

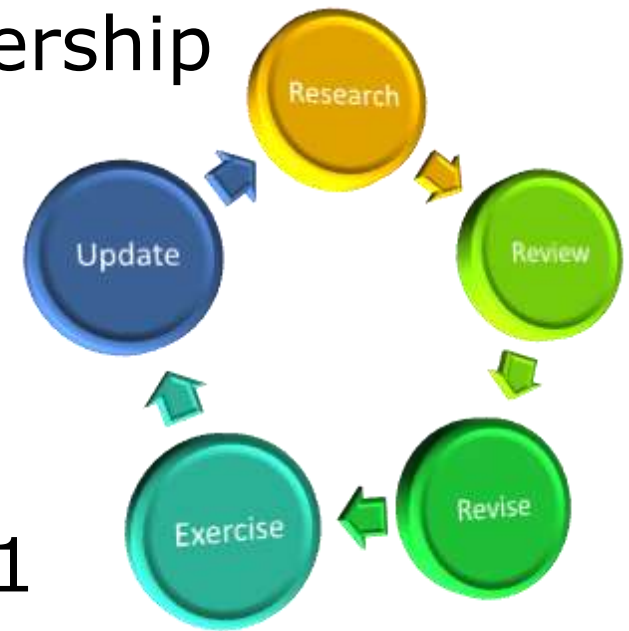
# Secure Sheep and Wool Supply Plan: *How the Industry is Preparing for an FMD Outbreak*

Danelle Bickett-Weddle, DVM, MPH, PhD, DACVPM  
Preventalytics



# SSWS Plan Development

- American Sheep Industry Association (ASI)
  - Funding began April 2019
- Industry-State-Federal-Academia Partnership
  - Academic partners draft documents
    - Iowa State University
  - Circulated drafts to Working Group
    - Review, suggest improvements
- Released content April 2020
- USDA and ASI funded “phase 2” in 2021
  - Additional resources for producers



# Secure Food Supply Plans

[secureremilk.org](http://secureremilk.org)

[secrepork.org](http://secrepork.org)

[secrebeef.org](http://secrebeef.org)

[seuresheepwool.org](http://seuresheepwool.org)



**Secure Milk Supply (SMS) Plan for Continuity of Business**  
August 2017

**Introduction**  
The Secure Milk Supply (SMS) Plan provides a workable continuity of business (COB) plan for dairy producers with an intention of their and nearby disease (FMD) infection in a regulatory (Control) Area to ensure any milk is processed that is available to Responding Regulators (RRs) (State, Tribal, and Federal officials, as appropriate) (RRs) until the end of allowing movement of any milk, against the risk of not allowing movement and thus the necessity for an alternative use of any milk. FMD is a highly contagious foreign animal disease that infects cattle and other domestic ruminants, such as swine, sheep, goats, and deer. FMD is not a public health or food safety concern. FMD has been eradicated from the U.S. since 1929 but it is present in many other countries and causes serious production losses to animals.

**Milk Movement at the Beginning of an FMD Outbreak**  
In an FMD outbreak, Responding Regulators (RRs) have the authority and responsibility to establish a Control Area around FMD Infected Premises (IPs) to manage animal and animal products (such as milk) movement within, into, and out of the Control Area. Producers or one with movement with Responding Regulators (RRs) in each outbreak and Control Area. Producers of milk from a Control Area must include production. There may be additional restrictions of milk or animal products of the Control Area or one with the processing. The following recommendations provide the flexibility for Responding Regulators (RRs) to manage milk movement during an FMD outbreak according to their regulatory jurisdiction and the circumstances surrounding the outbreak.



**Secure Pork Supply (SPS) Plan for Continuity of Business**  
August 2017

**Introduction**  
Pork and swine disease (PWS) is a highly contagious foreign animal disease that affects cattle and other domestic ruminants, such as swine, sheep, goats, and deer. FMD is not a public health or food safety concern. FMD has been eradicated from the U.S. since 1929 but it is present in many other countries and causes serious production losses to animals. FMD is a highly contagious foreign animal disease that infects cattle and other domestic ruminants, such as swine, sheep, goats, and deer. FMD is not a public health or food safety concern. FMD has been eradicated from the U.S. since 1929 but it is present in many other countries and causes serious production losses to animals.

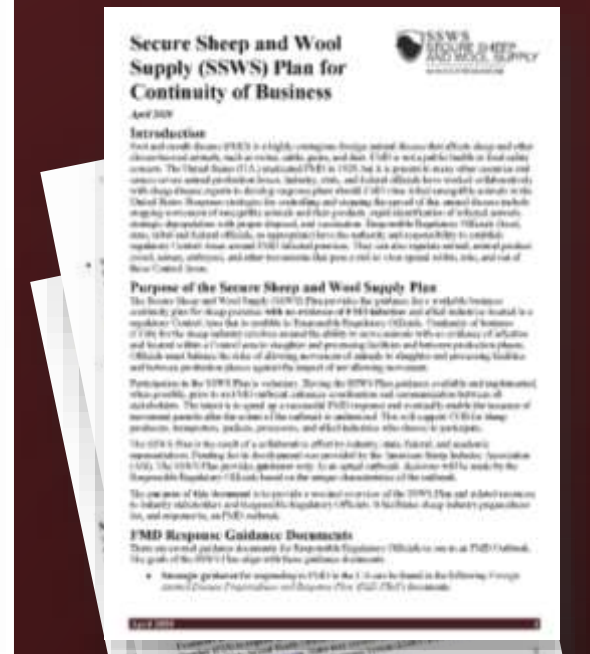
**Purpose of the Secure Pork Supply Plan**  
The goal of the Secure Pork Supply (SPS) Plan is to provide a workable business continuity plan for pork producers with an intention of their and nearby disease (FMD) infection in a regulatory (Control) Area to ensure any pork is processed that is available to Responding Regulators (RRs) (State, Tribal, and Federal officials, as appropriate) (RRs) until the end of allowing movement of any pork, against the risk of not allowing movement and thus the necessity for an alternative use of any pork. FMD is a highly contagious foreign animal disease that infects cattle and other domestic ruminants, such as swine, sheep, goats, and deer. FMD is not a public health or food safety concern. FMD has been eradicated from the U.S. since 1929 but it is present in many other countries and causes serious production losses to animals.



**Secure Beef Supply (SBS) Plan for Continuity of Business**  
August 2017

**Introduction**  
Pork and swine disease (PWS) is a highly contagious foreign animal disease that affects cattle and other domestic ruminants, such as swine, sheep, goats, and deer. FMD is not a public health or food safety concern. FMD has been eradicated from the U.S. since 1929 but it is present in many other countries and causes serious production losses to animals. FMD is a highly contagious foreign animal disease that infects cattle and other domestic ruminants, such as swine, sheep, goats, and deer. FMD is not a public health or food safety concern. FMD has been eradicated from the U.S. since 1929 but it is present in many other countries and causes serious production losses to animals.

