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Operation Red Fly

A tabletop training exercise on an outbreak of New World screwworm in Florida

"I've been wishing this kind of exercise would take place for 6 to 10 years.
I applaud the fact that you did this."

Dr. Steve Skoda, USDA-ARS

What if an outbreak of screwworm, *Conchliomyia hominivorax*, were discovered in Central Florida? How readily and smoothly would the response community – federal, state, local and private stakeholders – come together to respond? Could the outbreak be effectively contained, and in a timely manner?

The following article is courtesy Dr. Greg Christy, DVM, FDACS-DAI
(photos by Rick Sapp).



Above: The Florida Emergency Operations Center hosted nearly 100 state, federal and international visitors for the tabletop training exercise Operation Red Fly.

On January 24-25, 2012, the Florida Department of Agriculture and Consumer Services (FDACS), Division of Animal Industry, hosted a *Cochliomyia hominivorax* (New World Screwworm) tabletop training exercise at the Florida State Emergency Operations Center (SEOC) in Tallahassee, Florida. Dr. Thomas Holt, State Veterinarian and Director of the Division of Animal Industry, in envisioning the exercise, stated, "The purpose of the training exercise is to provide participants an opportunity to plan, initiate, and evaluate current response concepts and capabilities in a simulated outbreak of screwworm in Florida."

The New World Screwworm with its spiral spikes and posterior breathing tubes resembling a screw, hence its name, is an insidious pest that strikes all warm-blooded terrestrial animals. It is particularly devastating for commercial producers of livestock and is a serious public health concern when humans are affected. The adult screwworm is a fly that lays eggs in a mass on or near wounds. The eggs hatch and the maturing larva burrow headfirst into the flesh. This burrowing and feeding cause deep, pocket-like lesions in the skin, which are very damaging to the animal host.



Left: Diane Kitchen, FDACS-DAI, and Roxanne Mullaney USDA-APHIS/VS, served as Co-Incident Commanders. **Center:** Dr. Paul Gibbs, U.F. College of Veterinary Medicine served as exercise facilitator. **Right:** Dr. John Welch, USDA-APHIS/IS is technical director of the Screwworm Eradication Program.

New World Screwworm can be found in the northern countries of South America southwards to Uruguay, northern Chile and northern Argentina, as well as on several Caribbean islands (Cuba, Hispanola, Jamaica, Trinidad and Tobago). In Florida, screwworm is occasionally found in imported animals. Since 2000, 12 imported animals with screwworm larvae infestation have been identified in Florida. Although in those cases, the larvae were eliminated before the life cycle of the fly could be completed, awareness and constant surveillance is necessary to prevent further reintroduction of the pest into the United States.

Dr. Clarence Campbell, Florida's State Veterinarian from 1952 through 1991, presented information at the exercise about the joint state-federal screwworm eradication program in the southeastern United States, which began in 1957 during his tenure. He was instrumental in the successful implementation of Florida's program. Using sterile flies produced in a converted WWII airplane hangar in Sebring, Florida, the 2-year campaign cost approximately \$11 million and eliminated the annual \$20 million in screwworm-related producer losses in the southeastern United States. Dr. Holt stated that, "Should screwworm be reintroduced today into the United States and become established, losses in the southern United States could exceed \$1 billion a year."



Left: Dr. Fiona Maunsell, Assistant Research Professor, UF College of Veterinary Medicine, and Dr. Steve Skoda, USDA-ARS, coordinator of sterile fly receipt and distribution. **Right:** Dr. Suzan Loerzel, USDA-APHIS/VS, and John Crews, FDACS-DAI, in a planning group to discuss critical issues on Day 1 of the exercise.

The SEOC exercise, dubbed “Operation Red Fly,” simulated a screwworm introduction into Florida by pet dogs imported from the Caribbean and slated to be offered for adoption. The simulation outbreak spread across multiple Florida counties and impacted livestock industries, pets and public health. For 2 days, participants planned response actions to a series of realistic scenarios and were divided into a Multiagency Coordination (MAC) group, a simulated Incident Management Team (IMT), and a state-level Joint Information Center (JIC).

