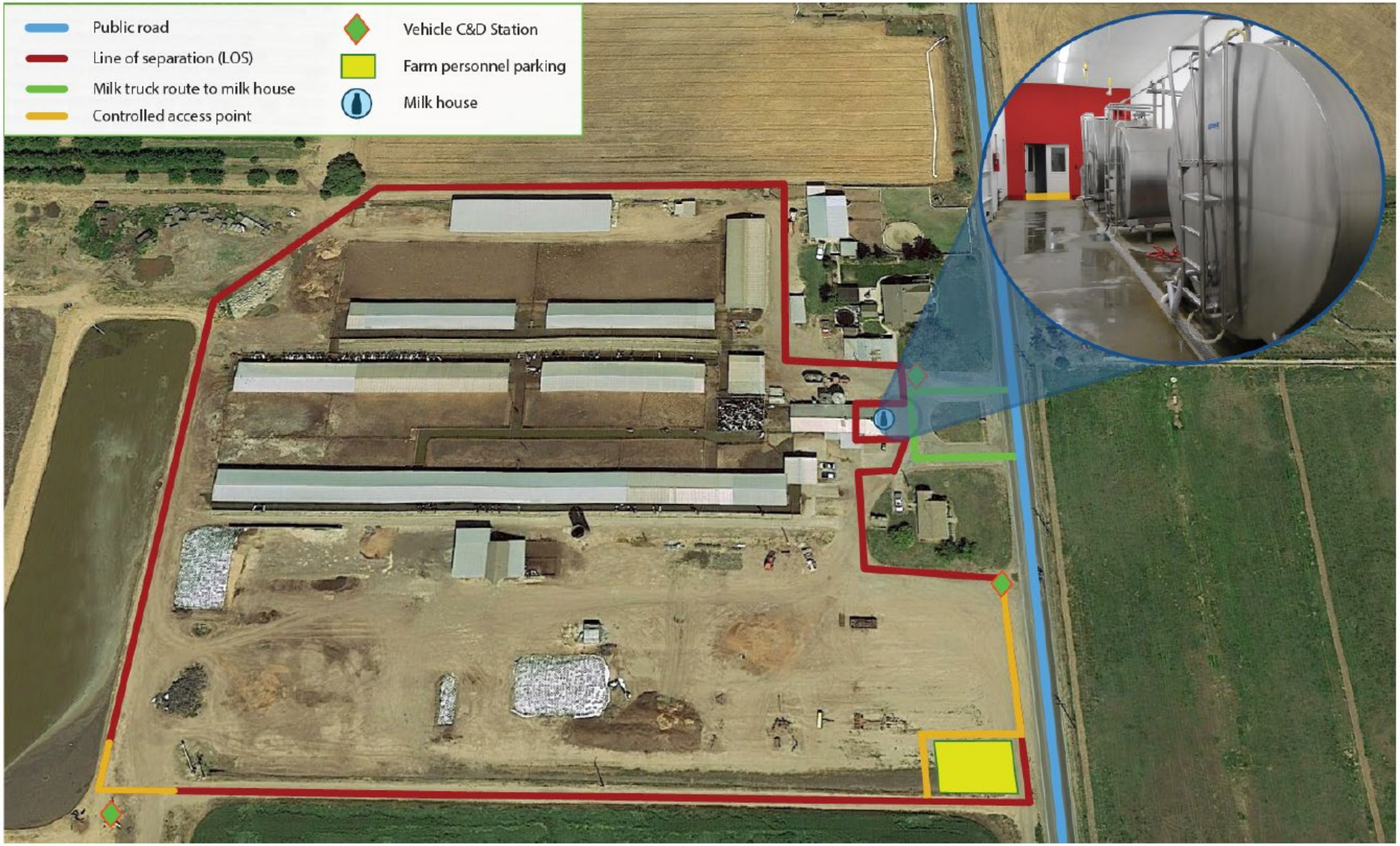
Line of Separation (LOS) & Perimeter Buffer Area (PBA)



Source: Center for Food Security and Public Health, Iowa State University

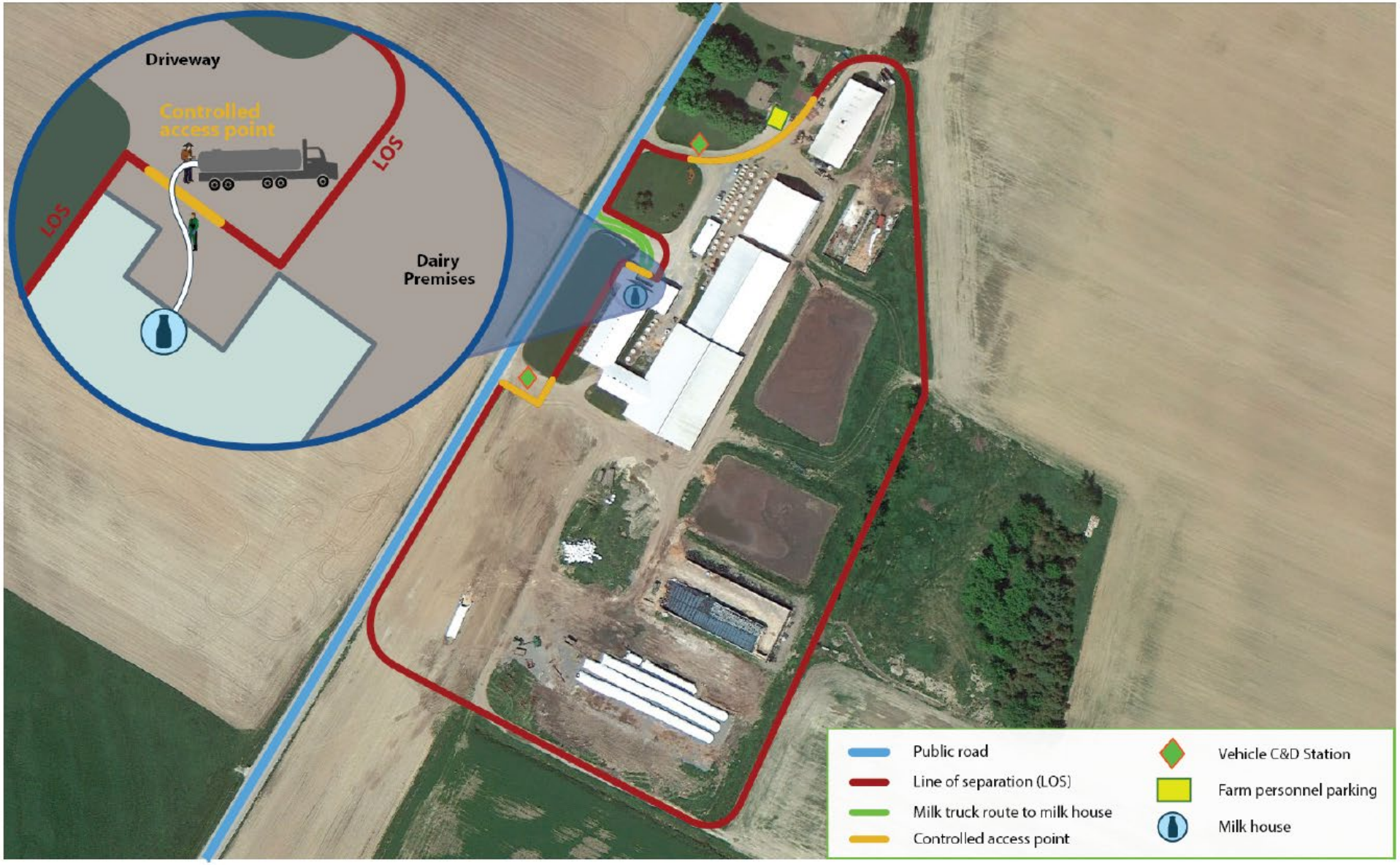
SMS Example: Milk House Outside the Line of Separation (LOS)

