



Overview: Invasive Species that Affect Plants



protect u.s.
community invasive species network

First Detectors Protecting U.S. from Pests

What are the Issues?



protect u.s.
community invasive species network

First Detectors Protecting U.S. from Pests

Asian Soybean Rust



- 2004-Detected in U.S.
- Estimated yield losses from 10%-50%
- Kudzu as a potential overwintering source
- ipmPIPE
<http://www.ipmpipe.org/>



What If...



Wheat Stem Rust Ug99

- What?
 - Wheat lines with the *Sr31* resistance gene found to be infested
- Where?
 - Uganda, Africa 1999
- Impact?
 - First worldwide report of virulence to the *Sr31* gene



protect u.s.
community invasive species network

First Detectors Protecting U.S. from Pests

Sunn Pest, *Eurygaster integriceps*



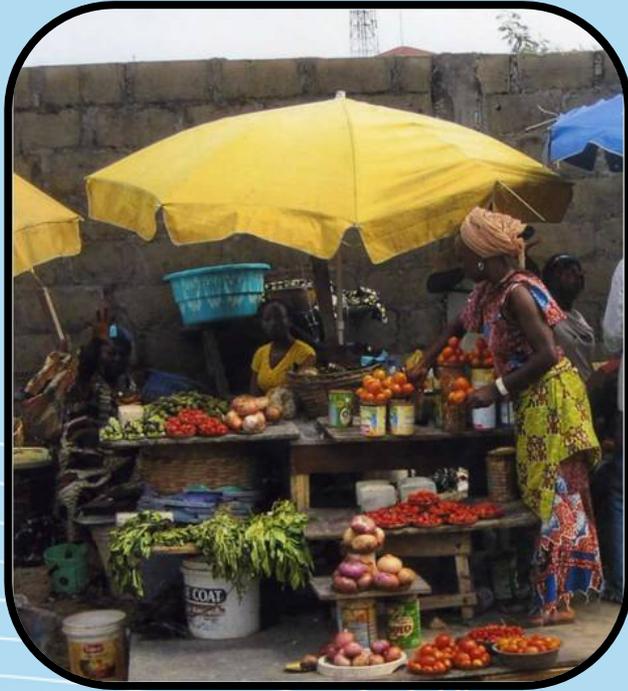
Photo Credit Left: ICARDA, FAO Plant Protection Series 2002
Bread Wheat: Improvement and Production, Curtis BC, Rajaram S,
Gómez Macpherson (eds.) <http://www.fao.org/DOCREP/006/Y4011E/Y4011E00.HTM>
Photo Credit Right: Florida Department of Agriculture and Consumer Services – Division of plant Industry



protect u.s.
community invasive species network

First Detectors Protecting U.S. from Pests

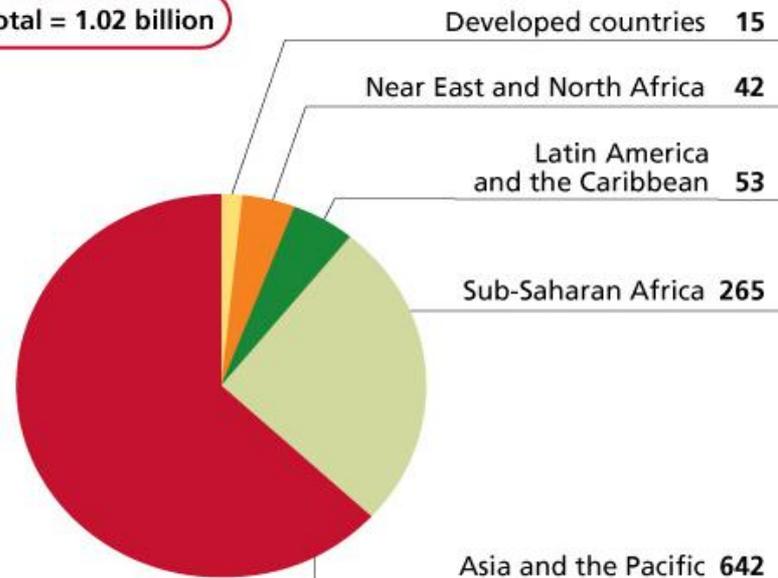
Wheat Losses-Who is Affected?



- Developing countries
- Food animal producers
- Everyone

Undernourishment in 2009, by region (millions)

Total = 1.02 billion



Source: FAO



Does Fruit Have Value?