For the exercise, FDACS partnered with the University of Florida, College of Veterinary Medicine (CVM) and the Florida Division of Emergency Management (DEM). Dr. Fiona Maunsell, CVM, the primary author of the exercise scenario, produced the exercise materials. Ms. Necole Holton, DEM, acted as the SEOC planner and event coordinator. Dr. John Welch, USDA, APHIS, International Services and Dr. Steve Skoda, USDA, Agricultural Research Services attended the exercise and acted as subject matter experts on current USDA screwworm eradication efforts.



Above: The small animal stakeholder working group (l-r): Richard Ziegler, FACA; Sue Rantuccio, FDACS-DAI; Dr. Terry Clekis, FVMA; and Bianca Blakley, FDACS-DAI.



Above: Dr. Gibbs working group (l-r): Dr. Steve Skoda, USDA-ARS; Dr. Kendra Stauffer, USDA-APHIS/VS; Dr. Greg Christy, FDACS-DAI; Dr. Paul Gibbs, UF CVM; Dr. Fiona Maunsell, UF CVM; Lt. Col. Dana McDaniel, DVM ; and Dr. John Welch, USDA-APHIS/IS.

An informational website on the biology and distribution of the New World Screwworm, past eradication efforts, current eradication efforts, videos and pictures can be viewed at <http://www.flsart.org/screwworm>.

Anyone suspecting a screwworm infestation is urged to immediately contact:

- A local veterinarian
- State Veterinarian's Office
Florida Department of Agriculture and Consumer Services
Division of Animal Industry
8:00 a.m. – 5:00 p.m. (850) 410-0900
After hours: 800-342-5869
Email: rad@freshfromflorida.com
- USDA/APHIS Veterinary Services Area Office
8:00 a.m. – 5:00 p.m. (352) 333-3120

More than 85 participants from the following agencies and organizations attended.
State Agencies Florida Department of Agriculture and Consumer Services Division of Agricultural Environmental Services Division of Animal Industry Office of Agricultural Law Enforcement Division of Plant Industry Florida Forest Service Florida Department of Health Florida Division of Emergency Management Florida Fish and Wildlife Conservation Commission Florida National Guard University of Florida College of Veterinary Medicine Institute of Food and Agricultural Sciences
Federal Agencies United State Department of Agriculture Animal and Plant Health Inspection Service, International Services Animal and Plant Health Inspection Service, Veterinary Services Animal and Plant Health Inspection Service, Wildlife Services
Organizations Florida Animal Control Association Florida Cattlemen's Association Florida Farm Bureau Florida State Animal Response Coalition Florida Veterinary Medical Association Representatives of Florida small ruminant producers
International Mexican Agricultural Service Dominican Republic

Agro-Training Opportunities

The Florida Department of Agriculture and Consumer Services in cooperation with several partners – DHS, WIFSS, University of Tennessee and others – offers training in agro-terrorism and related courses in Florida. Courses are open to all US citizens, and are free of charge (lunch is not provided) through DHS grant funding.



Thursday, February 16

AWR-152 Principles of Preparedness for Agroterrorism and Food Systems' Disasters

Registration at 7:30 am; Workshop from 8:00 am to 4:00 pm
Volusia County Health Department, 1845 Holsonback Drive,
Conference Room 516C, Daytona Beach, FL 32117. For

additional information or register on-site please visit

<http://dhs.wifss.ucdavis.edu/agroterrorism/classes/classesbydate.php>.



Friday, February 17

AWR-156 Principles of Planning and Implementing Recovery

Registration at 8:00 am; Workshop from 8:30 am to 3:30 pm
USDA Farm Service Agency, 4401 NW 25th Place, Suite M (a few
doors down from Ichiban Sushi), Gainesville, FL 32606. For
additional information or register on-site please visit

<http://dhs.wifss.ucdavis.edu/agroterrorism/classes/classesbydate.php>.



Tuesday, March 13

PER-259 Sharing Information and Intelligence Related to Food Importation and Transportation

8:00 am – 5:00 pm: Broward College (Hugh Adams Central
Campus), 3501 SW Davie Rd., Davie, FL 33314 Portable Unit No.
40, A.

This DHS certified course is offered free and offers 7.5 CEU's. It prepares participants to share information to enhance the safety of food importation and transportation. The deadline to register is March 5. To register visit www.flsart.org/mgtcourses.