SMS SECURE MILK SUPPLY
www.securemilksupply.org



SMS Example: Only Milk Transfer Hose Crosses the Line of Separation (LOS)

SMS SECURE MILK SUPPLY
www.securemilksupply.org



Determining LOS/PBA

- Minimize number of access points
- Consider inputs/outputs over 30 days
  - Easy to put a perimeter around entire premises
    - Be prepared to C&D everything that crosses
  - Prolonged outbreak, lots of movements
    - Conserve resources (time, water, disinfectants) while protecting critical assets
    - Benefit of LOS/PBA positioning

- H5N1: Hose down and sanitize contact surfaces in the milk house after collection if the milk hauler enters after being on other farms

Inputs/Outputs

Appendix C: Inputs/Outputs to the Operation & Contingency Planning

C&D of vehicles crossing the LOS is time and resource intense. Carefully planning the location of the LOS based on the types, drive path, frequency, and necessity of inputs/outputs can help focus resources to minimize FMD virus entry. Decide if some movements could be modified. For example: Move your garbage bin to the edge of the LOS so the garbage truck can pick it up without crossing the LOS or auger grain across the LOS into a farm wagon that remains inside the LOS.

Below are some input/outputs that may apply to your dairy operation. Evaluating the frequency and travel path can be used to help determine LOS placement. Include the completed chart in your biosecurity plan.

The last column helps with a contingency plan. If movements were limited, determine how long you could go without certain inputs or if some movements could be less frequent and still maintain the operation.

Inputs/Outputs	Frequency of input/output	Path traveled by:	How long could you go without this movement?
Milk truck/tanker	☐ More than once/day ☐ Daily ☐ Every other day	☐ Onsite vehicles ☐ Equipment ☐ People ☐ Animals ☐ None	☐ One day? ☐ Few days (2-6 days)?
Feed commodity delivery (bulk ingredients, bagged feed, liquid feed)	☐ More than once/day ☐ Daily ☐ Every other day	☐ Onsite vehicles ☐ Equipment ☐ People ☐ Animals ☐ None	☐ One day? ☐ Few days (2-6 days)? ☐ Week? ☐ Month? ☐ Year?
Ration (mixed feed) delivery to cattle onsite	☐ More than once/day ☐ Daily ☐ Every other day	☐ Onsite vehicles ☐ Equipment ☐ People ☐ Animals ☐ None	☐ One day? ☐ Few days (2-6 days)? ☐ Week?
Ration (mixed feed) delivery to cattle off-site (heifers, dry cows, pastured cattle, steers, etc.)	☐ More than once/day ☐ Daily ☐ Every other day	☐ Onsite vehicles ☐ Equipment ☐ People ☐ Animals ☐ None	☐ One day? ☐ Few days (2-6 days)? ☐ Week?
Feed harvest (silage, hay, grain)	☐ Monthly ☐ Annually	☐ Onsite vehicles ☐ Equipment ☐ People ☐ Animals ☐ None	☐ Week? ☐ Month?
Bedding inputs	☐ Daily ☐ Weekly ☐ Monthly ☐ Annually	☐ Onsite vehicles ☐ Equipment ☐ People ☐ Animals ☐ None	☐ One day? ☐ Few days (2-6 days)? ☐ Week?
Fuel delivery	☐ Daily ☐ Weekly ☐ Monthly ☐ Annually	☐ Onsite vehicles ☐ Equipment ☐ People ☐ Animals ☐ None	☐ One day? ☐ Few days (2-6 days)? ☐ Week?
Propane delivery	☐ Daily ☐ Weekly ☐ Monthly ☐ Annually	☐ Onsite vehicles ☐ Equipment ☐ People ☐ Animals ☐ None	☐ One day? ☐ Few days (2-6 days)? ☐ Week?
Veterinary personnel	☐ Daily ☐ Weekly ☐ Monthly ☐ Annually	☐ Onsite vehicles ☐ Equipment ☐ People ☐ Animals ☐ None	☐ One day? ☐ Few days (2-6 days)? ☐ Week? ☐ Month? ☐ Year?
Pharmaceutical deliveries	☐ Daily ☐ Weekly ☐ Monthly ☐ Annually	☐ Onsite vehicles ☐ Equipment ☐ People ☐ Animals ☐ None	☐ One day? ☐ Few days (2-6 days)? ☐ Week? ☐ Month? ☐ Year?
Mail/package deliveries	☐ Daily ☐ Weekly ☐ Monthly ☐ Annually	☐ Onsite vehicles ☐ Equipment ☐ People ☐ Animals ☐ None	☐ One day? ☐ Few days (2-6 days)? ☐ Week?
Milking equipment service personnel	☐ Daily ☐ Weekly ☐ Monthly ☐ Annually	☐ Onsite vehicles ☐ Equipment ☐ People ☐ Animals ☐ None	☐ One day? ☐ Few days (2-6 days)? ☐ Week? ☐ Month? ☐ Year?
Milk testing personnel	☐ Daily ☐ Weekly ☐ Monthly ☐ Annually	☐ Onsite vehicles ☐ Equipment ☐ People ☐ Animals ☐ None	☐ One day? ☐ Few days (2-6 days)? ☐ Week? ☐ Month? ☐ Year?
Garbage removal	☐ Daily ☐ Weekly ☐ Monthly ☐ Annually	☐ Onsite vehicles ☐ Equipment ☐ People ☐ Animals ☐ None	☐ One day? ☐ Few days (2-6 days)? ☐ Week?
Dead animal removal	☐ Daily ☐ Weekly ☐ Monthly ☐ Annually	☐ Onsite vehicles ☐ Equipment ☐ People ☐ Animals ☐ None	☐ One day? ☐ Few days (2-6 days)? ☐ Week? ☐ Month? ☐ Year?