Photo Credits: USDA-ARS Photo Gallery
<http://www.ars.usda.gov/is/graphics/photos/>

Oranges (Image k3644-12); Strawberries (K. Hammond, Image k7726-1)

Plums (S. Bauer, Image k8495-1); Peaches (K. Weller, Image k4957-19)



protect u.s.
community invasive species network

First Detectors Protecting U.S. from Pests

U.S. Citrus



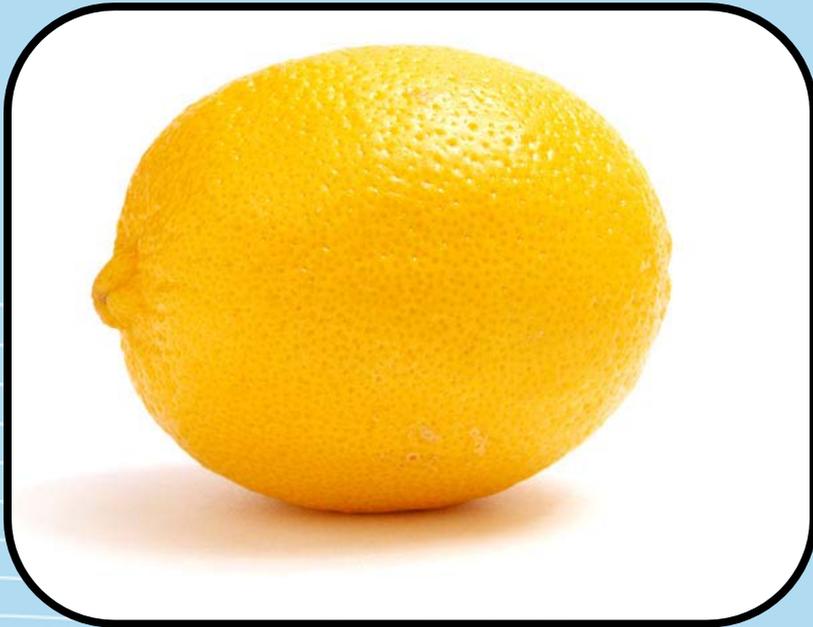
Photo Credits: Pink Grapefruit - Wikimedia Commons
Orange Juice (USDA-ARS Photo Gallery <http://www.ars.usda.gov/is/graphics/photos/>
S. Bauer, Image No. k7237-8)