If you have any questions please contact John Burkette: (850) 245-1387
John.Burkette@freshfromflorida.com.

Florida SARC Schedules Classes

The Florida State Animal Response Coalition offers three levels of Emergency Animal Sheltering Training: Awareness, Operations and Technician. Each level builds upon the previous level's knowledge and experience. Training is job/task based. "After you take these courses, when you are called upon to assist," says

SARC's Pam Burns, "you can be confident you know and understand the job you are deployed to do."

Awareness Level Sheltering training is the foundation course required to assist with caring for sheltered animals during a disaster. Course topics include:

Personal Preparedness
Overview of the Incident
Command System
Deployment Preparedness
Assisting in Shelter Set Up
Daily Care and Feeding
Proper Cage Cleaning and
Disinfection



Animal Behavior
Stress Management
Code of Conduct for
Individuals in a Response
Zoonotic Diseases
Personal Safety
Post Traumatic Stress and
more...

Four **FREE** courses in Small Animal Sheltering Awareness are scheduled for February-March: Bunnell, Port Charlotte and Tallahassee (2). To register, go to <http://www.flsarc.org/Training.html>. If you have questions contact Consie von Gontard, Director of Training at training@flsarc.org (352) 658-1224.

Economic Impacts of Citrus Greening in Florida, 2006/07–2010/11 **A study by Alan W. Hodges and Thomas H. Spreen**

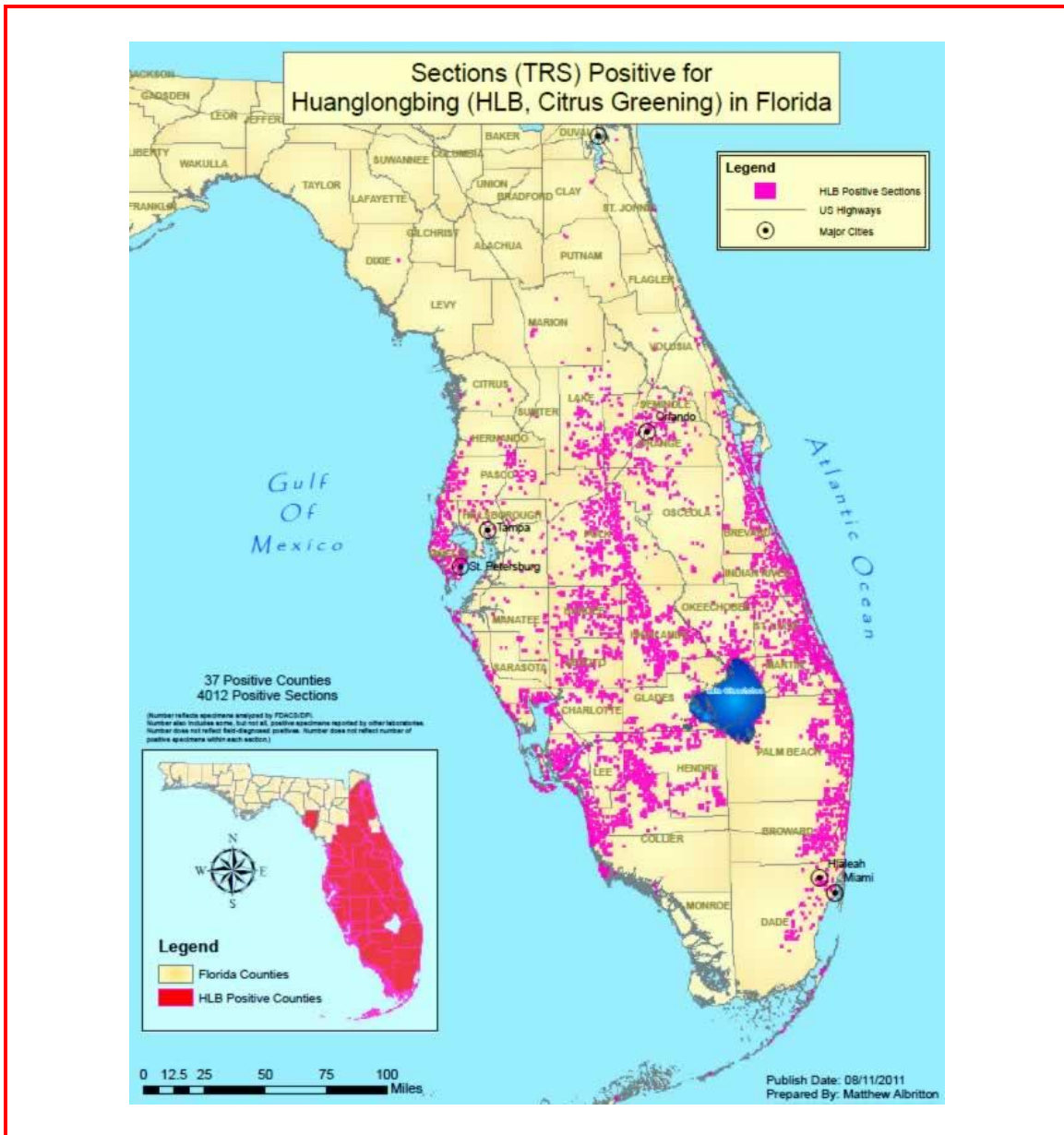
The state of Florida is the largest citrus producer in the United States, and the second largest producer of orange juice in the world, behind Brazil. The Florida citrus industry represents an important part of the Florida agricultural economy—with estimated output (revenue) impacts of \$8.91 billion and value added contributions of \$4.62 billion to Gross Domestic Product. The Florida citrus industry generated at least 75,800 jobs, based on over 203 million boxes of citrus fruit produced in the 2007/08 season (Hodges and Rahmani 2009).