**Purpose of the Secure Beef Supply Plan**  
The goal of the Secure Beef Supply (SBS) Plan is to provide a workable business continuity plan for beef producers with an intention of their and nearby disease (FMD) infection in a regulatory (Control) Area to ensure any beef is processed that is available to Responding Regulators (RRs) (State, Tribal, and Federal officials, as appropriate) (RRs) until the end of allowing movement of any beef, against the risk of not allowing movement and thus the necessity for an alternative use of any beef. FMD is a highly contagious foreign animal disease that infects cattle and other domestic ruminants, such as swine, sheep, goats, and deer. FMD is not a public health or food safety concern. FMD has been eradicated from the U.S. since 1929 but it is present in many other countries and causes serious production losses to animals.



**Secure Sheep and Wool Supply (SSWS) Plan for Continuity of Business**  
April 2018

**Introduction**  
Pork and swine disease (PWS) is a highly contagious foreign animal disease that affects sheep and other domestic ruminants, such as swine, sheep, goats, and deer. FMD is not a public health or food safety concern. FMD has been eradicated from the U.S. since 1929 but it is present in many other countries and causes serious production losses to animals. FMD is a highly contagious foreign animal disease that infects cattle and other domestic ruminants, such as swine, sheep, goats, and deer. FMD is not a public health or food safety concern. FMD has been eradicated from the U.S. since 1929 but it is present in many other countries and causes serious production losses to animals.

**Purpose of the Secure Sheep and Wool Supply Plan**  
The goal of the Secure Sheep and Wool Supply (SSWS) Plan is to provide a workable business continuity plan for sheep producers with an intention of their and nearby disease (FMD) infection in a regulatory (Control) Area to ensure any sheep or wool is processed that is available to Responding Regulators (RRs) (State, Tribal, and Federal officials, as appropriate) (RRs) until the end of allowing movement of any sheep or wool, against the risk of not allowing movement and thus the necessity for an alternative use of any sheep or wool. FMD is a highly contagious foreign animal disease that infects cattle and other domestic ruminants, such as swine, sheep, goats, and deer. FMD is not a public health or food safety concern. FMD has been eradicated from the U.S. since 1929 but it is present in many other countries and causes serious production losses to animals.

# Similarities to SFS Plans

- Summary documents
  - Consistent language wherever possible with other SFS Plans
    - Secure Milk, Beef, Pork
  - Managed movement guidance
- Enhanced biosecurity resources
- Record keeping resources
- Handouts/educational tools
  - Overview videos, 1-page docs
- Website layout

**Managed Movement of Susceptible Livestock Species during a U.S. Foot and Mouth Disease (FMD) Outbreak: Overview**

November 2019

**Introduction**

Movement restrictions<sup>1</sup> of susceptible livestock species is one strategy for the control and containment of FMD during a U.S. outbreak. A 72-hour national movement standstill has been recommended by USDA during state national exercises. Livestock operations affected by movement restrictions yet not impacted with FMD will need to resume movement as soon as possible to support business continuity in a way that is consistent with mitigating the risk of spreading FMD. The Secure Food Supply (SFS) Plans for Continuity of Business are for operations with no evidence of FMD infection located in a Control Area to prepare to meet movement permit requirements<sup>2</sup> while reducing the risk of spreading the FMD virus. Numerous states have made progress in pre-planning movement restrictions and permitting in the event of an FMD outbreak.

**Phases of Livestock Movement Restrictions**

FMD response strategies will be assessed and adjusted as the outbreak progresses and will depend on specific outbreak characteristics (see Figure 1).

**FIGURE 1. TIMELINE OF EARLY MANAGED MOVEMENT EVENTS IN AN FMD OUTBREAK**

TESTING SUSPECT CASE	PHASE 1	PHASE 2
<ul style="list-style-type: none"><li>• Suspect cases identified</li><li>• Immediate quarantine placed on suspect premises</li><li>• Trace back and trace forward efforts initiated</li></ul>	<ul style="list-style-type: none"><li>• Suspect cases confirmed</li><li>• Control Area established around affected premises</li><li>• Step movement in Control Area</li><li>• National movement standards of susceptible species may be incorporated</li><li>• In-bound livestock movement managed</li><li>• Mobilization of permitting system</li></ul>	<ul style="list-style-type: none"><li>• Extent of outbreak characterized</li><li>• Efforts to restart permitted movement initiated</li></ul>

Information from information contained in the Foot and Mouth Disease Response Plan, The First Step, 2011 and the FMD Preparedness Document: Classification of Phases and Types of a Foot and Mouth Disease Outbreak and Response, 2011

Managing movements of susceptible livestock species during an FMD outbreak could be approached similarly to the management of air traffic immediately following the September 11, 2001 terrorist attacks. The Federal Aviation Administration issued a "national ground stop"<sup>3</sup>—planes in the air were safely landed at the nearest airport and no new flights were initiated. Some commercial flights were allowed to resume in an orderly way three days later, with enhanced safety protocols in place and under heightened security. Early in an FMD disease outbreak, movement restrictions may be implemented that will "land" shipments of livestock in transit and "ground" any new movements until the extent of the outbreak can be characterized, and movements of susceptible livestock can resume under heightened biosecurity.

Page 1 of 2





# Differences with SFS Plans

- Adult sheep: mild to no obvious clinical signs
  - Impacts guidance on disease monitoring
  - “Factors to consider” document
  - Shaped permit guidance
- Wool handling
- Grazing public lands
- Premises identification – confusion with scrapie premises IDs



**Factors to Consider Regarding Surveillance, Biosecurity and Movement Permitting of Sheep in a Foot and Mouth Disease Outbreak**

**Introduction**  
Over the past several years, Secure Food Supply (SFS) business continuity plans have been developed for beef, pork, and milk producers in the event of a foot and mouth disease (FMD) outbreak in the United States. The development of these plans involved discussions among the livestock industries and federal and state regulatory officials, facilitated by academia, to come to a consensus and to produce the Secure Beef Supply (SBS), the Secure Pork Supply (SPS) and the Secure Milk Supply (SMS) Plans. The plans are intended to help producers protect their animals from infection. They also facilitate animal and product movement from premises that are under movement restrictions in a regulatory Control Area where animals and products are at a low risk of being infected. Many of the concepts and components of those plans are relevant to a Secure Sheep and Wool Supply (SSWS) Plan. However, there are some important differences between sheep and other species regarding FMD infection and in husbandry practices that need to be addressed.

The purpose of this document is to summarize the various factors to consider regarding surveillance, biosecurity, and movement permitting of sheep as compared to the approach in other SFS Plans.

**FMD Response Guidance**  
There are several guidance documents for Responsible Regulatory Officials to use in an FMD outbreak. The goals of the SFS Plans align with these guidance documents.