protect u.s.
community invasive species network

First Detectors Protecting U.S. from Pests

U.S. Citrus



U.S. Citrus



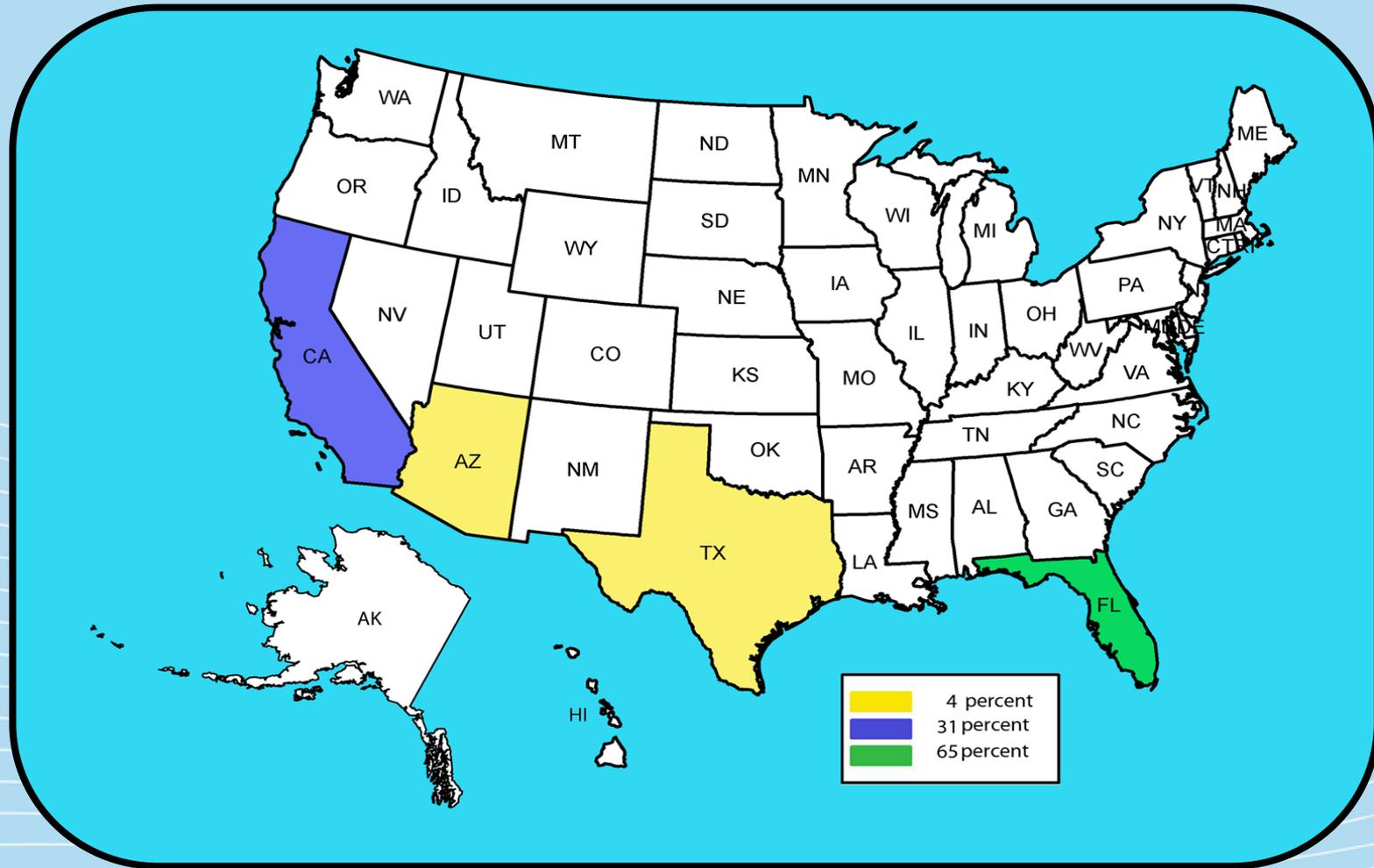
Photo Credit: Wikimedia Commons



protect u.s.
community invasive species network

First Detectors Protecting U.S. from Pests

U.S. Citrus Production, 2009-10



protect u.s.
community invasive species network

First Detectors Protecting U.S. from Pests

Citrus Greening Disease (Huanglongbing)



protect u.s.
community invasive species network

First Detectors Protecting U.S. from Pests

Citrus Greening Disease (Huanglongbing)



Asian Citrus Psyllid,
Diaphorina citri



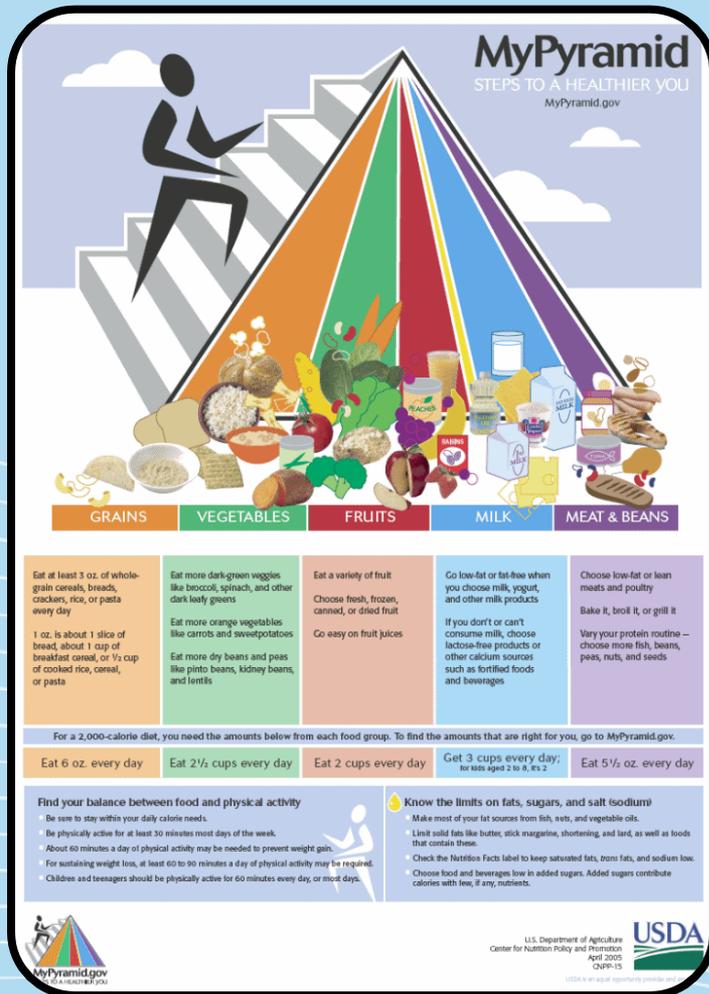
Citrus Greening Disease Symptoms



protect u.s.
community invasive species network

First Detectors Protecting U.S. from Pests

U.S. Citrus



- Economic Health
- Nutritional Health
- What happens if citrus greening can't be stopped?



protect u.s.
community invasive species network

First Detectors Protecting U.S. from Pests

Plum Pox Virus (PPV)



Healthy *Prunus* species



Plum Pox Virus



Infected *Prunus* species

Quarantine and Eradication Successful!



protect u.s.
community invasive species network

First Detectors Protecting U.S. from Pests

Spotted Wing Drosophila

Drosophila suzukii



Photo by G. Arakelian



Invasive Species are more than just an agricultural problem, they affect natural areas as well.



protect u.s.
community invasive species network

First Detectors Protecting U.S. from Pests

Emerald Ash Borer

Agrilus planipennis



Photo Credit:

Damaged ash trees: Daniel Herms, The Ohio State University, <http://www.invasive.org/> Image No. 5171038

