

Workbook



Biosecurity for Florida Producers



SART Training Media



Biosecurity for Florida Producers

Workbook

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SART Training Media may be downloaded from the Florida SART Web site <www.flsart.org>.

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About Florida SART

SART is a multiagency coordination group consisting of governmental and private entities dedicated to all-hazard disaster preparedness, planning, response, and recovery for the animal and agriculture sectors in the state of Florida.

SART operates at the local level through county SART organizations.

SART utilizes the skills and resources of many agencies, organizations and individuals with its multiagency coordination group structure.

SART supports the county, regional, and state emergency management efforts and incident management teams.

SART Mission

Empower Floridians through training and resource coordination to enhance all-hazard disaster planning and response for animals and agriculture.

SART Goals

- Promote the active engagement of each county coordinator who is responsible for animal and agricultural issues
 - Provide assistance in the development and writing of county ESF-17 plans
 - Promote the establishment of a county SART to work as a multiagency coordination group to support emergency management and incident management teams
 - Provide training for all SART and animal and agriculture personnel
 - Identify county resources available for an emergency or disaster
 - Work to comply with the National Incident Management System (NIMS) document
-

Subject: Biosecurity for the Florida Producer is crucial for developing effective prevention measures to preserve agriculture through an increased understanding of industry vulnerability, premises and worker security, animal protection, prevention activities, and emergency procedures.

Learning Objectives

At the end of this unit, participants will be able to:

1. Discuss the vulnerability of Florida agriculture
 2. Discuss agroterrorism
 3. Explain biosecurity
 4. Identify methods to ensure premises' security
 5. Identify worker security and awareness
 6. Identify methods to protect animals from exposure to disease or contamination
 7. Discuss recommendations for personal sanitation
 8. Describe equipment cleaning and disinfection procedures
 9. Identify procedures to reduce potential for premises' contamination by movement of animals and visitors
 10. Explain emergency procedures
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Slides 1-3






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Slides 4-6


Learning Objectives 1

- Discuss the vulnerability of Florida Agriculture
- Discuss agroterrorism
- Explain biosecurity
- Identify methods to ensure premises' security
- Identify worker security and awareness
- Identify methods to protect animals from exposure to disease or contamination

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Learning Objectives 2

- Identify recommendation for personal sanitation
- Identify equipment cleaning and disinfection procedures
- Identify procedures to reduce potential for premise contamination by movement of animals and visitors
- Identify emergency procedures


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What is biosecurity?

Agrosecurity means protecting the following from harmful acts – both intentional and unintentional:

- agricultural operations,
- the food processing industry,
- the food distribution system
- the hospitality industry

When talking about agriculture, **biosecurity** focuses on acts involving the introduction of pests or diseases.

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Slides 7-9

Florida's Agricultural Vulnerability

- Florida Agriculture is a 13 billion dollar a year industry
- Recent unintentional human *E. coli* outbreaks traced to California farms illustrate the potential for contamination by a bioterrorist act to impact the consumer as well as the agricultural economy
- The safety of the food supply has to begin at its source




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Florida's Agricultural Vulnerability

Florida has been called an agricultural sentinel state because if a foreign animal or plant disease introduction or agroterrorism event occurs in the United States . . .

. . . there is a good chance it will occur
FIRST IN FLORIDA!




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Florida's Agricultural Vulnerability

Florida's borders are truly porous:

- 14 major seaports
- 131 public seaports
- 20 commercial airports (13 handle international flights)



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Slides 10-12

Florida's Agricultural Vulnerability

Over 75 million tourists visit Florida annually



6 million of these arrive from foreign countries


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Agroterrorism

When any person knowingly or maliciously uses

- biological agents
- chemical agents
- plant pathogens
- animal pathogens


as weapons against the agriculture industry or food supply.


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Florida's Agricultural Vulnerability

Global Availability

- Foot-and-mouth Disease in 25+ countries
- Hog Cholera, Avian Influenza and Exotic Newcastle Disease are widespread
- Animal disease agents can be produced or delivered without sophisticated equipment



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Slides 13-15

Florida's Agricultural Vulnerability

Agents that can be introduced, transmitted, and/or created by people pose a significant risk

- Anthrax
- Foot-and-mouth Disease
- Food-borne bacteria – *E. coli*, salmonella

Not limited to these organisms!

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Prohibited Materials Carry Contagens

High potential for prohibited materials entering Florida – gifts, souvenirs, food and other products




Hoof still attached on this product!