- The goal is to detect FMD as quickly as possible and to work aggressively to stamp it out, if possible, to return the U.S. to FMD free status. (see: *Foot-and-Mouth Disease Response Plan: The Red Book*, [www.aphis.usda.gov/animal\\_health/emergency\\_management/downloads/fmd\\_redbook.pdf](http://www.aphis.usda.gov/animal_health/emergency_management/downloads/fmd_redbook.pdf))
  - Regulatory Control Areas will be established around the infected premises.
  - Movement of animals, products and vehicles/materials into, within, and out of an FMD Control Area will be based on risk and be by permit only.
- During an outbreak, while there is still a chance of stamping out FMD infection in the U.S. or in a particular state, all infected animals, birds, and flocks will likely be depopulated, preferably within 24 to 48 hours of detection of infection. Carcasses must be disposed of in a biosecure manner and according to federal, state, and local environmental regulations.
  - If animals are ordered to be depopulated by regulatory officials, the federal government is currently obligated to pay the owners 50% of the appraised value of the animals (Title 9 Code of Federal Regulations 53.2).
- In an extensive and rapidly moving outbreak, it may not be possible to stamp out the infection, so alternate approaches may be needed (see: *Classification of Phases and Types of a Foot-and-Mouth Disease Outbreak and Response*, [www.aphis.usda.gov/animal\\_health/emergency\\_management/downloads/phase-and-type-of-fmd-outbreak\\_2012.pdf](http://www.aphis.usda.gov/animal_health/emergency_management/downloads/phase-and-type-of-fmd-outbreak_2012.pdf))
- At the beginning of a U.S. FMD outbreak, the USDA may request a 72-hour movement standstill for all susceptible species. It will be up to the State Animal Health Officials to implement the

March 2009 1

# 2020 Deliverables

Document	Status
Biosecurity checklist (Sheep on pasture/rangeland)	Completed
Biosecurity checklist (Feedlot)	Completed
Managed Movement of Livestock - Overview	Completed - LINK TO SFS document
Managed Movement of Livestock - Regulatory Officials	Completed - LINK TO SFS document
Factors to Consider Regarding Surveillance, Biosecurity, Movement	Completed
Permitting of Sheep in an FMD Outbreak	Completed
Biosecurity Information Manual for Feedlots	Completed
Creating a premises map	Completed
Group training form	Completed - Same for Feedlot and Pasture
Inputs/outputs to the operation	Completed - consolidated lists
Line of separation examples	Completed
Movement logs for vehicles/equipment	Completed - Same for Feedlot and Pasture
Movement logs for animals	Completed - Same for Feedlot and Pasture
Movement logs for people	Completed - Same for Feedlot and Pasture
Employee and visitor arrival agreement	Completed - Same for Feedlot and Pasture
Record of checking rodent bait stations	Completed - Same for Feedlot and Pasture
Setting up and operating a C&D station	Completed - Same for Feedlot and Pasture; SHOULD REMAIN A WORD DOC
Approved disinfectants for FMD virus	Linked to USDA APHIS page
C&D Inventory log	Completed - Same for Feedlot and Pasture
Protect Your Premises - LOS Example	Completed
One page FMD overview handout	Completed
One page SSWS overview handout	Completed
SSWS Plan for Continuity of Business	Completed
SSWS Practice Questionnaire for FMD exposure	Completed
Biosecurity for wool handling in a control area	Completed
Biosecurity information manual for Sheep on pasture/rangeland	Completed
Creating a premises map	Completed
Group training form	Co
Inputs/outputs to the operation	Co
Line of separation examples	Co
Movement logs for vehicles/equipment	Co
Movement logs for animals	Co
Movement logs for people	Co
Employee and visitor arrival agreement	Co
Record of checking rodent bait stations	Co
Setting up and operating a C&D station	Co
Approved disinfectants for FMD virus	Lin
C&D Inventory log	Co
Protect Your Premises - LOS Example	Co
Biosecurity Template: Feedlot/Pasture/Rangeland	Co
Considerations for Enhanced Biosecurity on Rangeland/Public Lands	Co
Contingency planning for sheep and wool producers in an FMD outbreak	Co



- 15 major documents
  - Ranging from 1 to 44 pages
- Another 13 support documents
  - Appendices for enhanced biosecurity planning
- Active working group
- Collaboration = success!

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**SSWS Plan for Continuity of Business**

If foot and mouth disease (FMD) is found in United States livestock, Regulatory Officials will limit the movement of animals and animal products to try and control the spread of this very contagious animal disease.

**Foot and mouth disease (FMD) is not a public health or food safety concern. Meat and milk are safe to eat and drink.**

The Secure Sheep and Wool Supply (SSWS) Plan for Continuity of Business provides opportunities to voluntarily prepare before an FMD outbreak. This will better position premises with sheep that have no evidence of infection to



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Website Development and Maintenance managed by Iowa State University





## Secure Sheep and Wool Supply Plan: Wool Handling During a Foot and Mouth Disease (FMD) Outbreak



### Introduction

In the event of a foot and mouth disease (FMD) outbreak, it is possible that infected sheep could be shorn and their wool stored before the sheep are diagnosed with FMD. Wool from an infected flock, and potentially wool from a shared class will be considered to be contaminated with FMD virus. It must be

# Wool Handling



## Wool Handling During a Foot and Mouth Disease (FMD) Outbreak



### Virus Survival

#### How long can FMD virus survive in wool?

- FMD virus (FMDV) is more stable at lower temperatures, in organic matter such as manure or dirt, and when protected from sunlight.
- Reported survival times are approximately two months at 39°F (4°C). Survival time decreases with higher temperatures.
- There are no USDA-approved tests for detection of FMDV in wool (as of March 2023).

### Storage

#### How can FMD virus be killed in wool?

- Clean the wool and equipment to remove contamination.
- Bale/bag wool in waterproof plastic and clean the outside of each bale/bag.
- Store bales/bags in a biosecure area for **at least** the time and temperatures listed. Keep accurate records of bale/bag identification, storage times and temperatures:
  - 39.2°F (4°C) for four months, or
  - 64.4°F (18°C) for four weeks, or
  - 98.6°F (37°C) for eight days.

### Traceability

#### Why is traceability of wool bales/bags so important?

- Bales/bags should be uniquely identified and the wool not sorted or re-baled.
- Accurate, complete records of wool movements are critical to manage an FMD outbreak.
- It is possible that FMDV-infected sheep could be shorn and their wool stored or moved before the flock is diagnosed.

### Disposal

#### If wool cannot be moved in an outbreak, what are some disposal options?

- Burial or composting small amounts.
- Burning/incineration requires high temperatures and may not be publicly acceptable.
- All options must meet local and state environmental regulations.

The Secure Sheep and Wool Supply Plan is funded by the American Sheep Industry Association.