Beetle: David Cappaert, Michigan State University, www.bugwood.org, #2106098



protect u.s.
community invasive species network

First Detectors Protecting U.S. from Pests

Hemlock Woolly Adelgid

Adelges tsugae



Photo Credit:
damaged hemlock trees: William M. Ciesla, Forest Health Management International
<http://www.invasive.org/> Image No. 2167012
Adelgid: Connecticut Agricultural Experiment Station, www.bugwood.org, #3225077



protect u.s.
community invasive species network

First Detectors Protecting U.S. from Pests

Hemlock Woolly Adelgid

Adelges tsugae



protect u.s.
community invasive species network

First Detectors Protecting U.S. from Pests

Sudden Oak Death



Plant Biosecurity



- Inspectors
- County Extension Agents
- Park or Natural Resource Managers
- Private Crop Consultants or Advisors
- Everyone



protect u.s.
community invasive species network

First Detectors Protecting U.S. from Pests

Regulatory-Roles and Responsibilities



protect u.s.
community invasive species network

First Detectors Protecting U.S. from Pests

Plant Protection in the US- Begins at the Border, Ends with You!



Photo Credit: Department of Homeland Security, Customs and Border Protection



protect u.s.
community invasive species network

First Detectors Protecting U.S. from Pests

Department of Homeland Security, Customs and Border Protection

The screenshot shows the official website of U.S. Customs and Border Protection. At the top, there is a navigation bar with the agency's name and logo, a search bar, and a menu with links for 'About CBP', 'Newsroom', 'Border Security', 'Trade', 'Travel', and 'Careers'. Below the navigation bar, a 'CBP NEWS' banner features a headline: '\$1.4M Worth of Crystal Meth Seized at AZ Border - (12/16/2010 - myfoxphoenix.com)'. To the left of the main content area is a sidebar with several sections: 'Advisories', 'Contacts', 'Questions/Comments', 'Forms', and 'En Español'; 'Learn About...' with links for Human Trafficking, Trusted Traveler Programs, Know Before You Go, C-TPAT, Partnership Against Terrorism, and Duty, Tariff Rates; and 'Around the Agency' with links for News Releases, Photo Gallery, and Video Gallery. Below the sidebar is a 'Subscribe to CBP Updates' form. The main content area features a large image of two men in suits, with the headline 'Bersin Shares Security Vision With Aviation Executives'. Below this are three news items: 'Border Patrol Agent Killed; Suspects in Custody, Others Sought' (12/16/2010), 'Commissioner Takes Part in Dedication of Donna-Rio Bravo International Bridge' (12/15/2010), and 'Bersin Hosts Second Series of Meetings with Trade Groups' (12/10/2010). At the bottom of the page, there are logos for ESTA, Global Entry, and Border Entry Wait Times, along with a green box titled 'Border Crossing Document Requirements Have Changed!' and a graphic that says 'OR BUSINESS TRIPS TO MEXICO'. The bottom right corner of the page features the 'protect u.s. community invasive species network' logo and the tagline 'First Detectors Protecting U.S. from Pests'.

USDA-APHIS

The screenshot shows the USDA-APHIS website homepage. At the top, the USDA logo is followed by the text "United States Department of Agriculture" and "Animal and Plant Health Inspection Service". Below this is a navigation bar with links for Home, About APHIS, Newsroom, Career Opportunities, Help, and Contact Us. A search bar is located on the left side, along with a "Browse by Audience" section and a "Browse by Subject" menu. The main content area features a "You are here: Home" breadcrumb, a quote about protecting American agriculture, and several news items under "In the News", "Federal Register Posts", and "Latest Publications". On the right side, there is a "tell APHIS@ usda.gov/open" button, a "Related Topics" list, "APHIS New Media" links, and a "Spotlights" section with a featured image.

USDA United States Department of Agriculture
Animal and Plant Health Inspection Service

Home About APHIS Newsroom Career Opportunities Help Contact Us

You are here: Home

"Protecting American agriculture" is the basic charge of the U.S. Department of Agriculture's (USDA) Animal and Plant Health Inspection Service (APHIS). APHIS provides leadership in ensuring the health and care of animals and plants. The agency improves agricultural productivity and competitiveness and contributes to the national economy and the public health.

In the News More

USDA Announces Final Environmental Impact Statement for Genetically Engineered Alfalfa

- Final Roundup Ready Alfalfa Environmental Impact Statement
- Questions and Answers: Final Environmental Impact Statement Roundup Ready Alfalfa
- Comments by Secretary Vilsack Regarding Availability of a Final Environmental Impact Statement (EIS) for Roundup Ready Alfalfa

USDA Announces Recent Animal Welfare Act and Horse Protection Act Enforcement Actions

Secretary Vilsack Appoints Members to Advisory Committee on Animal Health

USDA Launches a Website to Inform the Public about User Fees

Federal Register Posts More

USDA Finalizes Rule Adding Areas in Illinois, Indiana, Maine, Ohio and Virginia to the List of Areas Generally Infested with Gypsy Moth

USDA Seeks Comment on Pest Risk Analysis for the Importation of Fresh Rambutan Fruit from Malaysia and Vietnam

USDA Seeks Comment on Amendments to Regulations Concerning the Entry of Wood Packaging Material from Canada into the United States

Agriculture Secretary Reestablishes National Poultry Improvement General Conference Committee

Latest Publications More

tell APHIS@
usda.gov/open

Your feedback and input are essential to APHIS. Visit USDA's Open.gov web site to share your thoughts, ideas, and suggestions on APHIS issues and programs.