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How Florida Is Vulnerable -- Animals

26 million poultry




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Slides 16-18

How Florida Is Vulnerable -- Animals


1.5 million beef cattle



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How Florida Is Vulnerable -- Animals

140,000 dairy cattle



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How Florida Is Vulnerable -- Animals

30,000 goats 10,000 sheep




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How Florida Is Vulnerable -- Animals

100,000 swine



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How Florida Is Vulnerable -- Animals

350,000 horses



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How Florida Is Vulnerable -- Animals

280 Game Farms and Hunting Preserves



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Biosecurity Measures. . .

. . . may seem drastic, but help preserve agriculture



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Definition of Biosecurity

Security from transmission of infectious disease, parasites, and pests among livestock, poultry, wildlife and zoo animals

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Your Biosecurity Resource Group?

- You (and your family)
- Foreman and workers
- Veterinarian
- Nutritionist
- Extension specialist
- Suppliers

All of you are responsible for your Biosecurity Plan


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Slides 25-27

The Biosecurity Key

Programs must reduce the risk of transferring disease agents, so . . .

Exposure Prevention Is the Key!




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If Reducing Risk Is the Key . . .

. . . What should a biosecurity plan include?

- Increase my animals' ability to resist disease
 - Vaccination
- Minimize contacts that might result in disease
- Eliminate sources of infectious agents
 - Other livestock, birds, insects, rodents, people, manure, soil, surface water (or water tanks), feed, and equipment




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In Developing Your Biosecurity Plan . . .

. . . Ask these questions:

- What are your disease concerns?
- What are the risk factors for these concerns?
- What management actions should be considered?
- How will this be monitored?

The plan must be written and practiced to be effective!



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Slides 28-30

Premise and Building Security

- Critical to ensuring farm biosecurity
- Perimeter fence (with appropriate signage)
- Only one entry/exit to property with lockable gate
- Critical storage areas should have limited access and be locked when not in use. (Lighted if appropriate)
- Establish neighborhood watch program
- Report any suspicious activity to law enforcement officials
- Maintain inventory of equipment and chemicals

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Premise and Building Security

Lock gates! 


 **Protect feed and supplies from unintentional OR intentional contamination**

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Worker Security and Awareness




- Pre-employment resume and background check
- Provide biosecurity awareness and personal protective equipment training and implementation policy
- Animal disease recognition training
- Job procedure training
- Train employees to recognize and report suspicious individuals or unusual activities
- Review emergency plan regularly

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Protect Animals from Exposure to Disease and Contamination


- Keep fences adjacent to livestock on neighboring premises in good repair
- Maintain closed herd if possible
- Purchase from sources with known herd health practices
- Isolate herd additions, including those returning from shows, for at least 2 weeks prior to allowing them to come in with other animals to reduce potential for introducing a disease
- Know the source and quality of purchased feed and hay

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Protect Your Animals from Disease and Contamination!

Does Your Biosecurity Plan Include . . .


- Maintain a vaccination/parasite control program.
 - Review herd health plans annually with your DVM
- Separate any obviously sick animals from the rest of the herd and contact your veterinarian for the appropriate treatment.
- Know the signs of reportable/foreign animal diseases and report any unusual signs to your veterinarian.
- Limit direct contact between livestock, wildlife, pets, and pests.
 - Prevent wildlife and pets from sharing feed bunks or water sources.
 - Rodents, other vermin and wildlife are very mobile and can spread disease agents. Don't ignore dogs, cats, and poultry.

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Protect Your Animals from Disease and Contamination!

Other Considerations

- Ensure that adequate hand washing and boot cleaning/disinfection supplies are available and monitor workers to ensure compliance with established protocol
- Do not feed table scraps, human food products or garbage to farm animals
- Reduce potential for runoff of water and organize material from adjacent livestock premises

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Slides 34-36

Protect Your Animals from Disease and Contamination!

No meat scraps!




- Don't feed meat scraps to livestock!
- Don't risk introducing Foot-and-mouth Disease

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Protect Your Animals from Disease and Contamination!

Personal Sanitation

- If possible, provide on-farm laundry facilities or furnish coveralls for use by workers, especially those with personal livestock
- Provide foot bath and require personnel to use when entering and leaving animal areas
- Provide adequate facilities for hand washing and require workers to use them
- Provide disposable gloves for use by workers and insist they use them when treating sick animals or assisting with births
- Insist workers wash hands before milking dairy animals


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Protect Your Animals from Disease and Contamination!