Farm Access– Enhanced Biosecurity

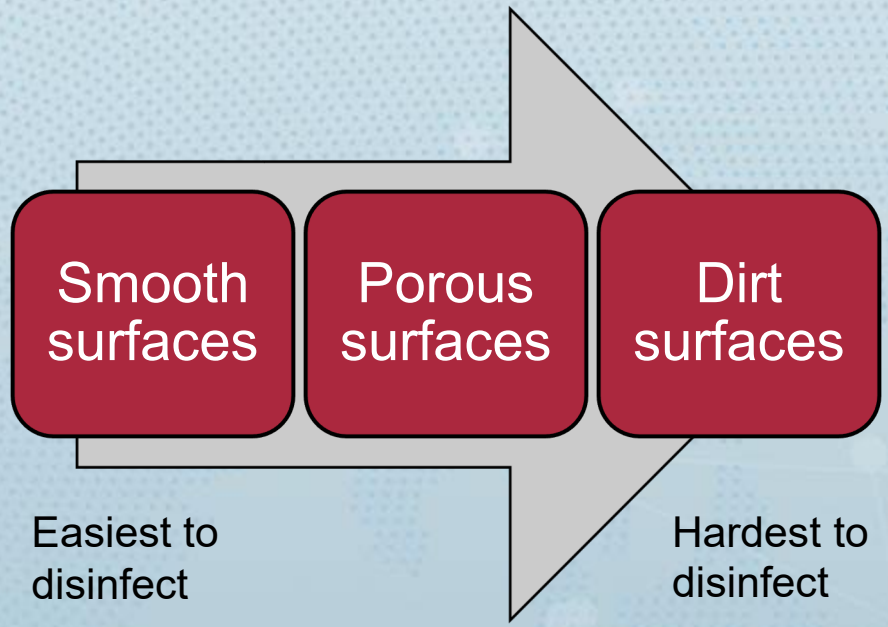
- Specific guidance for movement of
  - Animals
  - People
  - Vehicles, equipment, supplies
- Cleaning and Disinfection station
  - Operational, clearly marked, and equipped
  - Runoff managed
  - Contingency plan for inclement weather

4. Vehicles and Equipment

- Avoid/minimize sharing
  - C&D if sharing required
    - Emphasize tires and wheel wells
  - Or stays outside PBA/LOS
    - Move livestock, carcasses to perimeter for pick-up
- Restrict off-farm vehicles from shared drive paths with on-farm traffic
  - Minimize contact with animals, feed, manure
- *Special procedures for animal transport vehicles

C&D Steps

- Clean
  - Dry clean, wash, rinse, dry
- Disinfect
  - Read the product label (mixing, application, contact time, safety)
  - Apply, contact time, rinse, dry
- Consider surface type



Slide courtesy Danelle Bickett-Weddle, Preventalytics

Clean and Disinfect

EPA's Registered Antimicrobial Products Effective Against Avian Influenza [List M]

On this page:

Disinfectant Products with Claims for Avian Influenza Virus

EPA has reviewed required laboratory testing data demonstrating that these products kill avian influenza virus.

www.epa.gov/pesticide-registration/epas-registered-antimicrobial-products-effective-against-avian-influenza

*Follow label directions

Some Disinfectants Effective* Against FMD, Avian Influenza

- Virkon®S
  (sodium chloride, potassium peroxymonosulfate)
- Household bleach
  (Sodium hypochlorite)
- Accel®
  (accelerated hydrogen peroxide)

5. Personnel: Daily Biosecurity

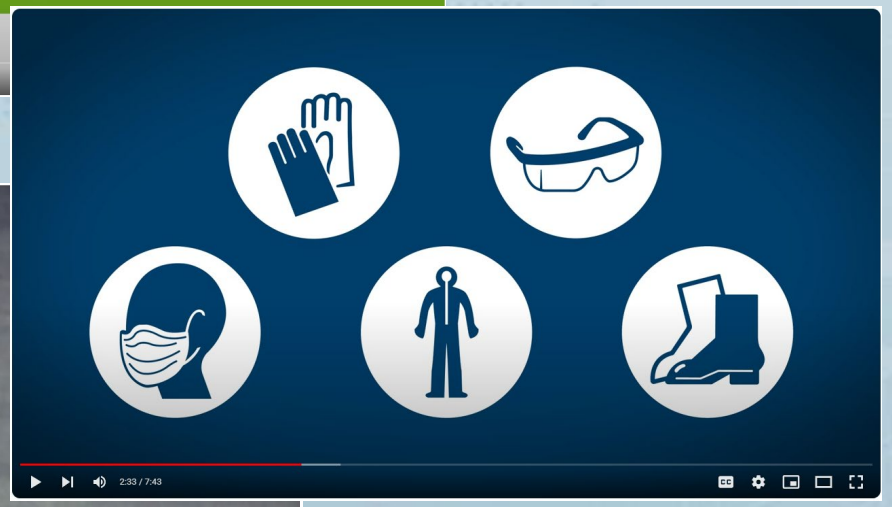
- Strategically assign animal caretaker roles, SOPs
- Clean or dairy-dedicated footwear/shoe covers
- Clean or dairy-dedicated clothing/coveralls
  - *especially important for animal handlers
- Handwashing, gloves
- Biosecure Entry Procedure for crossing LOS

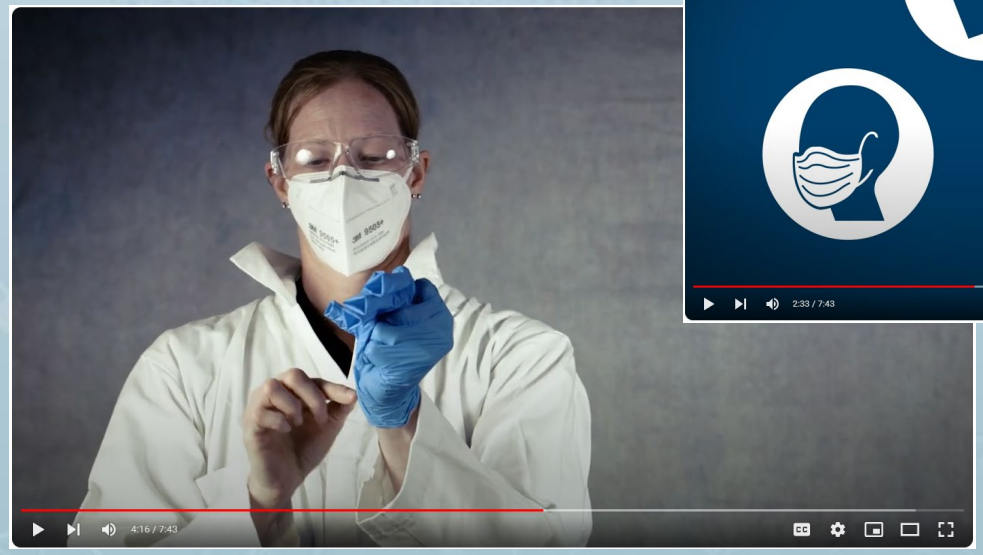
Enhanced Biosecurity

- Entry logbook
  - Downtime following international travel,
    contact with other livestock premises
- Prohibit visitor entry
  - Plan for deliveries, service personnel
- Personnel should arrive having showered, wearing clean clothing, footwear, personal items since last contacting animals (live or dead), their areas, or raw milk

H5N1 Personnel Biosecurity

- Encourage people to wear eye, nose and mouth protection (e.g., face shield or goggles, masks) when milking cows
- Wash hands after handling cows or raw milk
- Do not drink or eat raw milk dairy products





https://youtu.be/e1Ar8IqXb9Y?si=0TH3qLt2XEArsuk2

Precautions for Animal Caretakers

Protect Yourself From H5N1 When Working With Farm Animals

H5N1 is a bird flu virus that could make you sick. Wear recommended personal protective equipment (PPE) when working directly or closely with sick or dead animals, animal feces, litter, raw milk, and other materials that might have the virus.