Citrus *Huanglongbing* (HLB), more commonly known as citrus greening disease, has become endemic in the state of Florida and in São Paulo, Brazil, where it has caused major damage to citrus production. Believed to have originated in or near southern China more than a century ago, HLB's presence was detected in the São Paulo state in Brazil in 2004. By September 2005, the disease was found in Miami-Dade County, and it soon spread throughout the commercial production area in Florida. The disease affects citrus production by causing premature fruit drop. Infected trees also produce small, misshapen fruit with bitter juice that has no economic value. As the disease progresses, the tree becomes more vulnerable to other diseases. **Currently, there is no strategy to cure the disease.** Some growers attempt to suppress the disease through an aggressive eradication program, while others are employing foliar nutritional techniques in an attempt to mask the symptoms of the disease and extend the economic life of infected groves.

This study attempts to estimate the regional economic impacts of HLB on production of Florida oranges utilized for juice manufacturing only. The potential economic impacts on the fresh citrus fruit market were not assessed.

To read the rest of the report go to <http://edis.ifas.ufl.edu/fe903>. Published in January 2012 by Alan W. Hodges, extension scientist, and Thomas H. Spreen, professor, Food and Resource Economics Department, Florida Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida, Gainesville, FL 32611.



NOTE: A SART Training module completed several years ago by Dr. Tim Schubert, FDACS-DAI and Dr. Rick Sapp, SART Sentinel Editor, focused on three diseases threatening Florida agriculture: citrus greening, soybean rust and sudden oak death. That training module is still available through the SART web site at <http://www.flsart.org/SART/tm?pageID=2#>.

NASAAEP – It’s Been Five Years Have we made progress?

Quotes from the formative meeting of NASAAEP, Orlando, FL

“To have an effective response, you have to work within the system. To go out on your own freelancing is just not going to work.”

Scott Mason, DVM, Oklahoma Disaster Preparedness Coordinator

“As a rule, when ‘it hits the fan and you need boots on the ground quickly, America’s vet schools are right there. We can deploy 12 veterinarians and technicians in a fully sustained MASH Unit for all-hazard, all-species disaster response.”

John Haven, Director, University of Florida College of Veterinary Medicine



**Chris Crnich, Nevada, and
John Wight, Orlando, FL**


**“It’s clear that no one person or group can do it alone.”
*Heather Case, DVM, MPH, Asst. Director, Coordinator of
Emergency Preparedness and Response, AVMA***

“A SART begins to be woven into the fabric of a community by responding to small emergencies, possibly one animal at a time. We are preparing to shelter whatever animal [the public] has that we can handle, aquariums to snakes. We have two levels of volunteers: workers (who must be NIMS compliant with 100, 200, 700 with HazMat awareness) and product suppliers (who do not need to be NIMS trained). Our volunteers, by the way, pay for their own background checks.”