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2021

FMD virus survives in raw wool

- Traceability of bales
- WOAHA inactivation (5 options)
  - Capabilities limited in U.S.
- Storage of wool at:
  - 4°C [39.2°F] for four months,
  - 18°C [64.4°F] for four weeks, or
  - 37°C [98.6°F] for eight days

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# Enhanced Biosecurity



- Line of separation concept
  - Complicated for grazing public lands
  - Risk of exposure  $\neq$  Zero
  - Management in peace time brings challenges in outbreak of highly contagious diseases



# Grazing Public Land Allotments



- Exposure risks explained
  - Common-use roads, corrals, trailheads, recreationalists, other livestock, wildlife
- Protecting the flock
  - Work with SAHO, livestock associations prior to discuss ways to minimize exposure

Gap Identified in 2020



# Developed/Released in 2021



USDA and  
ASI Funded

SSWS PLAN PRODUCERS VETERINARIANS PACKERS/PROCESSORS REGULATORY OFFICIALS TRAINING MATERIALS

Training Materials  
Biosecurity  
Disease Monitoring  
Forms  
Outreach

### Outreach Materials

Conducting a meeting? Putting on a Workshop? Need an article for a newsletter? We have the resources for you!

#### Preparing Yourself

Read:

- [SSWS Plan](#)
- [Wool Handling](#)

Watch:

- [SSWS Plan Overview, Webinar \(71:04 mins\)](#)
- [Implementing Enhanced Biosecurity During an FMD Outbreak, June 2017, Webinar \(67:16 mins\)](#)
- [Secure Food Supply Planning in the U.S.: Continuity of Business, Dec 2020 EuFMD Conference Video \(1:42 mins\)](#)

Review:

- [Disease Information](#) webpage

#### Educating An Audience

Reassure your audience that FMD is not a public health or food safety concern. Meat will still be safe to eat.

#### Secure Sheep and Wool Supply Plan

- Handout: [1-page SSWS Plan English](#) | [1-page SSWS Plan Spanish](#) | [1-page Wool Handling English](#)
- [SSWS Booklet English](#)
- Overview Video (download): [English \(45mb\)](#) | [Spanish \(51mb\)](#)
- Overview Video (watch): [English \(8 mins\)](#) | [Spanish \(11 mins\)](#)

#### Foot and Mouth Disease (FMD) Overview

- Handout: [1-page FMD English](#) | [1-page FMD Spanish](#)
- Video (download): [English \(37mb\)](#) | [Spanish \(download 40mb\)](#)
- Video (watch): [English \(8 mins\)](#) | [Spanish \(8 mins\)](#)

#### FMD Vaccination: What Livestock Producers Need to Know

- Video (download): [English \(367mb\)](#)
- Video (watch): [English \(8:35 mins\)](#)

#### Outreach Articles

- [What Producers Need to Know \(customizable\)](#)
  - [Download 250 Word Article](#)
  - [Download 500 Word Article](#)
  - [Download 1000 Word Article](#)

## Guide to the Secure Sheep and Wool Supply (SSWS) Plan

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**ASI** | **USDA**

The Secure Sheep and Wool Supply Plan was made possible through funding from the American Sheep Industry (ASI) Association and the United States Department of Agriculture (USDA) Animal and Plant Health Inspection Service (APHIS).



# Videos

New  
2021



11 mins

7 mins



# Premises Identification Handout

New  
2021

- ✓ Confusion around Scrapie Premises ID and PINs
  - National PIN
  - State Location Identifier (LID)
  - Scrapie premises ID
  - Oh my!
- ✓ Worked with USDA to create handout

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## Premises Identification – What is needed and how is it used? (cont'd)

Table 1: Types of Premises Identification

Type of ID	Purpose
National Premises Identification Number (PIN)	Unique national code assigned to a single premises identifies the actual location used for tracing health or food safety movement permits
State Location Identifier (LID)	Unique numeric state assigned to a single location identifies the actual location used for tracing health or food safety emergency animal disease outbreak control use a LID to exit of a control zone
Scrapie Premises ID	Assigned to physical or more Flock ID. If assigned the scrapie "legacy" premises ID number may be the Flock ID.

### Abbreviations

- APHS – Animal and Plant Health Inspection
- PIN or Flock ID – Flock Identification Number
- LID – State Location Identifier
- NSEP – National Scrapie Eradication Program
- PIN – National Premises Identification Number
- SAHO – State Animal Health Official
- USDA – United States Department of Agriculture

### Acknowledgments

This Secure Sheep and Wool Supply (SSWS) P documents were developed by the Center for University (SU) College of Veterinary Medicine from the American Sheep Industry Association

### Additional Resources

- The Secure Sheep and Wool Supply website
- The USDA has a Factsheet: National ID for Sheep and Goats available at: <https://secure-sheepwool.org>

[www.securesheepwool.org](https://www.securesheepwool.org)

## Premises Identification – What is needed and how is it used?



National Premises Identification Number (PIN), Flock Identification Number (FIN), a Location Identifier (LID), or a scrapie premises ID – so many numbers – which one is needed for a foreign animal disease outbreak? Each identification type serves a different and important purpose.

The Secure Sheep and Wool Supply (SSWS) Plan for Continuity of Business in a Foot and Mouth Disease (FMD) Outbreak recommends getting a National Premises Identification Number (PIN) – why?

- A premises identification number (PIN) is required to request a movement permit during an FMD outbreak. A PIN is a nationally unique code that is permanently assigned to a single physical location where animals are housed or graze. PINs allow animal health officials to quickly and precisely identify where animals are located in the event of an animal health emergency like an FMD outbreak. PINs speed up communication and response during an outbreak. FMD is a highly contagious animal disease and is not a food safety or public health threat.

I have gotten ear tags for the National Scrapie Eradication Program (NSEP) – do I already have a PIN?

- You might. There are 3 types of identifying numbers for premises: PINs, State Location Identifier (LID), and scrapie premises IDs. PINs are becoming more common but the scrapie premises ID is the most frequently used type of premises identifier for sheep and goats. If you have previously ordered "840" electronic ID tags you may already have a PIN, because a scrapie premises ID cannot be used to order electronic ID. See Table 1 for more information.

I have a Flock Identification Number (Flock ID or FIN) to order official scrapie ID tags – is that the same thing as a Premises Identification Number (PIN)?

- No. Flock ID or FINs are assigned to a group of sheep managed as a unit on one or more premises under the same ownership. The flock ID pertains to a group of animals wherever they move, not a location. One flock ID may be related to more than one premises. A PIN is permanently assigned to a single physical location and is required to request a movement permit during an FMD outbreak.

How do I know what type of premises identification I have?

- Contact the office of your State Animal Health Official (State Veterinarian), call 1-800-USDA-TAG, or contact the USDA APHIS Veterinary Services Office in your state.

If I already have a scrapie premises ID, FIN or a LID, why do I need a PIN?

- PINs serve as a method of locating animals in a Control Area during an animal health emergency such as a foot and mouth disease (FMD) outbreak. PINs (not scrapie premises ID, LID or FIN) are required to request a movement permit during an FMD outbreak. A PIN is linked to the geospatial location reflecting the actual location of the animals on the premises. This includes a valid 911 address and a set of matching coordinates (latitude and longitude). PINs are an important part of traceability during an FMD outbreak, which is critical to outbreak management as well as regaining trade status for sheep and their products. If an FMD outbreak occurred in the U.S. and your flock was located in a Control Area, a PIN would be required for both the premises of origin and the premises of destination in order to request a movement permit for animals or their products.