Equipment Cleaning/Disinfection Procedures

- Equipment includes all farm vehicles, as well as animal transportation/handling and veterinary equipment
- Do not lend or borrow equipment. If it must be loaned or borrowed, clean and disinfect before and after each use
- All manure and organic material must be removed to make disinfection effective
- Clean/disinfect all equipment after each use, especially when used on sick animals

These tips will contribute greatly to keeping animals healthy!

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Protect Your Animals from Disease and Contamination!

Visitor Policy



- Know your visitors!
- Have they been on other premises?
- Have they traveled internationally within the previous week?

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Protect Your Animals from Disease and Contamination!

Procedures for Premise Entry/Exit 1

- Require delivery vehicles and visitors to use a controlled entry/exit point
- Ensure premise personnel are present to ensure that a record is kept on all persons visiting the premise
- Ensure that all vehicles have tires and undersurfaces cleaned and disinfected prior to entering and exiting the premises
- Prevent visitor and service vehicles from driving across feed delivery and manure removal routes whenever possible

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Protect Your Animals from Disease and Contamination!

Procedures for Premise Entry/Exit 2

- Park all vehicles away from livestock areas, preferably concrete
- Provide a foot bath or disposable footwear for use by visitors exiting vehicles
- Locate holding pens for animal pickup/delivery away from barns and other livestock areas
- Ensure that livestock hauling vehicles are clean and well-bedded to prevent disease introduction and injury to livestock

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Protect Your Animals from Disease and Contamination!

Premise Biosecurity



- Don't haul trash or garbage from other ranches!
- Bag all refuse, trash and contaminated clothing when leaving any premises.

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Protect Your Animals from Disease and Contamination!

Premise Biosecurity




- Clean boots **BEFORE** and **AFTER** working animals!
- Remove dirt, debris.
- Disinfect!

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Protect Your Animals from Disease and Contamination!

Premise Biosecurity



- Don't carry disease home!
- Clean and disinfect tires at **YOUR** gate . . .
- Reduce the risk of disease!


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Protect Your Animals from Disease and Contamination!

Emergency Procedures


- Must be written, provided upon initial employment, responsibilities clearly identified, and reviewed periodically with each worker
- Evacuation plans for all buildings
- Utility locations and procedures for shutting down
- Worker procedures during an emergency
- Emergency contact information

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Some Florida Resources


In case of an outbreak, first contact the state or federal Department of Agriculture.

- FDACS, Division of Animal Industry [\[Link\]](#)
- Florida Dept. of Agriculture and Consumer Services (FDACS) [\[Link\]](#)
- Florida Animal Disease Control [\[Link\]](#)
- Florida Dept. of Community Affairs, Div. of Emergency Management [\[Link\]](#)
- Florida Reportable Animal Diseases [\[Link\]](#)

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Biosecurity Resources


- CDC/USDA - Overview of Biosecurity and Avian Overview of Biosecurity and Avian Influenza. PowerPoint PDF [\[Link\]](#)
- Homeland Security [\[Link\]](#)
- EDEN Homeland Security Plant Biosecurity course (Purdue) [\[Link\]](#)
- Preparing for an AgroTerrorism Event [\[Link\]](#)
- Protecting Farms – AgroSecurity Principles [\[Link\]](#)

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Specific Disease Issues

- CDC – Control of Avian Influenza in Poultry [\[Link\]](#)
- Foot and Mouth Disease [\[Link\]](#)
- Shared Human-Animal Diseases [\[Link\]](#)
- Transmittable Animal Diseases [\[Link\]](#)
- Zoonosis – Animals Can Make You Sick [\[Link\]](#)

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Disaster Resources

- Caring for Livestock After Disaster. Scott Cotton and R. Ackerman, Colorado State University. 2006. [\[Link\]](#)
- Extension Disaster Education Network (EDEN) is a collaborative multi-state effort by Extension Services across the country to improve the delivery of services to citizens affected by disasters. [\[Link\]](#)
- Guidelines for the Development of a Local Animal Care Plan in Emergencies, Disasters, and Evacuations. Sebastian Heath, Ph.D., D.V.M., Purdue University, School of Veterinary Medicine

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General Resources


- U.S. State Veterinarian Offices [\[Link\]](#)
- Sunshine State Horse Council [\[Link\]](#)
- United States Dept. of Agriculture (USDA) [\[Link\]](#)
- University of Florida Institute for Food and Agricultural Sciences Extension publication resource (EDIS)
 - Veterinary Medicine [\[Link\]](#)
 - Specific Livestock Animals [\[Link\]](#)
- University of Florida IFAS Extension Disaster Handbook [\[Link\]](#)
- Animal Health Hazards of Concern During Natural Disasters (USDA-APHIS, Feb. 2002) [\[Link\]](#)
- World Organization for Animal Health (OIE) [\[Link\]](#)

