PowerPoint Slides - Handout Pages

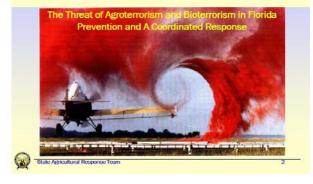
The Threat of Agroterrorism and Bioterrorism – Prevention and a Coordinated Response PowerPoint slides are reproduced on the following pages at reduced size with space for participant notes.

Also included in the participant workbook for The Threat of Agroterrorism and Bioterrorism – Prevention and a Coordinated Response available on the SART web site at:

www.flsart.org



Agroterrorism & Bioterrorism



Agroterrorism & Bioterrorism Prevention & Response

Prepared by

Amanda Hodges, PhD

Southern Plant Diagnostic Network, University of Florida Funded by Cooperative State Research, Extension and Education Service (CSREES), USDA

Rick Sapp, PhD

Florida Department of Agriculture and Consumer Services Florida SART Technical Writer



Acknowledgements

- US Dept. of Health & Human Services, Centers for Disease Control and Provention
- American Veterinary Medical Association
- . US Dept. of Interior, US Geological Survey
- University of Florida, Institute of Food & Agricultural Sciences
- University of California, Agriculture & Natural Resources; Mississippi State University Extension Service; University of Texas, Dr. Philip Varghese, Fluid Mechanics
- Florida Fish & Wildlife Conservation Commission
- Susan Halbert, PhD, Gail Wisler, PhD, Gerald Holmes, PhD, North Carolina State University, Jim Stack, PhD, Kansas State University, R. Winstead, Adolph Northern, Lee Island Coast CVB, University of North Dakota, Long Lake Fishing Club, Theadore Wells, Stanton, Texas



State Agricultural Response Team

Learning Objectives

- 1. Explain agroterrorism and bioterrorism
- Identify examples of agroterrorism and bioterrorism from history
- 3. Explain how Florida may be vulnerable agriculturally, geographically and climatologically
- Identify likely agricultural threats should Florida specifically become a terror target
- 5. Discuss the NPDN, National Plant Diagnostic Network
- Explain how Florida citizens and government can mobilize to prevent a terrorist act and how they may mount a coordinated response



State Agricultural Response Team

Florida SART

- Multi-agency coordination
 - Governmental and private
 - All-hazard preparation, response and recovery
 - Animal and agricultural





_			
-			
_			
	·		
_			

What's the rush?

The aftermath of 9/11

- · Department of Homeland Security (DHS) was officially formed in November 2002
- Americans realize that oceans and distance are no longer our protection from the wider world as terrorist cells are discovered in the US, Canada and around
- . Begin to evaluate possibilities of attack, develop a "threat matrix" which includes bioterrorism and agroterrorism





State Agricultural Response Team

Wake-Up Calls



9/11 - Foreign: 19 foreign nationals associated with al-Qaeda hijack and crash four airliners in the U.S. Almost 3,000 people die in the attacks and the effects appear to be permanent.

State Agricultural Response Team



4/95 - Domestic: Security Camera shows Timothy McVeigh's rented Ryder truck arriving at the Alfred Murrah Federal Building in Oklahoma City. 168 confirmed deaths in the explosion of agricultural fertilizer and motor oil. McVeigh calls it "retaliation" not terror.



Intentional ... or not Does it matter whether or not it is intentional? State Asyncultural Response Tourn

An Agroterrorism Event Estimated Costs (Intentional or not)

- \$1.8 billion for slaughter of animals
- \$1.0 billion to disinfect farms
- \$658 million for livestock disposal
- \$78 million for business recovery
- \$21 million for marketing support
- \$4 billion loss for agriculture industry
- A 20% loss to the state's \$107 billion tourism industry





State Agricultural Response Team

11

What is "agroterrorism?" When any person knowingly or maliciously uses biological or chemical agents as weapons against the agriculture industry and food supply or the malicious use of plant or animal pathogens to cause disease in the agricultural sector plants or animals.