How do I get a PIN?

- PINs can be requested, free of charge, from the office of the State Animal Health Official (SAHO) where the animals are located: <https://www.aphis.usda.gov/apis/our-focus/animal-health/tracability/state-pin>. If you have multiple or adjoining locations with animals, contact your SAHO or the USDA APHIS Veterinary Services Office in your state for guidance on how many PINs may be needed.
- Producers and packers are encouraged to validate their PIN with SAHOs to ensure their data on file accurately represents the location of the animals and not a mailbox at a residence or business affiliated with the animal premises. The National Pork Board provides an online premises verification resource for all species at: <https://nps.pork.org/Premises>. Submit corrections to the USDA APHIS Veterinary Services Office in your state.

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March 2021




# FMD Lesion Pictures

New  
2021

## FOOT-AND-MOUTH DISEASE IN SHEEP PROGRESSION OF LESIONS

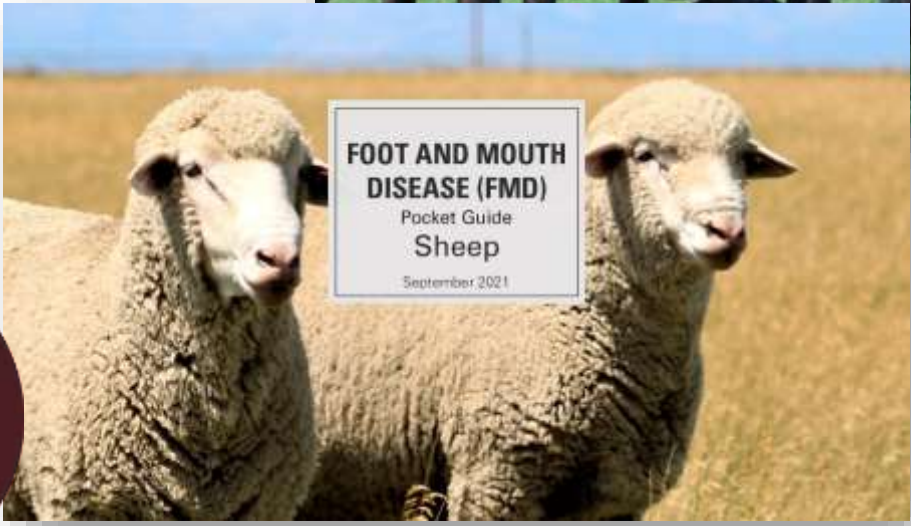


Foot-and-mouth disease (FMD) lesions may be mild or not apparent in adult sheep but can also be severe like in cattle or pigs. Vesicles, ulcers, and erosions in and around the coronary band, mouth, and nose may be seen. These lesions cause clinical signs like lameness, Fever and reduced feed intake can happen in sheep infected with FMD. Infected young lambs sometimes die suddenly due to heart disease. The following lesion ages are approximate.

	CORONARY BAND	DENTAL PAD, TONGUE	NASAL MUCOSA
EARLY LESION (1-5 DAYS)	 Blanching of the coronary band	 Focal erosion of the dental pad and tongue	 Focal erosion of the nasal mucosa
LATE LESION (5-7 DAYS)	 Erosion of the coronary band with fibrin deposition	 Multifocal healing erosions on the dental pad	 Erosion on the nasal mucosa with fibrin deposit

**If you suspect a Foreign Animal Disease**  
Call your State Animal Health Official (SAHO) or Area Veterinarian-In-Charge (AVIC) to report your concerns. If you do not have access to the contact information of the SAHO or the AVIC at your location, you can call 1-888-536-7583, to reach the office of the AVIC for your state. You can also call the USDA APHIS Veterinary Services National Center for Animal Health Emergency Management at 800-940-8524 (24 hours) for assistance.

**Photo Credit:** USDA APHIS Foreign Animal Disease Diagnostic Laboratory and the U.S. Department of Homeland Security APISCC APIS Visual Information Service at Plum Island Animal Disease Center.



[securesheepwool.org](http://securesheepwool.org)





# Biosecurity Posters

New  
2021

## PROTECTING THE SHEEP FLOCK

### VISITORS WITHOUT DIRECT SHEEP CONTACT

Make sure actions on this operation do not introduce disease on vehicle tires, equipment, and footwear.



ARRIVING



Make sure you have permission to enter this operation. Follow all posted signs.



Drive and park in designated areas.

## PROTECTING THE SHEEP FLOCK

### FARM ACTIVITIES

Preventing disease exposure depends on awareness and following biosecurity steps daily.



ANIMAL INTRODUCTIONS AND HEALTH



Incoming sheep can introduce disease unless quarantined and managed separately for a period of time. Observe, test, and vaccinate as recommended by your veterinarian.



Keep records of animal identification, vaccinations, and treatments given. Record animal, vehicle, and people movement so the operation will be needed in a disease.

PERSONNEL AND EQUIPMENT



Wear farm-dedicated clothing that has not been around animals on other operations. Wear footwear that can be cleaned when moving between different animal groups.



Vehicles and animals used to move sheep can carry disease on tires, pens, harness, or equipment. Limit spread by working sheep from youngest to oldest and sick last.

## PROTEGIENDO EL REBAÑO DE OVEJAS

### VISITANTES CON CONTACTO DIRECTO CON OVEJAS

Tenga en cuenta la salud y el bienestar de los animales al trabajar con las ovejas, para proteger su salud.



ENTRAR A LA OPERACIÓN



Asegúrese de tener el permiso requerido ingresar a la operación. Siga todos los señales y pasos de bioseguridad.



Respete la Línea de Separación (LOS) entre el tráfico fuera y dentro del sitio. Conduzca y estacione en áreas designadas.



Firme en el registro de visitantes y mencione cualquier contacto con ganado o viaje internacional.

MANTENGA LA LIMPIEZA



Use calzado que se puede limpiar si es apropiado (remover estiércol), antes de entrar a las zonas de animales y al moverse entre grupos de animales.



Limpie equipos y materiales que se usan entre diferentes grupos de animales y operaciones, para evitar la propagación de enfermedades.



Use ropa limpia que no haya sido usada con otros animales en otras operaciones. Lávese las manos antes del contacto, entre grupos y después del contacto con los animales. Limite el contacto con las ovejas a tareas esenciales.

# SSWS Plan Resources, Outreach: 2022

- ASI, USDA funded
- Train-the-trainer session, Producer meetings
- SQA resources
  - Biosecurity chapter
  - Co-branded forms
- Maintain SSWS website
  - OIE to WOAHP



19 Trainers









# SSWS Plan Resources, Outreach: 2023

Exercise implementation of  
SSWS Plan at state level  
ASI, USDA funded



# Tabletop Exercise in Colorado

- 4 hours, May 2023
  - 3 modules
  - After 72-hour standstill expired to 7 days out
  - Producers, packers in Control Area, not infected
- 31 attendees (1 virtual)
- Success!