Joel Hersh, Pennsylvania State Preparedness Coordinator/PA SART.

“It has been a four-year effort to get emergency planners to recognize the needs and impacts of agriculture and animals. The principal difference between the east and west is the sheer number of people and Florida, like New Mexico, is a gateway for thousands of people and who knows what else every day!”

Billy Dictson, Director, Office of Biosecurity, College of Agriculture and Home Economics, New Mexico State University



NASAAEP
Partners in animal disaster response.

National Alliance Of State Animal and Agricultural Emergency Programs

Coming soon, please check back.

alliance@nasaiep.org

And Of Note....

Florida SART Advisory Board Meeting

Advisory Board Members: Please mark your calendars for the SART Advisory Board meeting on April 4th from 10 a.m. – 2 p.m. The meeting will be held at the Alachua Regional Service Center in Alachua, 14101 Hwy. 441, Suite 200 – 386-418-5500.

We would like to know if you would like to attend this meeting via webinar if that option were available. Let Bianca Blakley, SART Planner know A.S.A.P. if interested (850) 410-0959 bianca.blakley@freshfromflorida.com. Thank you and we look forward to seeing you at 10 a.m. on April 4th.

DVD is Now Available

In 2011 a cross-jurisdictional team of about 40 large animal responders took part in a table-top training and hands-on teaching exercise at the Miami Animal Import Center (MAIC). (See <http://www.flsart.org/newsletter/sent-11-09.jsp>)



The scenario was a simple, but realistic and ultimately involved stakeholders from FAA, the airlines, fire, police, animal handling companies, local veterinarians, staff from the USDA-MAIC and others. An aircraft arrived from South America and, upon landing, blew several tires on the main gear. A fairly routine situation, this normally takes a few hours to repair before the aircraft can be moved. This time however the aircraft was filled with valuable thoroughbred horses.

Over the course of several hours participants stepped through the process of who is in charge (has incident command), how to manage effective information flow, access to the runway, and access to equipment to cool the aircraft and the animals inside.

“Just getting all the stakeholders into the room, communicating, and sharing related priorities and needs was huge step forward in dealing with future emergencies,” said Dr. Kendra Stauffer, USDA Emergency Area Coordinator for Florida and SART Steering Committee member. “Gaps were identified where policies need to be reviewed and MOUs developed.”

Dr. Stauffer now has a few DVDs available from that exercise. Contact her at Kendra.E.Stauffer@aphis.usda.gov.

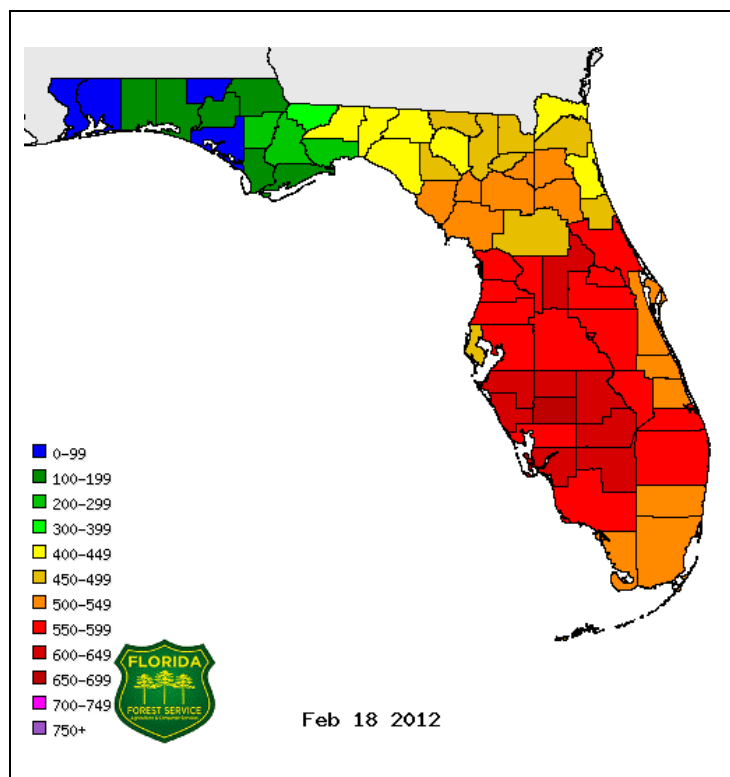
Keetch Byram Drought Index

It's that time of year.
Again.