Related Topics

- Apply for a permit
- Apply for AWA licensing/registration
- Emergency Support Function #11 (ESF #11)
- FOIA Reading Room
- Fruits and Vegetables Import Requirements (FAVIR) Database
- Horse Protection Act
- Jobs in APHIS
- Report a pest or disease
- Report agricultural smuggling
- Travel with my Pet
- Vet accreditation information

APHIS New Media

- RSS Feeds
- APHISgov
- APHIS Channel

Spotlights

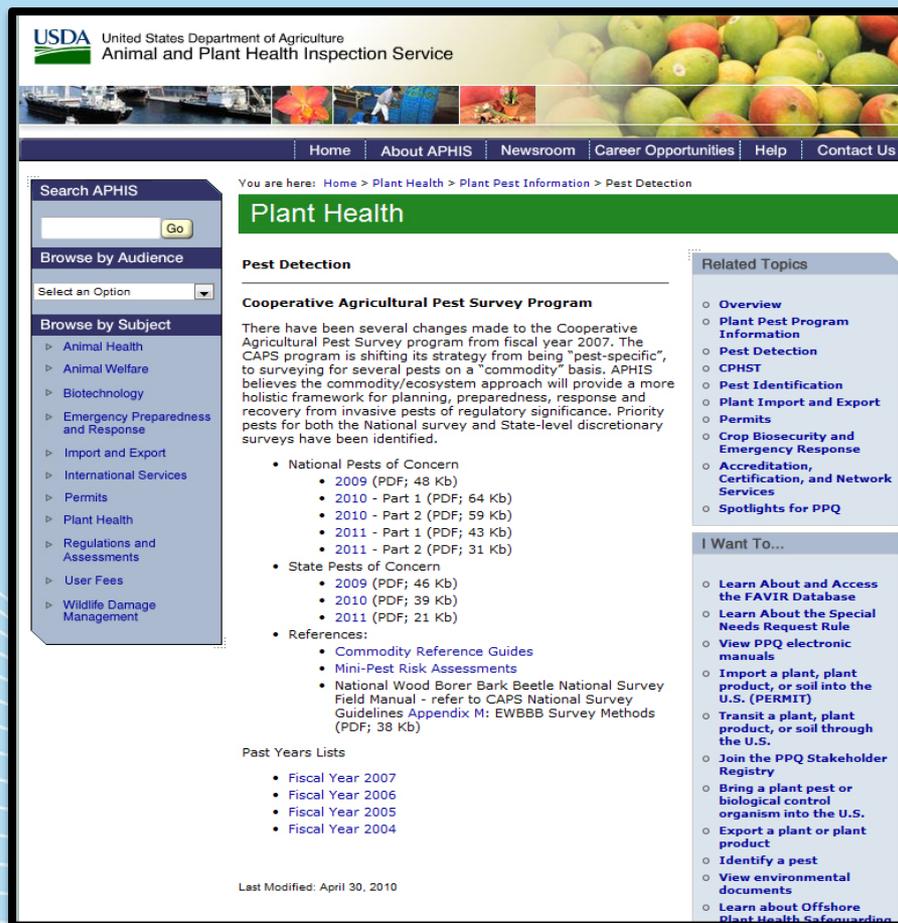
and They're Here!



protect u.s.
community invasive species network

First Detectors Protecting U.S. from Pests

Cooperative Agriculture Pest Survey Program



The screenshot shows the USDA APHIS website interface. At the top, the USDA logo and "United States Department of Agriculture Animal and Plant Health Inspection Service" are displayed. A navigation bar includes links for Home, About APHIS, Newsroom, Career Opportunities, Help, and Contact Us. The main content area is titled "Plant Health" and "Pest Detection". The "Cooperative Agricultural Pest Survey Program" section contains a paragraph explaining the program's shift to a commodity-based approach and a list of documents for National and State Pests of Concern, along with references and past years lists. A sidebar on the left offers search and browse options, while a right sidebar lists related topics and "I Want To..." actions.

USDA United States Department of Agriculture
Animal and Plant Health Inspection Service

Home About APHIS Newsroom Career Opportunities Help Contact Us

You are here: Home > Plant Health > Plant Pest Information > Pest Detection

Plant Health

Pest Detection

Cooperative Agricultural Pest Survey Program

There have been several changes made to the Cooperative Agricultural Pest Survey program from fiscal year 2007. The CAPS program is shifting its strategy from being "pest-specific", to surveying for several pests on a "commodity" basis. APHIS believes the commodity/ecosystem approach will provide a more holistic framework for planning, preparedness, response and recovery from invasive pests of regulatory significance. Priority pests for both the National survey and State-level discretionary surveys have been identified.