Wash hands with soap and water, then put on PPE in this order:

1. Fluid-resistant coveralls
2. Waterproof apron, if needed for job task
3. NIOSH Approved® Respirator (e.g., N95® filtering facepiece respirator or elastomeric half mask respirator)
4. Properly-fitted unvented *or* indirectly vented safety goggles or face shield
5. Head cover or hair cover
6. Gloves
7. Boots

Scan to learn how to put on and take off a respirator

While wearing PPE

- Use separate designated clean areas, one for putting on PPE and one for taking off PPE.
- Avoid touching your eyes, mouth, and nose after touching any contaminated material.
- Do not eat, drink, smoke, vape, chew gum, dip tobacco, or use the bathroom.

Follow these steps to safely remove PPE

1. Remove the apron, if worn
2. Clean and disinfect boots
3. Remove boots
4. Remove coveralls
5. Remove gloves
6. Wash hands with soap and water or alcohol-based hand rub
7. Remove goggles or faceshield and then remove respirator
8. Remove head cover or hair cover
9. Wash hands again with soap and water or alcohol-based hand rub

After removing PPE

- Shower at the end of the work shift.
- Leave all contaminated clothing and equipment at work.
- Watch for symptoms of illness while you are working with potentially sick animals or materials. Continue watching for symptoms for 10 days after finishing working. If you get sick, tell your supervisor and talk with a doctor.

Reusable and disposable PPE

- While removing PPE, dispose of all disposable PPE appropriately and set aside reusable PPE
- Clean and disinfect reusable PPE after every use

Scan to find more PPE and worker safety information

CDC NIOSH

April 2024

6. Animal Movement, Animal Health

Daily Biosecurity

- Recordkeeping
  - Identification
  - Movement logs
  - Source documentation
- Animal health protocols
  - Collaboration with veterinarian
  - Quarantine and isolation
  - Animal flow

Enhanced Biosecurity

- Pre-movement Isolation Period
  - No animal introduction from control area (7) days prior to moving animals out
- Plan for interrupted animal movement
- Maintain directional flow of animals during loading/unloading
- Outgoing animals may not return

H5N1- Movement Control in Dairy Cattle

- Test lactating cattle prior to movement, following federal and state-specific guidance
- Isolate newly introduced lactating cows or those returning from an off-site location for at least 30 days- milk separately or last

Mandatory Testing for Interstate Movement of Dairy Cattle

- Prior to interstate movement, dairy cattle are required to receive a negative test for Influenza A virus at an approved National Animal Health Laboratory Network (NAHLN) laboratory.
- Owners of herds in which dairy cattle test positive for interstate movement will be required to provide epidemiological information, including animal movement tracing.
- Dairy cattle moving interstate must adhere to conditions specified by APHIS.
- As will be described in forthcoming guidance, these steps will be immediately required for lactating dairy cattle, while these requirements for other classes of dairy cattle will be based on scientific factors concerning the virus and its evolving risk profile.

Mandatory Reporting

- Laboratories and state veterinarians must report positive Influenza A nucleic acid detection diagnostic results (e.g. PCR or genetic sequencing) in livestock to USDA APHIS.
- Laboratories and state veterinarians must report positive Influenza A serology diagnostic results in livestock to USDA APHIS.

THEREFORE, IT IS HEREBY ORDERED, under the authority of Iowa Code §163.1, which authorizes IDALS to determine and employ the most efficient and practical means for the control of an infectious or contagious disease, to determine whether an animal has been exposed to a disease, and to limit animal movement for disease control, that:

1. Any Dairy Cattle Originating from an HPAI Affected Herd are prohibited from Exhibition.
2. Any Dairy Cattle intended for any Exhibition must have a Certificate of Veterinary Inspection (CVI) issued within seven (7) calendar days of arrival at an Exhibition.
3. Premises from which any Dairy Cattle intended for Exhibition Originate must comply with the following HPAI Dairy Testing Protocol no more than 7 calendar days before the day of arrival at any Exhibition.

7. Animal Product Movement

Daily Biosecurity

- Semen, embryos, milk
  - Come from sources with documented biosecurity practices
  - Recordkeeping
  - Transported in containers that can be C&D
- Colostrum from source herd or pasteurized

Enhanced Biosecurity

- Specific protocols/options for milk collection (see LOS)
- Colostrum from source herd or pasteurized *for FMD inactivation*
- Milk disposal
  - Plan exists in event raw milk can’t be moved off-farm

Semen and embryos have not been linked in the spread of H5N1 to date, and data on H5N1 presence and survival in oocytes, embryos and semen is not currently available.

*Normal mortalities, not known to be infected

8. Carcass* Disposal

Daily Biosecurity

- Prevent attraction of wildlife, rodents, other scavengers
  - Cover compost piles whenever possible
- Disposal methods and routes indicated in plan/labeled on map

Enhanced Biosecurity

- Vehicles hauling carcasses to common disposal site do not cross LOS/PBA
- C&D equipment used to move dead animals after use
- Plan in case of large number of die-offs

9. Manure Management

Daily Biosecurity

- Stored and removed to prevent exposure of susceptible animals to disease agents
- Manure handling equipment separate from feed handling equipment (or C&D between use)
- Follow local regulations

Enhanced Biosecurity

- Meets state, local, and Responsible Regulatory Official regulations
- On-site storage plan if cannot be permitted off-site during outbreak

Data on H5N1 presence and survival in cattle manure and lagoons is not currently available.

10. Rodents, Wildlife, Other Animals

Daily Biosecurity

- Clean
- Exclude
- Control

Enhanced Biosecurity

- Dogs, cats, and other pets are not allowed to roam between operations
- Biosecurity measures taken for working animals

H5N1: Focus on small mammals (including cats) and birds as they may be early indicators of H5N1 on a dairy. Some species may be reservoirs (shed the virus) or fomites (carry virus on fur, foot pads, feathers).

Prevent cats from roaming between farms and avoid feeding raw milk to cats

11. Feed and Water

Daily Biosecurity

- Feed
  - Storage, handling
  - Prevent contamination
  - Clean spills immediately
- Disposal methods and routes indicated in plan/labeled on map
- Manure handling equipment separate from feed handling equipment (or C&D between use)

Enhanced Biosecurity

- C&D feed delivery vehicles if cross LOS
- Finished feed stored in closed bins or buildings

Data on H5N1 presence and survival in feed is not currently available.