# USDA NADPRP Grant

- “Developing movement decision criteria and exercising movement plans for livestock grazing public land allotments in and around FAD control areas through collaboration with industry, state, and federal partners”
  - Feb 2022 – June 2024
  - American Sheep Industry Association
  - National Cattlemen’s Beef Association
    - Consultant: Danelle Bickett-Weddle, Preventalytics

## Movement Decision Criteria for Industry and Regulatory Officials Managing Cattle and Sheep Grazing Federal Public Lands during a Foot-and-Mouth Disease (FMD) Outbreak

February 2024

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# Advisory Group

- Public land ranchers (CO, MT, ND, NM, NV, OR, UT)
  - Represent 22,000 grazing permittees
- Federal land mgt agencies (BLM, USFS)
- Wildlife agencies (USDA Wildlife Services, US Fish & Wildlife Service)
- SAHOs (CO, CA, NV)
- USDA APHIS VS
- Associations (ASI, NCBA, Public Lands Council)



Assembled and began meeting in May 2022



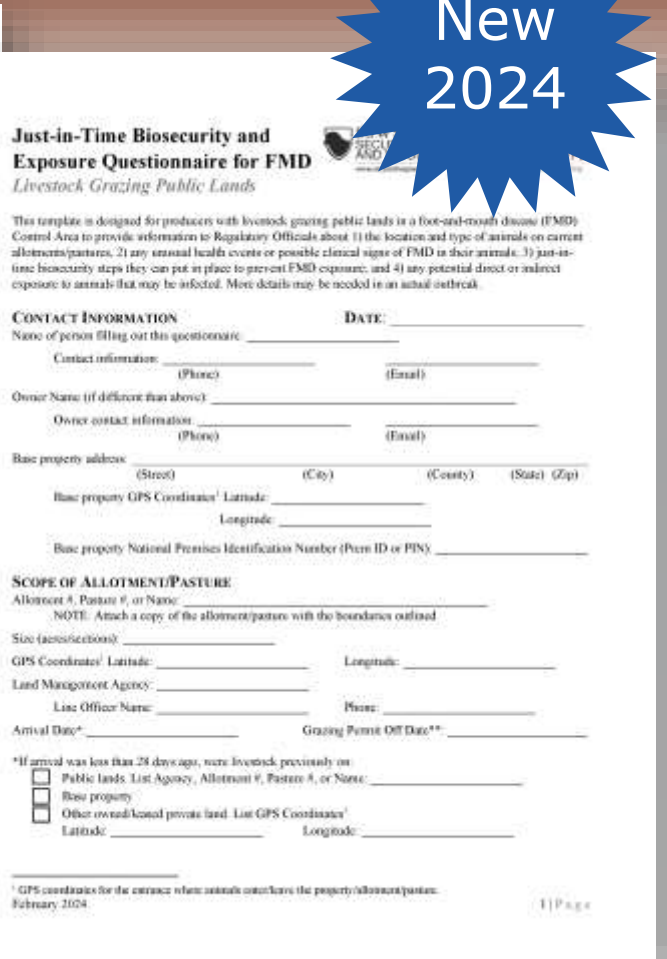


## Conducted Seminar (Nov 2022) and Workshop (Aug 2023)

- Create inter-jurisdictional guidance
- Obtain consensus on effective movement plan

# Resource Creation

- Management Practices/  
FMD Exposure Risks
- Roles of Agencies
  - BLM, USFS, USDA APHIS,  
States, Wildlife
- Just-in-Time Biosecurity/  
FMD Exposure  
Questionnaire





# Ultimate Goals

Better prepare sheep and cattle ranchers

Better prepare decision makers

- Resources posted in February 2024
- Video (5 mins) posted in May 2024



- Producers
- Steps to Move
- Premises ID Number
- Biosecurity
- Disease Monitoring
- Vaccination
- Movement Records
- Permit Guidance
- Forms and SOPs
- Signs and Posters
- Public Land Grazing**

## Public Land Grazing

Managing livestock grazing public lands in an FMD outbreak poses unique challenges for ranchers. An effective response will require interagency collaboration with the federal land management agencies and the state and federal officials managing the outbreak. An Advisory Group of public land grazing stakeholders consisting of Western States sheep and cattle producers, the Public Lands Council (PLC), State Animal Health Officials (SAHO), Bureau of Land Management (BLM), U.S. Forest Service (USFS), U.S. Fish and Wildlife Service (USFWS), USDA Wildlife Services (WS), USDA Animal and Plant Health Inspection Service (APHIS), the American Sheep Industry Association (ASI), and the National Cattlemen's Beef Association (NCBA) worked together to determine livestock management options and movement decision criteria guidance. An overview is provided in the [Executive Summary](#).

## Guidance Documents

- [Movement Decision Criteria for Industry and Regulatory Officials Managing Cattle and Sheep Grazing Federal Public Lands during an FMD Outbreak](#)
- [Roles of Agencies in Non-outbreak and FMD Outbreak Situations: Permitting Sheep and Cattle Grazing Federal Public Lands](#)
- [Management Practices and FMD Exposure Risks for Sheep and Cattle Grazing Federal Public Lands](#)
- [Just-in-Time Biosecurity and Exposure Questionnaire for FMD: Livestock Grazing Public Lands \(TYPE info\) - Final PDF](#)
- [Just-in-Time Biosecurity and Exposure Questionnaire for FMD: Livestock Grazing Public Lands \(WRITE info\) - Word document](#)

Ranchers with livestock on their base property at any point in time are encouraged to develop an enhanced biosecurity plan for that premises. As a result of this project, a section on "Grazing Public Lands" has been included in the [Biosecurity Checklist](#) and [Information Manual](#) for Pasture/Rangeland and both Plan Templates ([type](#) and [write](#)). The Food of Biosecurity Checklist and Information Manuals remain unchanged.

## Grazing Public Lands in an FMD Outbreak



Download the Grazing Public Lands in an FMD Outbreak video

These resources were created with funding from the USDA National Animal Disease Preparedness and Response Program (NADRRP) to the American Sheep Industry Association (AW22VSSP00000812)



# Self-Assessment Checklist for Enhanced Biosecurity for FMD Prevention: Sheep on Pasture/Rangeland



## 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 operation.

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

## 3. Protecting the Flock

### Line of Separation (LOS)

The biosecurity plan includes an LOS, which is established as an outer control point within the premises to limit movement of virus into areas where susceptible livestock are housed. The LOS is clearly defined in the biosecurity plan and is clearly marked on the premises. Only vehicles, people, or items only cross the LOS through clearly marked and controlled entry Point(s), following appropriate biosecurity measures. Sheep are prevented from contact with livestock on adjacent premises. Sheep do not have access to streams, waterways, or water that may have come from other premises with FMD-susceptible species.