- National Pests of Concern
 - 2009 (PDF; 48 Kb)
 - 2010 - Part 1 (PDF; 64 Kb)
 - 2010 - Part 2 (PDF; 59 Kb)
 - 2011 - Part 1 (PDF; 43 Kb)
 - 2011 - Part 2 (PDF; 31 Kb)
- State Pests of Concern
 - 2009 (PDF; 46 Kb)
 - 2010 (PDF; 39 Kb)
 - 2011 (PDF; 21 Kb)
- References:
 - Commodity Reference Guides
 - Mini-Pest Risk Assessments
 - National Wood Borer Bark Beetle National Survey Field Manual - refer to CAPS National Survey Guidelines Appendix M: EWBBB Survey Methods (PDF; 38 Kb)

Past Years Lists

- Fiscal Year 2007
- Fiscal Year 2006
- Fiscal Year 2005
- Fiscal Year 2004

Last Modified: April 30, 2010

Related Topics

- Overview
- Plant Pest Program Information
- Pest Detection
- CPHST
- Pest Identification
- Plant Import and Export
- Permits
- Crop Biosecurity and Emergency Response
- Accreditation, Certification, and Network Services
- Spotlights for PPQ

I Want To...

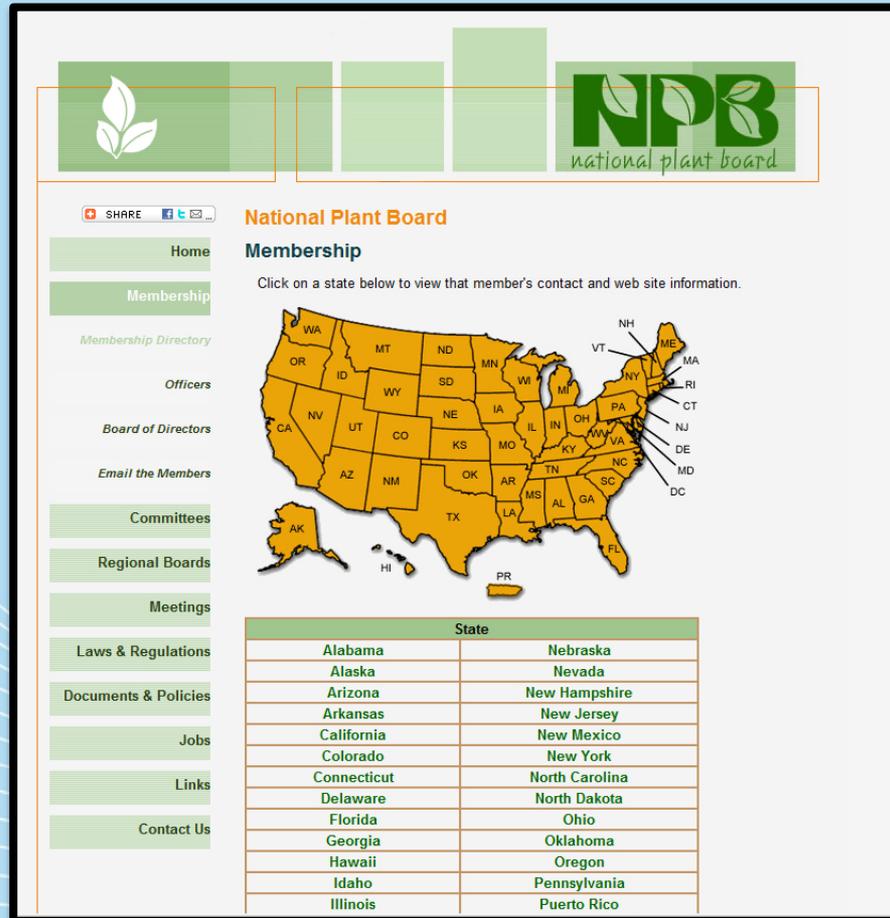
- Learn About and Access the FAVIR Database
- Learn About the Special Needs Request Rule
- View PPQ electronic manuals
- Import a plant, plant product, or soil into the U.S. (PERMIT)
- Transit a plant, plant product, or soil through the U.S.
- Join the PPQ Stakeholder Registry
- Bring a plant pest or biological control organism into the U.S.
- Export a plant or plant product
- Identify a pest
- View environmental documents
- Learn about Offshore Plant Health Safeguarding



protect u.s.
community invasive species network

First Detectors Protecting U.S. from Pests

National Plant Board



National Plant Board

Membership

Click on a state below to view that member's contact and web site information.