Implementing the Enhanced Biosecurity Plan

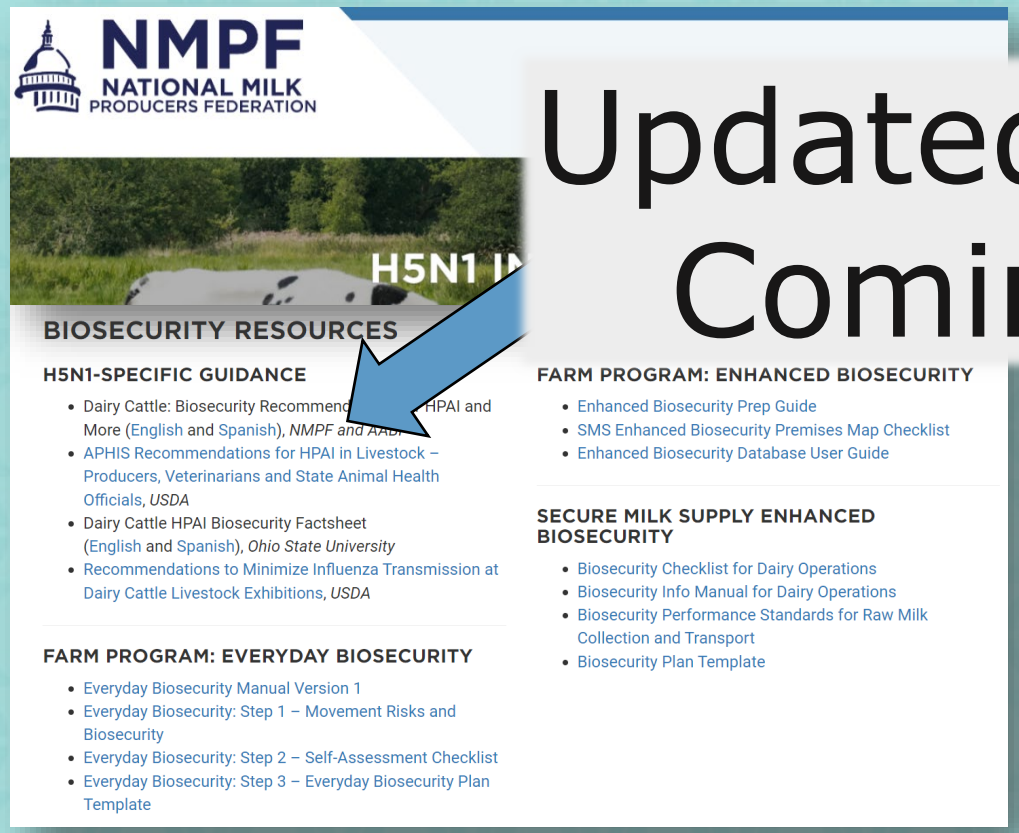
- Once plan is written
  - Absence of FMD (H5N1): Decide which items to implement
  - FMD (H5N1) diagnosed in U.S.: Prepare to implement ALL items
  - Located in FMD Control Area (H5N1?): Officials may REQUIRE all items