- In place       In progress       Not in place

### Grazing Public Lands (*wording subject to review/edits*)

The Biosecurity Manager and those overseeing sheep grazing public lands are aware of FMD exposure risks. They can describe just-in-time biosecurity steps (through records, interviews, or observations) for livestock grazing public lands when requested.

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

### Maximize Distance between Susceptible Livestock on Adjacent Premises

The distance is maximized between susceptible livestock on adjacent premises, and steps to do so have been coordinated with owners/operators of these premises.

- In place       In progress       Not in place



# Updates to SSWS & SBS Resources

- Biosecurity Checklist: Pasture/Rangeland
- Information Manual: Pasture/Rangeland
- Biosecurity Template
- Continuity of Business Plan

# SSWS Implementation

- “Build capacity for broad outreach and education about FMD preparedness and the SSWS Plan to sheep industry stakeholders”
  - USDA NADPRP to ASI
  - May 2023–May 2025
- Tours, videos
  - Implementing enhanced biosecurity
- Training sessions
  - Funding for workshops





# “Show Me”

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[seuresheepwool.org/training-materials/biosecurity/](https://seuresheepwool.org/training-materials/biosecurity/)



10 mins

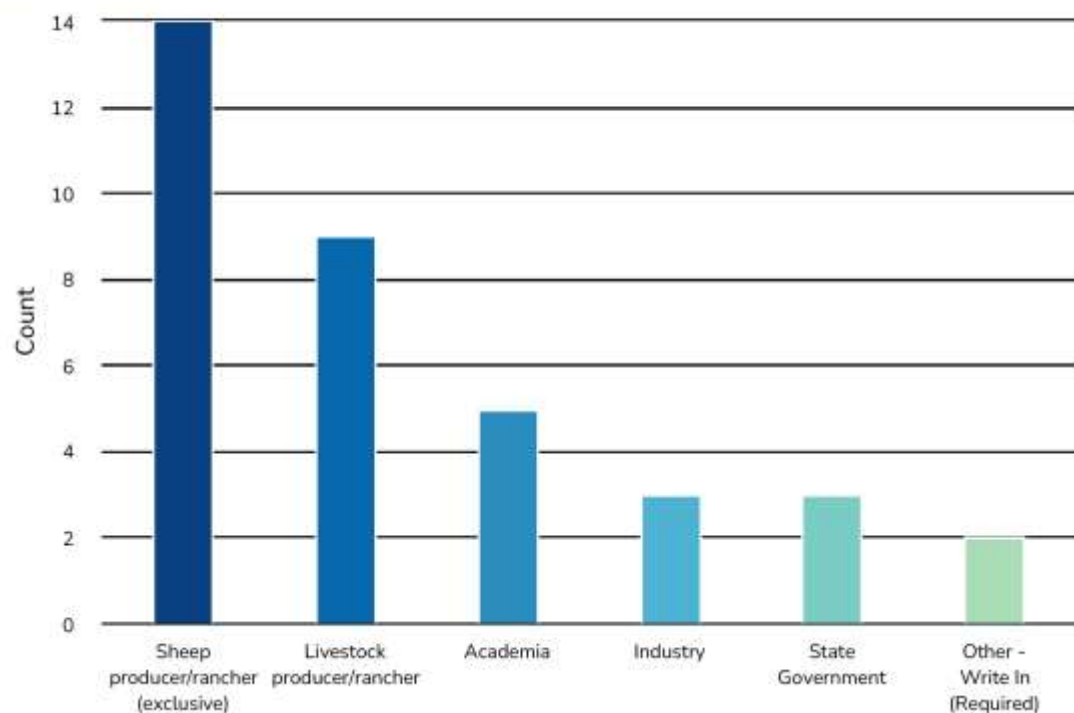
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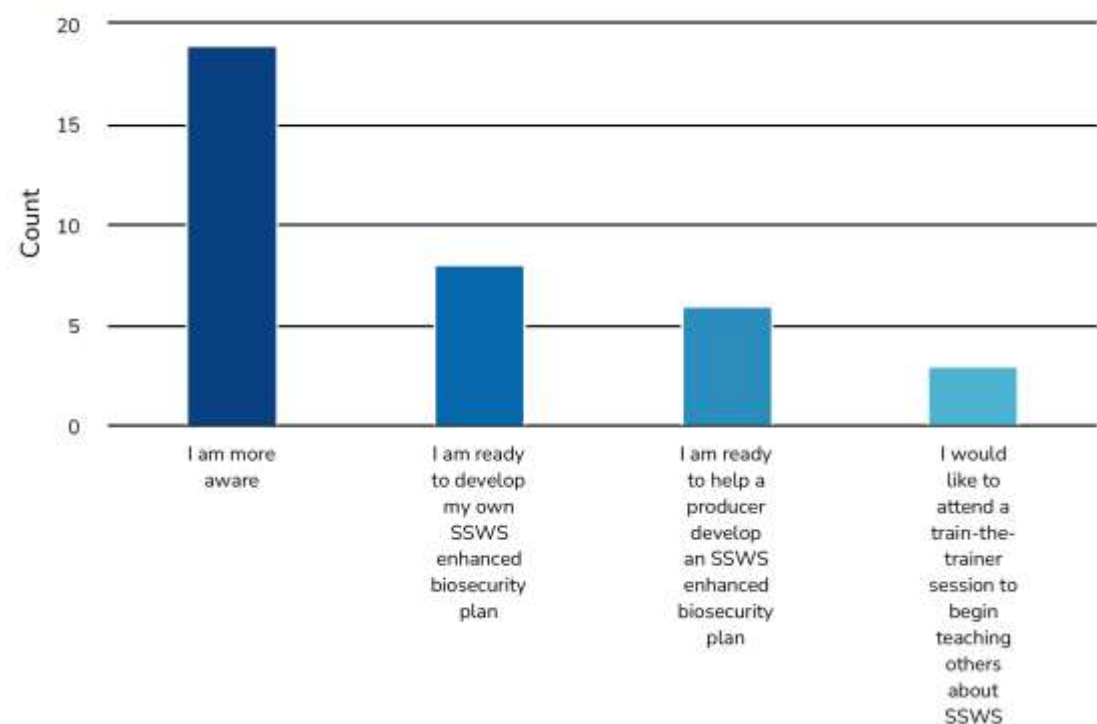