State	
Alabama	Nebraska
Alaska	Nevada
Arizona	New Hampshire
Arkansas	New Jersey
California	New Mexico
Colorado	New York
Connecticut	North Carolina
Delaware	North Dakota
Florida	Ohio
Georgia	Oklahoma
Hawaii	Oregon
Idaho	Pennsylvania
Illinois	Puerto Rico



protect u.s.
community invasive species network

First Detectors Protecting U.S. from Pests

Cooperative Extension- Roles and Responsibilities



protect u.s.
community invasive species network

First Detectors Protecting U.S. from Pests

Cooperative Extension

UF/IFAS Extension
Solutions for Your Life

About Extension Local Offices FAQ Success Stories Jobs Weather

- ▶ **Agriculture**
Aquaculture, Citrus, Crops, Forest Resources, Livestock, Nursery & Greenhouse, Organic, Safety, Small Farms, Turf / Sod
- ▶ **Environment**
Ecosystems & Species, Insects, Water, Recreation, Getting Involved
- ▶ **Families & Consumers**
Aging & Caregiving, Children, Food Safety, Health & Nutrition, House & Home, Money Matters, Relationships, Workplace
- ▶ **Lawn & Garden**
Calendar, Getting Started, Maintenance & Care, Plants & Grasses, Problems, Types of Gardens, Industry Professionals, A-Z Index
- ▶ **Sustainable Living**
Agriculture, Environment, Lawn & Garden, Consumers, Involved Citizens, Government Issues, Building & Construction, Land Use & Development
- ▶ **Disaster Prep & Recovery**
- ▶ **4-H Youth Development**

Green Holidays
 Find ways to make decorating, gift giving, and family time to be sustainable for the environment and your budget. [More...](#)

Special Diets and Holidays
 A food allergy, vegetarianism, or diabetes doesn't mean traditional holiday foods are off the table this winter. [More...](#)

Mistletoe
 This plant grows year round, but is most connected to the holidays. Learn how to remove it and use it at home. [More...](#)

La Niña
 A La Niña phase means a warm, dry winter is in store for the Southeast. Read more about climate variability. [More...](#)

Strawberry Disorders
 Botrytis fruit rot and powdery mildew are two diseases to watch for during the winter strawberry season. [More...](#)

Cold Damage on Palms
 We have information on frost and chilling injuries and methods for recovery of damaged tropical palms. [More...](#)

▶ [More Hot Topics...](#)

[Bookmark / share this page](#)

Continuing Education
▶ [Training & CEUs](#)

Upcoming Events
▶ [Featured Events](#)
▶ [Extension Events Calendar](#)

IFAS Resources
▶ [EDIS: IFAS Publications](#)
▶ [Extension Bookstore](#)
▶ [IFAS News](#)
▶ [FAWN: Florida Automated Weather Network](#)
▶ [The Disaster Handbook](#)

Main IFAS Units
▶ [Institute of Food and Agricultural Sciences \(IFAS\)](#)
▶ [IFAS Research](#)
▶ [College of Agricultural and Life Sciences \(CALs\)](#)

 [RSS Feeds](#)



National Plant Diagnostic Network

NPDN
National Plant Diagnostic Network

NPDN Web Ring

- National
 - NPDN
- Regional
 - CPDN
 - NCPDN
 - NEPDN
 - SPDN
 - WPDN
- PDIS
 - PDIS Login

NPDN Portal

- Home
- Employment Opportunities
- Exercise Resources
- First Detector
 - Training Modules
- Meeting Information
 - 2011 National Meeting
 - Past National Meetings
- National Repository
- Newsletter
- Diagnostic Tips

Login Panel

- NPDN Login

Home

Welcome to the National Plant Diagnostic Network Website

The NPDN was established in 2002 by legislative mandate in response to the need to enhance agricultural security through protection of the health and productivity of plants in agricultural and natural ecosystems in the U.S. With support from the USDA-NIFA and through the collective efforts of many individuals representing Land Grant Universities, federal agencies, state departments of agriculture, and other stakeholders, the NPDN has grown into an internationally respected consortium of plant diagnostic laboratories. The specific purpose of the NPDN is to provide a nationwide network of public agricultural institutions with a cohesive, distributed system to quickly detect high consequence pests and pathogens that have been introduced into agricultural and natural ecosystems, identify them, and immediately report them to appropriate responders and decision makers. To accomplish this mission, the NPDN has invested in plant diagnostic laboratory infrastructure and training, developed an extensive network of first detectors through education and outreach, and enhanced communication among agencies and stakeholders responsible for responding to and mitigating new outbreaks. I invite you to explore our website to learn more about the NPDN and our programs.

Richard Bostock, Executive Director, NPDN, University of California, Davis

Upcoming Events

- ESA Annual Meeting
December 12-15, 2010
San Diego, CA
- Nucleic Acid-Based Pathogen Workshop
January 25-28, 2011
Lexington, KY
- Third National Meeting Plans Underway
November 6-8, 2011
San Francisco, CA

Training

NPDN Online Training

NPDN Five Year Review Documentation

- Executive Summary Report
- Table of Contents for Five Year Review Document
- CSREES NPDN Five Year Review
- Summary of Recommendations From Review Team

Collaborators

- Animal and Plant Health Inspection Service

NPDN



protect u.s.
community invasive species network

First Detectors Protecting U.S. from Pests

NPDN Crop Biosecurity E-Learning



Packaging Samples 1

Diagnostic labs receive thousands of specimens each year. Below, and on the next few screens, you can compare poorly-packed and well-packed samples.