Resources and Outreach Materials

Slide courtesy Danelle Bickett-Weddle, Preventalytics

Website Resources

NMPF



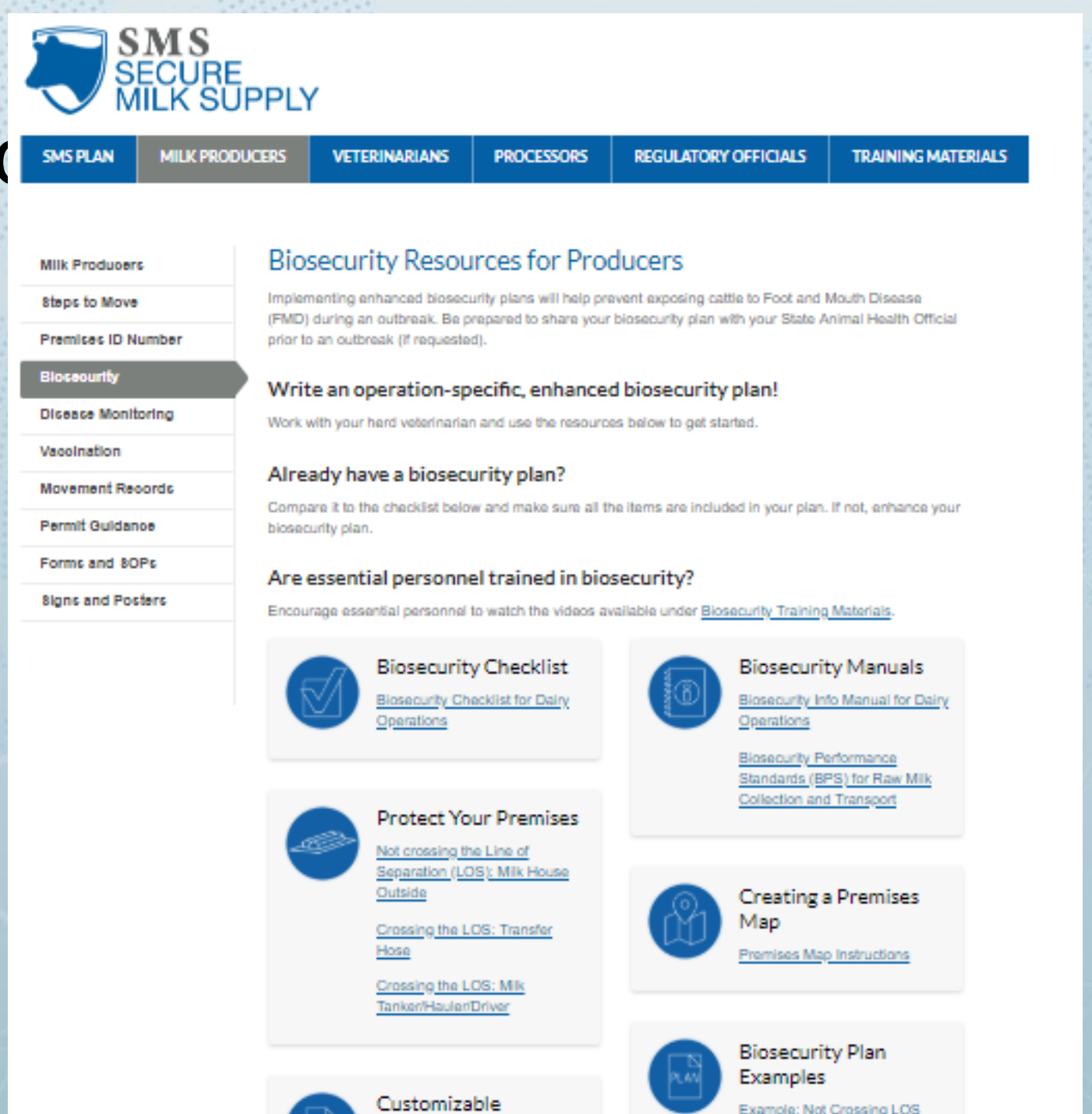
www.nmpf.org/resources/hpai/

AABP

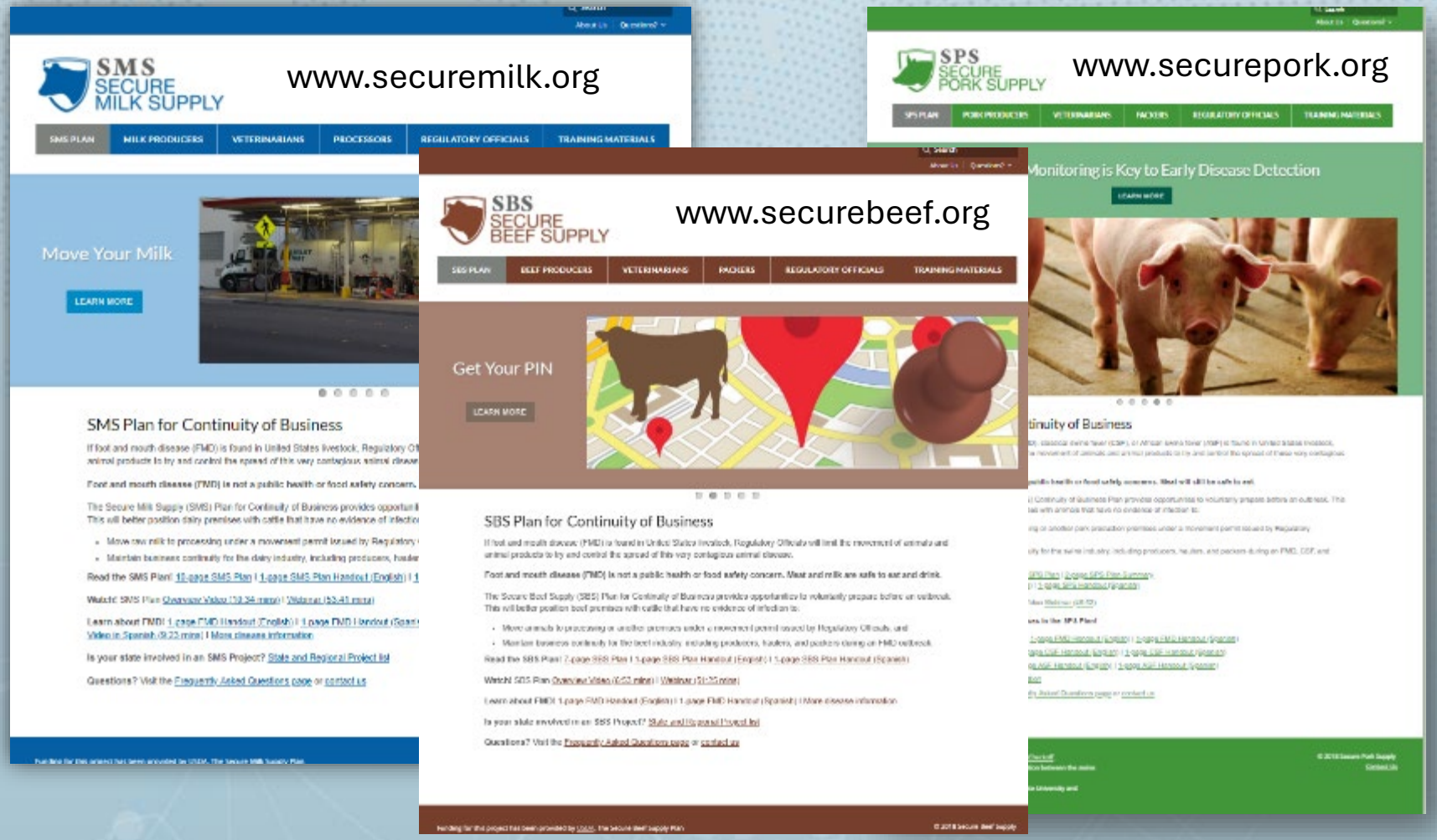
aabp.org/resources/iav/

Updated Resources Coming Soon...

Resourc


SMS
SECURE
MILK SUPPLY
SMS PLAN
MILK PRODUCERS
VETERINARIANS
PROCESSORS
REGULATORY OFFICIALS
TRAINING MATERIALS
Milk Producers
Steps to Move
Premises ID Number
Biosecurity
Disease Monitoring
Vaccination
Movement Records
Permit Guidance
Forms and SOPs
Signs and Posters
Biosecurity Resources for Producers
Implementing enhanced biosecurity plans will help prevent exposing cattle to Foot and Mouth Disease (FMD) during an outbreak. Be prepared to share your biosecurity plan with your State Animal Health Official prior to an outbreak (if requested).
Write an operation-specific, enhanced biosecurity plan!
Work with your herd veterinarian and use the resources below to get started.
Already have a biosecurity plan?
Compare it to the checklist below and make sure all the items are included in your plan. If not, enhance your biosecurity plan.
Are essential personnel trained in biosecurity?
Encourage essential personnel to watch the videos available under Biosecurity Training Materials.
Biosecurity Checklist
Biosecurity Checklist for Dairy Operations
Biosecurity Manuals
Biosecurity Info Manual for Dairy Operations
Biosecurity Performance Standards (BPS) for Raw Milk Collection and Transport
Protect Your Premises
Not crossing the Line of Separation (LOS): Milk House Outside
Crossing the LOS: Transfer Hose
Crossing the LOS: Milk Tanker/Hauler/Driver
Creating a Premises Map
Premises Map Instructions
Biosecurity Plan Examples
Example: Not Crossing LOS
Customizable