Maintained by the Florida Forest Service, the Keetch-Byram drought index (KBDI: http://flame.fl-dof.com/fire_weather/KBDI/index.html) is a continuous reference scale for estimating the dryness of the soil. The index increases for each day without rain and decreases when it rains. The scale ranges from 0 (wet) to 800 (bone dry).

High values of the KBDI indicate conditions are favorable for wildfires, but drought is not by itself a prerequisite for wildfires.

Wind, temperature, relative humidity and atmospheric stability also play a major role in determining actual fire danger.



“Tracking Food-borne Pathogens” Video

Investigators from the UC Davis Western Institute for Food Safety and Security (WIFSS) use DNA “fingerprinting” to track pathogens, like e-coli or salmonella, to their source. In the process, the scientists are learning how these

deadly bacteria move from water or animals into our food supply. To watch a 2-minute video uploaded to YouTube.com by UC Davis on January 10 click <http://www.youtube.com/watch?v=NgHbRjBhu8U>.

SARC Photos Online

Florida SARC, the Florida State Animal Response Coalition, has posted photos online of Horse Training (25) and Hurricane Disaster (14) exercises. These can be played as Thumbnails, Slide Show or Film Strip by clicking the tab you prefer. http://www.flsarc.org/News_Photos.html.

And of course Florida SART, the Florida State Agricultural Response Team, has numerous photos available of activities and events from 2004 to 2011 at <http://www.flsart.org/photogallerylist/>.

The Latest on the Burmese Python

The news runs in cycles. Either there is so much to talk about that everyone in a news room scrambles to keep up or there is little newsworthy and the reporters and editors scramble to find something to say.

The “Burmese Python Invasion” of Florida has been in the news of late and your *Sentinel* editors can’t quite make up their minds whether it is a case of too much or too little news.

The Nature Conservancy has a story and photos online at <http://www.nature.org/ourinitiatives/regions/northamerica/unitedstates/florida/howwework/stopping-a-burmese-python-invasion.xml>.

The article quotes Kris Serbesoff-King, the Nature Conservancy’s Florida invasive species program manager: “It’s sad that it’s gotten this far — and unfortunately, **there is no reason to think that they aren’t going to disperse farther north.** Maybe they won’t get to Washington D.C., but their native habitat compares well to the Gulf region of the southern United States.”



Love them or loath them, snakes have been an endless source of fascination for as long as mankind has existed – but what exactly are they? Well, snakes are elongate, legless, carnivorous reptiles of the suborder *Serpentes*. They are further distinguished by their lack of eyelids and external ears.






FLSART.org a Member-Only Community

Because Florida SART is a member-based community of agricultural (animal and plant) responders, we share certain contact information on the SART web site. If there is an emergency and you might be able to assist, you can quickly be contacted. You are part of a vital chain of response that keeps the Sunshine State safe and, in case of an emergency, helps it recover. Your active participation is vital.

Please log in and visit the SART Member-Only page to review your contact information <http://www.flsart.org/SART/login>.

Logo Wars

Can you connect the state with the logo? Hint – this is way too easy!

<p>Florida (www.flsart.org)</p>		
<p>Texas (www.txsart.org)</p>		
<p>Louisiana (http://lsart.org) and Virginia (www.virginiasart.org)</p>		<p>VIRGINIA</p> 
<p>North Carolina (www.ncsart.org)</p>		

About the *SART Sentinel*

The SART Sentinel is an e-mail newsletter prepared monthly by the members of the Florida State Agricultural Response Team. Past issues of the *Sentinel* are archived on the Florida SART Web Site www.flsart.org.

If you have a story or photo that you would like to have considered for publication in the *SART Sentinel*, please contact the editors.

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