Possible Delivery Source

- Point Source Delivery
 - Letter or Package
 - Sprayer
- Vectors
 - United States experiments with Yellow Fever spread by infected mosquitoes
 - Japanese use plague infected fleas in China
- Upwind Line Delivery
 - Highly modified crop duster or rooftop dispersion Issues of inversion and dilution
- - "Person-to-person" Suicidal Delivery
 - Only certain agents are transmissible (Pneumonic Plague, Smallpox)



State Agricultural Response Team



The Agroterrorist's Objective

- · Attack our food supply and create shortages
- Cause us to fear, to lose faith and confidence
- *An indirect form of attack and aggression





State Agricultural Rea

The Agroterrorist's Objective An agroterrorist's objective may be something very symbolic of Florida State Agricultural Response Team **Agroterrorism** (In reverse and with unintended consequences) 1961-71: The United States uses herbicides such as "agent orange" in Viet Nam. The purpose is to serve as a defoliant and destroy enemy crops. Unfortunately, side effects are a dramatic increase in soft-tissue cancers. 1812. French Emperor Napoleon Bonaparte invokos Russia with 610,000 troops. They are defeated by weather and Russians' scorched earth' policy 600,000 die. (Painting by Adolph Northern, 19th century.) State Agricultural Response Team Florida's Agroterrorism Experience Florida has had no known intentional case of agroterrorism to date. The potential is huge, however. Most cases of invasive, destructive plants, animals and insects have either been accidental or "acts of God." Water hyacinth: introduced in 1800s.

What is "bioterrorism?" The deliberate release of viruses, bacteria, other germs or chemicals to cause illness or death in people, animals, or plants.

Bioterrorism

- More than 1,000 microbiological libraries worldwide, naturally occurring disease and national bio-weapons programs, there are ample sources from which agents can be obtained
- Two weapons categories
 - Disease-causing organisms such as bacteria, viruses and prions
 - Toxic substances produced by or from living organisms such as bacterial toxins, fungi and molds, plant extracts and animal toxins



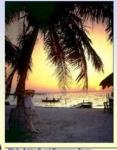
State Agricultural Response Team

20

Although there is some overlap, the intent of agroterrorism is to attack and destroy the plant and animal infrastructure while the intent of bioterrorism is to threaten people directly with biological organisms. Agroterrorism Bioterrorism - September 2001 **Tr & BA ADE **FRANKLIN ARK AD DBEST **FRANKLIN ARK AD DBES

Where Florida is Vulnerable 17 million residents are crowded into the Florida peninsula and more than 75 million visit each year! State Agricultural Response Team

Florida "Climate-Receptive"



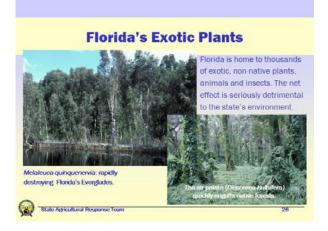
- Nickname is the Sunshine State for its average of 300 days of full sunshine per year
- One of every climate zone Tropical in Florida Keys Sub-tropical South Florida Temperate North Florida
- Thus receptive to almost any plant, animal, insect or disease from any location in the world

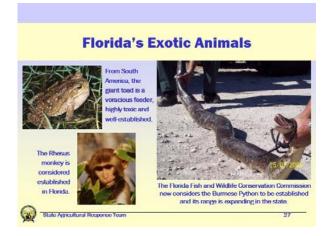
State Agricultural Response Team

Florida and The World

-			
-			
-			
_			
_			
_			
-			
_			
-			
_			
-			
-			

Florida - A "Sentinel State" Florida is a "Sentinel State" A constant invasion of exotic species Not native to the Florida or North American eco-system Causes harm to or has potential to cause harm to the environment Can be a native American species that has invaded a new area or crop or from Africa or Asia or even from another world! Love bugs Stute Agricultural Response four State Agricultural Response four







How Florida is Vulnerable - Plants

- 1.25 million residents earn livings in agriculture producing billions in market
- A \$6.2 billion industry (direct and indirect impact: Second only to tourism: provides 75% of United States winter produce)
- Florida's top agricultural sectors:
 - Cane for sugar
 - Citrus
 - Dairy
 - Forest products
 - Greenhouse/nursery products
 - Tomatoes

State Agricultural Response Team







- · 26 million poultry
- · 1.5 million beef cattle
- 350,000 horses
- 140,000 dairy cattle
- 100,000 swine
- 30,000 goats
- 10,000 sheep
- Millions and millions of pets





Throughout the state, but concentrated in Horses: Marion County Dairy: Suwannee River Valley and Okeechobee Area Cattle: South Central Area

Be Prepared!

Who is ultimately responsible for protecting you, your family, your community and your way of life?