Secure Milk, Pork, Beef Plans



Enhanced Biosecurity Checklists

www.poultrybiosecurity.org

www.securemilksupply.org

www.securepork.org

www.securebeef.org

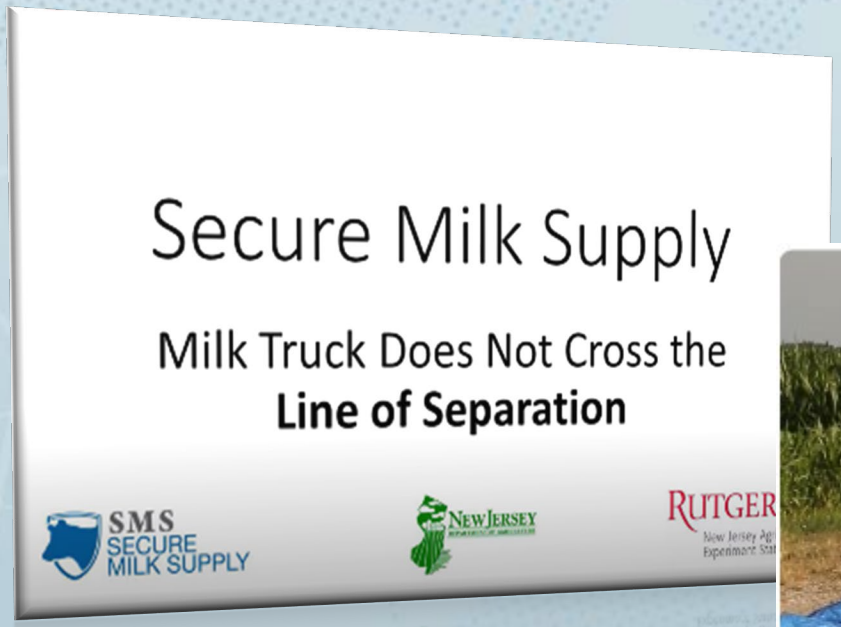
Information Manuals

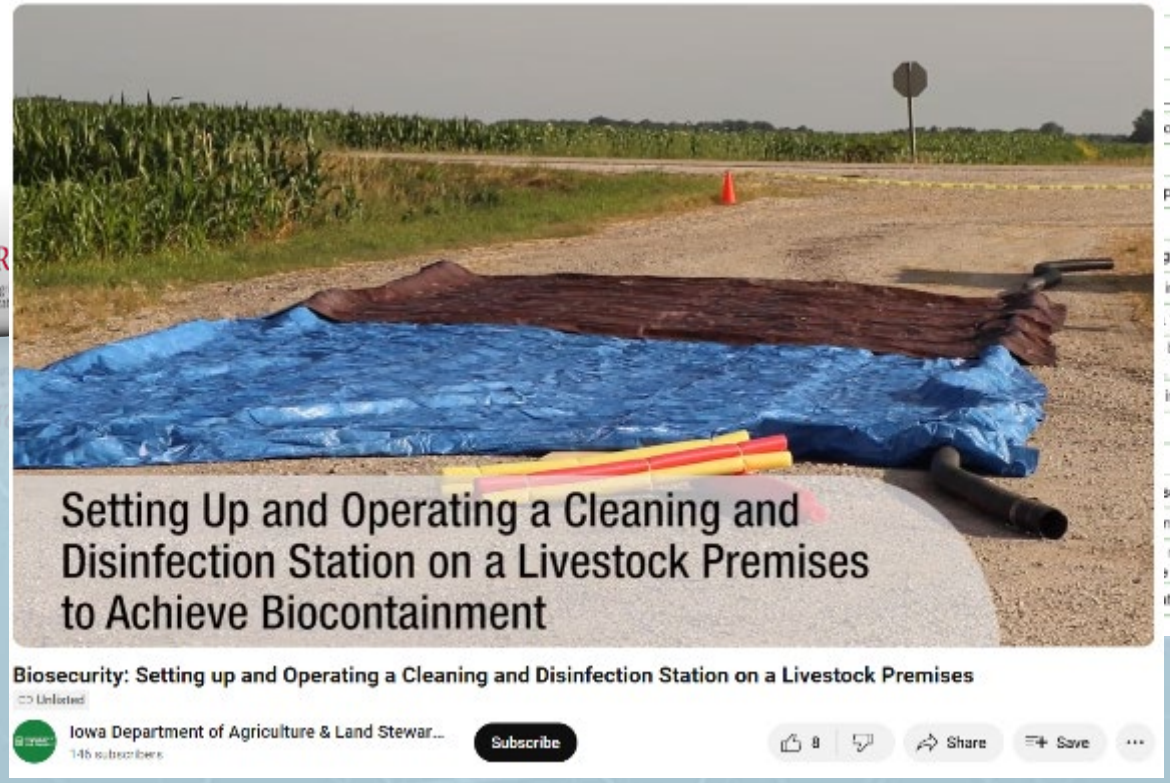
www.securemilk.org

www.securepork.org

www.securebeef.org

Biosecurity Training

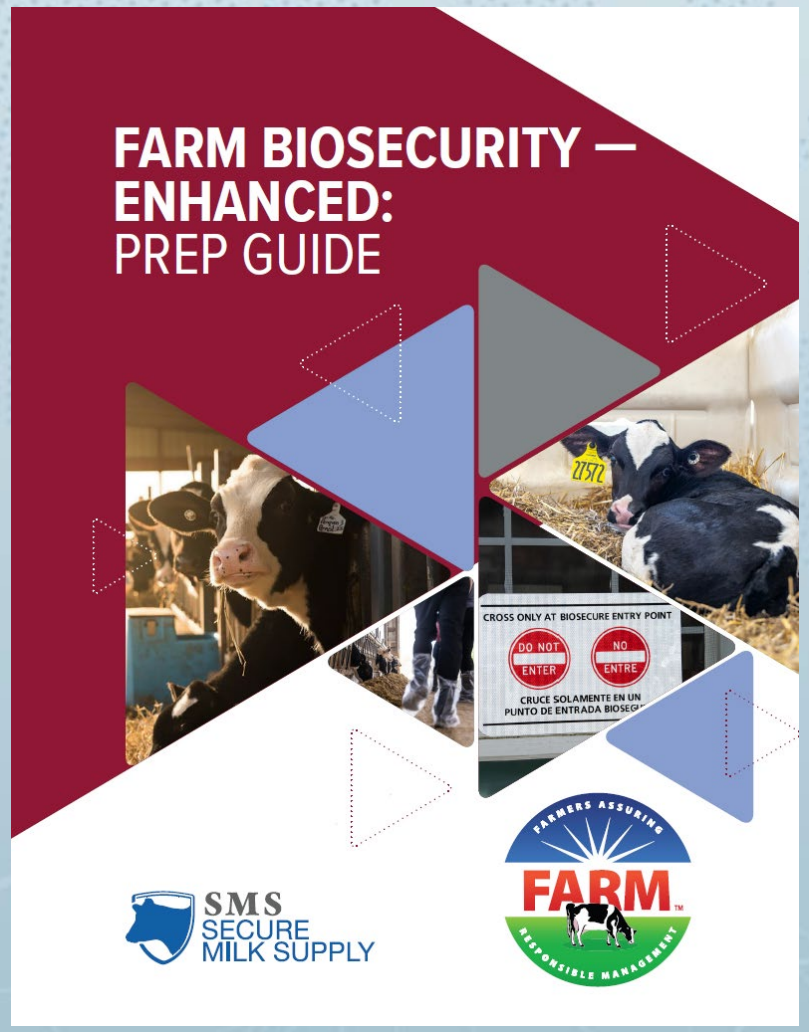




C&D STATION SUPPLY CHECKLIST

√	#	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: _____)	
		oring disinfectant solution	
		ping handle	
		g off equipment	
		interior	
		: 14 feet x 90 feet)	
		by 4 inch lumber, pool	
		intake and discharge hose	
		sealable)	
		ner	
		rubber O-ring, flex seal	
		ter container)	

Templates



- On-farm livestock trailers are used to transport animals to or away from the arriving livestock trailer at a designated cattle crossing LOS Access Point.

5. PERSONNEL

Prior to Arriving at the Dairy

The Biosecurity Manager ensures that everyone crossing the LOS on foot or exiting their vehicle inside the LOS has been instructed to arrive at the dairy

- with a clean vehicle interior (free of all animal manure/excrement) that has not become contaminated by soiled clothes, footwear, or other items.
- having showered and wearing clean clothing and footwear since last contacting susceptible animals.