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Review Learning Objectives 1

- Discuss the vulnerability of Florida Agriculture
- Discuss agroterrorism
- Explain biosecurity
- Identify methods to ensure premises' security
- Identify worker security and awareness
- Identify methods to protect animals from exposure to disease or contamination


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Review Learning Objectives 2

- Identify recommendations for personal sanitation
- Identify equipment cleaning and disinfection procedures
- Identify procedures to reduce potential for contamination of premises by movement of animals and visitors
- Identify emergency procedures

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Thank You!





Resources

The following are sources of information, including agencies mentioned in this unit that may be helpful.

- Florida Department of Community Affairs, Div. of Emergency Management
Web site: <http://www.floridadisaster.org>
 - United States Department of Agriculture (USDA)
Web site: <http://www.usda.gov>
 - Florida Department of Agriculture and Consumer Services (FDACS)
Web site: <http://www.doacs.state.fl.us>
 - FDACS Division of Animal Industry
Web site: <http://www.doacs.state.fl.us/ai/>
 - USDA Animal and Plant Health Inspection Service (USDA-APHIS)
Web site: <http://www.aphis.usda.gov>
 - World Organisation for Animal Health (OIE)
Web site: <http://www.oie.int>
 - APHIS Center for Emerging Issues (CEI) has various worksheets available on animal health and diseases of concern as well
Web site: <http://www.aphis.usda.gov/vs/ceah/cei/worksheets.htm>
 - University of Florida Institute of Food and Agricultural Sciences Extension publication resource (EDIS) offers many fact sheets for various veterinary and animal health
Web sites: http://edis.ifas.ufl.edu/DEPARTMENT_VETERINARY_MEDICINE
http://edis.ifas.ufl.edu/TOPIC_Livestock_by_Animal
http://edis.ifas.ufl.edu/TOPIC_Livestock_Health_by_Animal
 - The University of Florida IFAS Extension Disaster Handbook
Web site: <http://disaster.ifas.ufl.edu>
 - United States Animal Health Association (USAHA) web address and animal disease information links
Web sites: <http://www.usaha.org/index.shtml>
<http://www.usaha.org/links.shtml#disease>
 - USDA-APHIS Veterinary Services division publication, “Animal Health Hazards of Concern During Natural Disasters,” published in February 2002 is available at the following link. The goal of the publication is to “describe some of the natural disasters that have occurred in the U.S. during recent years and to review some infectious and noninfectious hazards that, at the very least, are perceived to be related directly to natural disasters.”
-

Web site: http://www.aphis.usda.gov/vs/ceah/cei/EmergingAnimalHealthIssues_files/hazards.PDF

- USDA-APHIS fact sheets for various animal diseases are available at the following Web address
Web site: http://www.aphis.usda.gov/lpa/pubs/fsheet_faq_notice/fsfaqnot_animalhealth.html
 - The Animal and Plant Health Inspection Service has veterinarians serving as Area Veterinarian's in Charge (AVICs) who are part of the chain to whom foreign animal diseases are reported. The list of all states' AVICs are found on the following Web site: http://www.aphis.usda.gov/vs/area_offices.htm
 - State Veterinarian Office contact information for each state
Web site: <http://www.aphis.usda.gov/vs/sregs/official.html>
 - Saunders Comprehensive Veterinary Dictionary 2nd edition, written by D. C. Blood and V. P. Studdert. Published in 1999 by W. B. Saunders.
 - Iowa State University Center for Food Security and Public Health
Web site: <http://www.cfsph.iastate.edu>
 - Web-based Training: Recognizing and Responding to Foreign Animal Diseases. Florida Department of Agriculture and Consumer Services; available for continuing education credit. http://www.sarttraining.com/courses/FADS_Beta/
 - Video Resources:
 - Foreign Animal Diseases: Foot and Mouth Disease*. USDA. Length: 7:22 (Download). Provides a helpful description of FMD, especially to see FMD's symptoms and effects.
 - Foot-and-Mouth Disease* (originally broadcast March 30, 2001 on the News Hour with Jim Lehrer). PBS Online. Length: 14 min. (Streaming). Describes the 2001 FMD outbreak in Britain and discusses spread of FMD and primary and secondary economic impacts.
- Access these clips through the Florida SART Training Materials page.
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