# Attendee Feedback

1. What profession best describes your involvement in the livestock industry? (select one)



6. AFTER today's tour, which description BEST matches your next steps with the SSWS Plan: (select one)



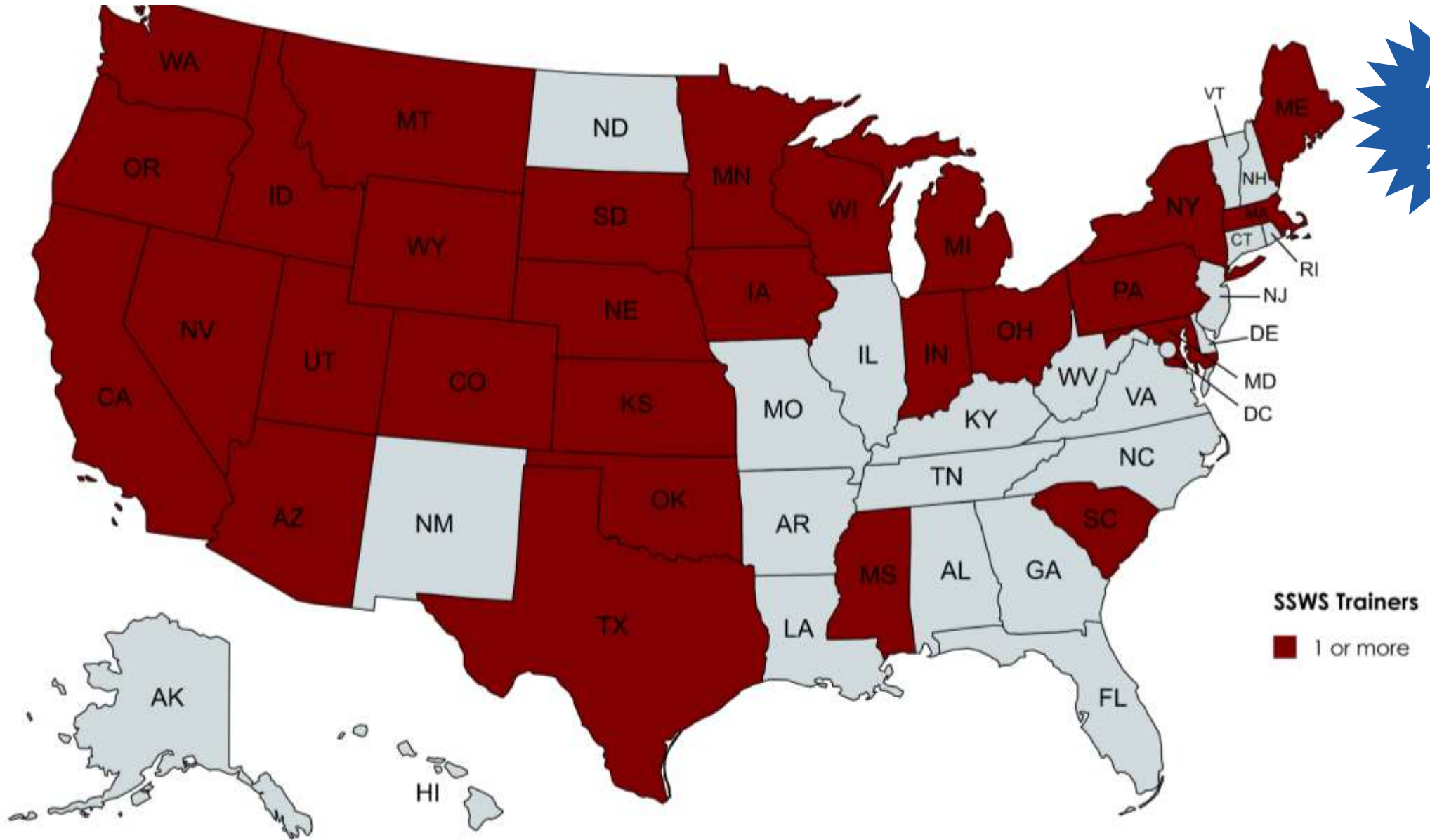
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# 74 SSWS Trainers in 30 States!

As of  
Nov  
2024



# Producer Outreach: Funded

- **California**
  - 1 workshop
- **Colorado**
  - 2 workshops
- **Maryland**
  - 2 workshops
- **Oregon**
  - 1 done, 3 more workshops
- **South Dakota**
  - 2 workshops

Industry  
Preparedness &  
Resiliency

- **Upcoming 2025**
  - **Iowa**
  - **Michigan**
  - **Nebraska**
  - **Nevada**
  - **New York**
  - **Wyoming**

# Next Steps in Preparedness

- USDA NADPRP Proposal
  - If funded, spring 2025-27
  - Targeted grazing movement decision criteria, exercises
  - Assess gaps, develop additional tools, promote through training programs
  - Update SSWS website platform to meet user, security, software needs (Iowa State University)
- Continued discussions with other hoof stock SFS Plan colleagues
  - Quarterly calls with Pork, Milk, Beef, Poultry
  - Ensure alignment where applicable
  - Share lessons learned, resources, challenges faced by industry
  - Collaboration





# SSWS Website: Funders, Partners



The screenshot shows the top portion of the SSWS website. At the top right, a dark red navigation bar contains a search bar with a magnifying glass icon and the text "Search". Below the search bar are two links: "About Us" and "Questions?". A yellow circle highlights the search bar, and a dark red arrow points from the right side of the image towards it. Below the navigation bar is the SSWS logo, which consists of a black silhouette of a sheep's head inside a shield, followed by the text "SSWS SECURE SHEEP AND WOOL SUPPLY". Below the logo is a dark grey horizontal menu with six white text items: "SSWS PLAN", "PRODUCERS", "VETERINARIANS", "PACKERS/PROCESSORS", "REGULATORY OFFICIALS", and "TRAINING MATERIALS". The main content area has a white background. On the left, under the heading "About Us", there are three paragraphs of text. The first paragraph mentions funding from the American Sheep Industry Association and USDA. The second paragraph mentions the website is maintained by Iowa State University's Center for Food Security and Public Health. The third paragraph describes the collaboration between the sheep and wool industries, state and federal government officials, and Iowa State University. On the right side of the "About Us" section, there are two logos: the ASI logo (American Sheep Industry Association) and the USDA logo (United States Department of Agriculture). At the bottom left of the main content area, under the heading "SSWS Partners", there is one line of text: "Iowa State University, Center for Food Security and Public Health".

Search

About Us Questions? ▾

**SSWS**  
SECURE SHEEP  
AND WOOL SUPPLY

SSWS PLAN PRODUCERS VETERINARIANS PACKERS/PROCESSORS REGULATORY OFFICIALS TRAINING MATERIALS

## About Us

Funding for the Secure Sheep and Wool Supply Plan and website was provided by the [American Sheep Industry Association](#). Additional funding was provided by [USDA](#).

The SSWS website is maintained by Iowa State University, [Center for Food Security and Public Health](#).

The Secure Sheep and Wool Supply Plan involves collaboration between the sheep and wool industries, state and federal government officials, and Iowa State University.

**ASI** | 

**USDA**  


## SSWS Partners

Iowa State University, Center for Food Security and Public Health





# Questions?



SCAN ME

Danelle Bickett-Weddle  
[dbw@preventalytics.com](mailto:dbw@preventalytics.com)



"Statue of Biosecurity"