[Name of Dairy] Enhanced Biosecurity Plan for FMD Prevention in [State]

Date [Created or Updated]: [Date MM/DD/YYYY]

This Biosecurity Plan is based off of the Secure Milk Supply (SMS) Plan Self-Assessment Checklist for Enhanced Biosecurity, [May 2017] and the Biosecurity Performance Standards (BPS) for Raw Milk Collection and Transport [April 2016] and was developed using guidance from the SMS Information Manual for Enhanced Biosecurity for FMD Prevention: Dairy. All documents are available at www.securemilksupply.org.

SCOPE OF BIOSECURITY PLAN

- National Premises Identification Number (Farm ID or PIN): [PIN] (request from the office of the State Animal Health Official)
- Premises address: [a valid 911 address]
- Premises GPS coordinates: [Latitude, Longitude]
- Animals* on primary premises: [All Species] and [Number of animals]
- Animal housing types: [e.g., buildings, pastures, dry lots]
- Other business operations on premises? [Yes or No] If yes, what? [e.g., sale of milk/milk products, vegetable stand; sale of feed fertilizer or compost; hosting farm tours]
- Secondary premises** locations: [list the PINs, 911 addresses, or GPS coordinates (latitude, longitude) where animals associated with this operation reside (e.g., dry cows off-site, heifers on pasture, steers)]
  - Will be provided if this premises is located in an FMD Control Area
  - _____
  - _____
  - _____

*Animals that are susceptible to FMD include cattle, pigs, sheep and goats. For biosecurity guidance for beef cattle and pigs, see www.securebeef.org and www.securepork.org.
**Work with your State Animal Health Official to determine if separate PINs are needed for all of your associated premises

1. BIOSECURITY MANAGER AND WRITTEN PLAN

The designated Biosecurity Manager for this premises and their contact information follows:

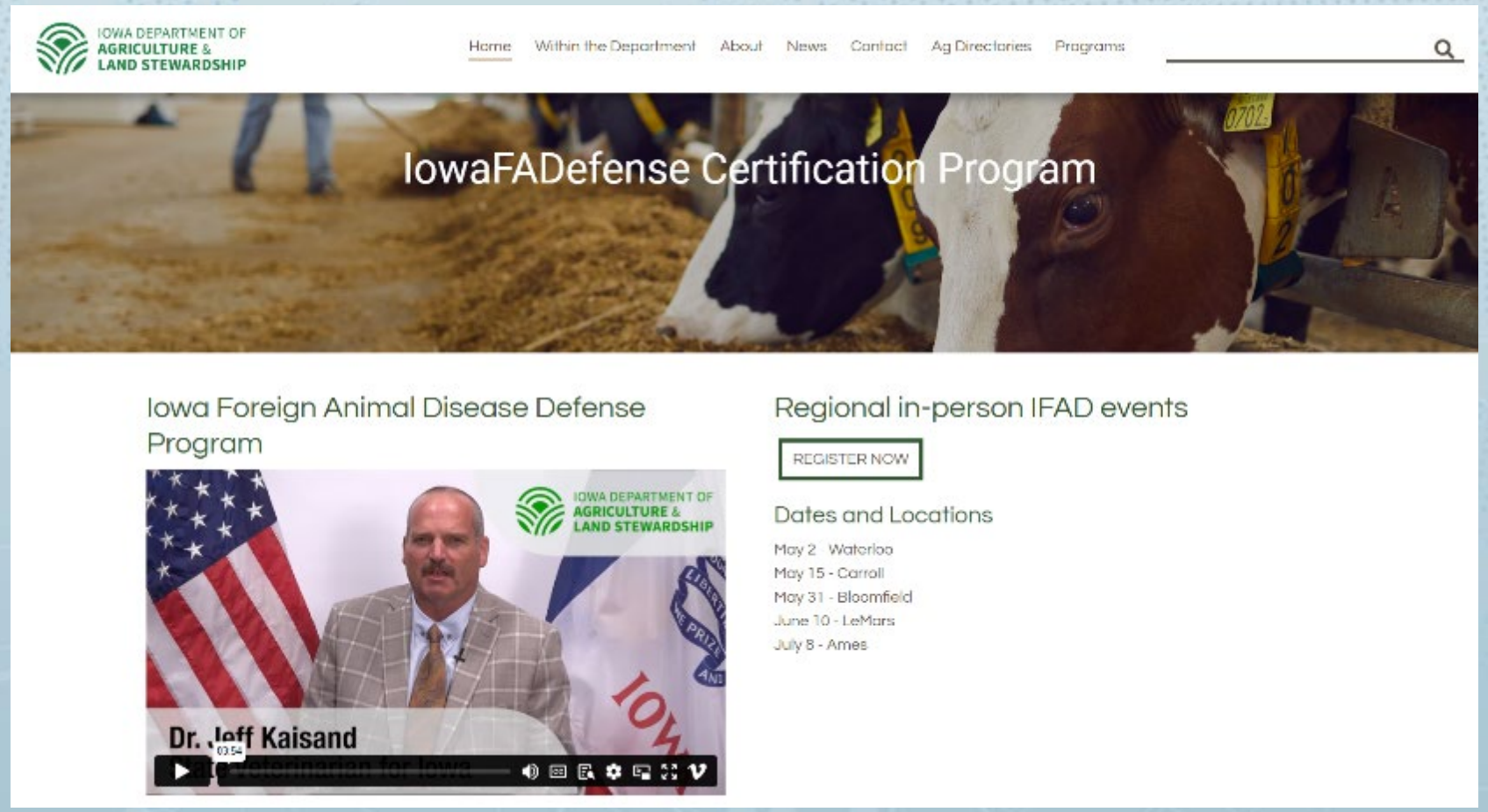
NAME:
PHONE: [xxx-xxx-xxxx]
EMAIL: [email address]

In the event the Biosecurity Manager is away from the operation, **their designee's** contact information is:

NAME:
PHONE: [xxx-xxx-xxxx]
EMAIL: [email address]

The Biosecurity Manager's contact information is posted [describe where located].

IowaFADefense Certification Program



ISU VDPAM Biosecurity Trailer

- Contact Grant Dewell, beef extension veterinarian
  gdewell@iastate.edu
  515-294-2822
- Ideas
  - Demo for awareness
  - Role play- biosecure entry/exit
    - Farm worker
    - Visitor
  - Donning/doffing PPE

USDA Financial Support- Biosecurity

- For all producers
  - Biosecurity planning and implementation- up to $1,500 per premises
    - Develop site-specific biosecurity plan
    - Conduct biosecurity trainings
    - Perform audits
- For producers with infected herds
  - PPE supplies, laundering- up to $2,000 per premises per month
    - Requires participation in workplace/farm worker study
- FSA loans available for biosecurity measures

- Additional support available for milk/animal testing, milk treatment, etc.

Acknowledgements

- USDA
- CDC
- NMPF
- Preventalytics

Resources

- www.securemilk.org
- farmbiosecurity.cfsph.iastate.edu
- www.cfsph.iastate.edu/biosecurity/
- https://iowaagriculture.gov/animal-industry-bureau/biosecurity
- https://www.aphis.usda.gov/livestock-poultry-disease/avian/avian-influenza/hpai-detections/livestock
- https://www.nmpf.org/resources/hpai/

Thank you!

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Questions?

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