State Agricultural Response Team

Prevention and Response

Office of Bio and Food Security Preparedness

- Mission: to ensure the safety and wholesomeness of food and other consumer products through inspection and testing programs
- Created in 2002, is responsible for protection of Florida citizens
 Coordinates response of Florida Department of Agriculture &
- Consumer Services (FDACS)

 Coordinates with local, state and federal
- Coordinates with local, state and rederal agencies; private and government laboratories; agriculture/food industries
 - Federal: USDA, FDA, CDC, FBI
 - State: FDOH, FDLE, FDEP, IFAS

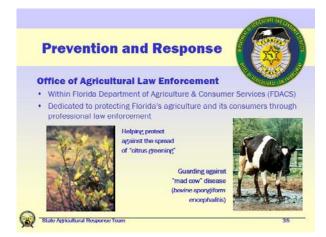




State Agricultural Response Team

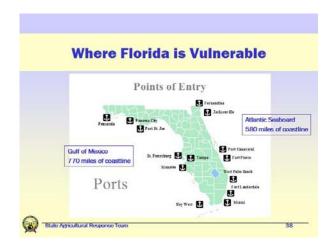
33

Prevention and Response Office of Bio and Food Security Preparedness Since 9/11 has spent more than \$17 million to prepare for and prevent agroterrorism events Laboratory construction, renovation and upgrades Additional border protection for agricultural interdiction More than 15 major training and coordination events Development of SART, State Agricultural Response Team



Statewide Ag Inspection Statewide Ag Inspection Francis Francis

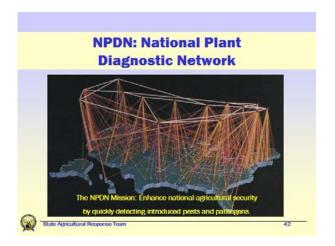










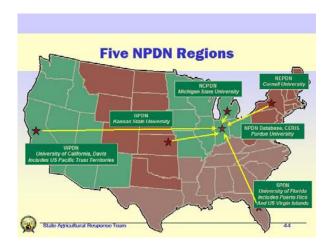


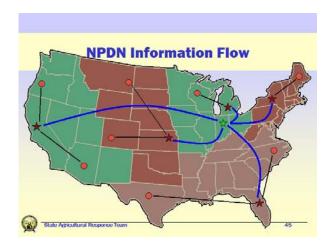
112 PowerPoint Slides - Handout Pages

The NPDN Role

- · Enhanced security of America's agricultural sector from a biosecurity event or unintentional introduction.
- · How is this accomplished?
 - Coordinated national diagnostic laboratories
 - Rapid communication and response system
 - Database analysis for event detection
 - Education and training of "first detectors"







What is a "First Detector?"

- · What is a First Detector?
 - Anyone likely to encounter an act or suspected act of

bio- or agroterrorism

- Producer: farmer or rancher
- Agricultural consultant
- County Extension Agent or Forester
- Agents of the State Department of Agriculture & Consumer Services
- Florida Master Gardeners





State Agricultural Response Team

What does a "First Detector" do?

- . Training, certificate of completion and national registry
- Surveillance
 - Be alert to the odd or different
 - Change in attitude from business as usual to potentially important
 - May be contacted if an incident in their area





"First Detectors" - Natural Multi-Taskers State Agricultural Response Tear

Key Resources

- · United States Department of Agriculture (USDA) www.usda.gov
- Florida Department of Agriculture and Consumer Services (FDACS) www.doacs.state.fl.us
- . FDACS-Division of Plant Industry www.doacs.state.fl.us/pi/
- FDACS Division of Animal Industry www.doacs.state.fl.us/ai/
- . USDA, Animal and Plant Health Inspection Service, National Center for Import and Export www.aphis.usda.gov/vs/ncie/
- Florida State Agricultural Response Team www.flsart.com
- Integrated Pest Management, IFAS Extension, University of Florida http://ipm.ufl.edu/
- Southern Region Center for Integrated Pest Management www.sripmc.org
- · University of Florida, IFAS Extension Service http://solutionsforyourlife.ufl.edu/



State Agricultural Response Team

Key Resources

- · National Plant Diagnostic Network www.npdn.org
- Southern Plant Diagnostic Network http://spdn.ifas.ufl.edu/
- Florida Plant Diagnostic Network http://fpdn.ifas.ufl.edu/
- · Extension Disaster Education Network
 - www eden Isu edu
- · Congressional Research Service, The Library of Congress "Agroterrorism: Threats and Preparedness" by Jim Monke, Analyst in Agricultural Policy, August, 13, 2004
 - www.fas.org/irp/crs/RS32521.pdf
- . Centers for Disease Control and Prevention www.cdc.gov



State Agricultural Response Team

Working Together To Protect Florida's Agriculture & Way of Life



Now, Test Your Knowledge and Awareness (1 of 3) (True or False) The United States has never participated in planning, developing or carrying out acts of agroterrorism or bioterrorism. The essential difference between agroterrorism and bioterrorism is (Yes or No) The accidental release into the fragile Florida ecosystem of a pet snake that one can no longer care for should be prosecuted as an Florida is called a "sentinel state" because Which of the following Florida industries is considered *immune* to an attack by an agro-terrorist? 1. Citrus industry (too wide-spread) 2. Cattle and horse industries (animals are just impossibly difficult) Nursery industry (nope - species confusion) Vegetables (would take an airplane and no one would do that ...) All are possible targets as well as timber and even pets! State Agricultural Response Team Pre/Post Test (2 of 3) Ensuring the safety and wholesomeness of food and other consumer products through inspection and testing programs is the mission of which of the following Florida offices? 1. Office of Safety and Wholesomeness of Food 2. Office of Bio and Food Security Preparedness 3. Office of Other Consumer Nuisance Regulations (Yes or No) The 24/7 toll free telephone number of Florida's Agriculture (res or No) The 247 for the reaephone mober of Florida's Agriculture Law Enforcement office is 1-800.342.5869 and you should call it right away if you suspect any case of or issue with agro- or bio-terrorism. (Hint. The correct answer is "Yes." Please remember this number!) (Circle the correct answer) The National Plant Diagnostic Network is responsible for training which of the following volunteer guardians of America's agriculture industry. 1. First Responders 2. First Detectors 3. First Decorators State Agricultural Response Team Pre/Post Test (3 of 3) Which of the following may not an objective of a trained terrorist? 1. To cause fear and insecurity To make a "political or economic statement" 3. To cause harm to the enemy's infrastructure All of the above may be terrorist objectives 10. On a scale of 1 to 10, one being very uneasy and apprehensive, and ten

being rock-solid safe and secure, I feel that Florida is well-prepared for a

possible bioterror or agroterror event.

Test Answer Key (1 of 2) It is instructive to think of bioterror as specific acts directed at individuals, crowds or populations, such as sending arthrax spores through the mail. Agroterror is a general act, intending to sew death, destruction and dismay by indirect means, such as introducing a plant virus that may take years to become destructive to a host industry. This is an opinion question and one could argue all sides of the issue Florida is a "sentinel state" because it is uniquely situated by climate and geographic position to host exotic and harmful immigrants. #5. All are possible targets as well as timber and even pets! #2. Office of Bio and Food Security Preparedness The 24/7 toll free telephone number of Florida's Agriculture Law Enforcement office is 1-800-342-5869 and you should call it right away if you suspect any case of or issue with agro- or bio- terrorism. State Agricultural Response Team Test Answer Key (2 of 2) #2. First Detectors 8. #4. All of the above may be terrorist objectives 10. This too is an opinion question and there is no right or wrong answer. It is entirely personal. However, if you have an idea that you believe will make America stronger or more vigilant without sacrificing our free and democratic way of life, please write that idea on the answer sheet! State Agricultural Response Team Glossary

- Agroterrorism: when any person knowingly or maliciously uses biological or chemical agents as weapons against the agriculture industry and food supply. It may also be thought of as the malicious use of plant or animal pathogens to cause disease in the agricultural sector – plants or animals.
- Bioterrorism: The deliberate release of viruses, bacteria, other germs or chemicals to cause illness or death in people, animals, or plants.
- SART: The Florida State Agricultural Response Team. A multi-agency coordinating group consisting of governmental and private entities dedicated to all-hazard disaster preparedness, planning, response and recovery for the animal and agriculture sectors in Florida.
- Terrorist: One who utilizes violence and intimidation systematically to achieve
 political objectives, while disguised as a civilian non-combatant. The use of a
 civilian disguise exempts the perpetrator from protection under the Geneva
 Conventions, and consequently if captured they are liable for prosecution as
 common criminals.



State Agricultural Response Team

57

Reporting Suspicious Plant and Animal Diseases Cases Meanwhile... Batman falls for yet another of the Joker's fiendish phone pranks. Protect Florida agriculture. Report suspicious animal disease cases to the What?! You won't Office of the State Veterinarian. All calls are confidential and toll free. insure the Batmobile? Daytime (8 am -5 pm) 1-877-815-0034 (1-850-410-0900) Or to Office of Bio & Food Security Preparedness 1-850-410-6757 Or 24/7 to Agriculture Law Enforcement 1-800-342-5869 Or SPDN Hub Laboratory (Gainesville) 1-352-392-1795

Agroterrorism and Bioterrorism Prevention and Response

This concludes our presentation on "The threat of Agroterrorism and Bioterrorism in Florida: Prevention and a Coordinated Response." Thank you for attending and participating.



59

Notes