Read on to learn what is right/wrong with these clinic specimens.

[Home](#) [Exit](#) [Previous](#) [Next](#)



Photograph Examples

Take a series of photos...

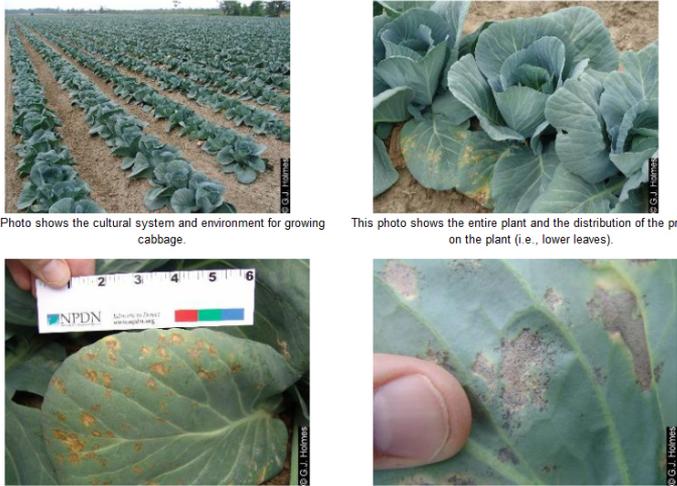


Photo shows the cultural system and environment for growing cabbage.

This photo shows the entire plant and the distribution of the problem on the plant (i.e., lower leaves).

Cabbage leaf with ruler indicates size and extent of leaf damage.

Close-up of plant damage with thumb used to show size/scale.

[Home](#) [Exit](#) [Previous](#) [Next](#)



protect u.s.
community invasive species network

First Detectors Protecting U.S. from Pests

Regional IPM Centers

The screenshot shows the homepage of the National Information System for the Regional IPM Centers. At the top, there is a green header with the text "NATIONAL INFORMATION SYSTEM FOR THE REGIONAL IPM CENTERS" and a "Google Search" box. Below this is a blue navigation bar with links for "INTEGRATED PEST MANAGEMENT", "WHAT IS IPM?", "GLOSSARY", and "FEEDBACK". The main banner features four regional IPM Center logos: North Central (with sunflowers), Northeastern (with red apples), Southern (with a cow), and Western (with a cow). Below the logos are navigation links: "HOME", "ABOUT CENTERS", "NEWS", "PROGRAMS", "CENTER PRODUCTS", and "DATASOURCES".

Welcome to the National Site for the USDA Regional IPM Centers Information System.

This site provides information about commodities, pests and pest management practices, people and issues in the U.S. It also provides links to sites for each of the four Regional IPM Centers. The site has been completely redesigned, so you may find links that don't work. We have tried to minimize errors, but please [let us know](#) if you find information or links lacking.

At this National Site you can access the complete Crop Profiles and Pest Management Strategic Plans databases, an IPM Expertise database, information on pesticide use, current pest management research, funding opportunities, the National IPM Projects database, and links to many related sites

At each of the Regional Center Sites, you can access the same information as found on this National Site, but specific to the individual region. Additional region-specific information, news and announcements can be found within each Regional Center's Site.

The National and Regional Sites share a similar design and organization so that you can easily navigate the information at each site. Please note that your present location will always be indicated by the individual Center logo at the top left of each page, except for this national site, which has all 4 Regional Center logos in the banner. Links to sites outside the Information System will open in new, smaller browser windows

If you have comments, suggestions or questions about this site, please [contact us](#).

[HOME](#) · [BACK TO THE TOP](#)

Regional IPM Links: [NORTH CENTRAL](#) [NORTHEASTERN](#) [SOUTHERN](#) [WESTERN](#) [IPM Directories](#) [Find an Expert](#)

 United States Department of Agriculture National Institute of Food and Agriculture

This system developed and managed by the NSF Center for IPM as the National Information System of the Regional Integrated Pest Management Centers, and is sponsored by the United States Department of Agriculture, National Institute of Food and Agriculture. The NSF Center for IPM is co-located with the Southern Region IPM Center at North Carolina State University, 1730 Varsity Drive, Suite 110, Raleigh, NC 27606.
Last updated: December 20, 2010

Center Cooperators click here for [Intranet](#)



protect u.s.
community invasive species network

First Detectors Protecting U.S. from Pests

Extension Disaster Education Network



Agricultural Disasters

EDEN > Topics > Agricultural Disasters



Agricultural Disasters

Last Updated: 6/22/2010 10:25 AM

Related Pages

- [Swine Influenza](#)
October 19, 2009 US Secretary of Agriculture Tom Vilsack announced the USDA's National Veterinary Services Laboratories (NVSL) confirmed the presence of 2009 pandemic H1N1 influenza virus in a pig sample collected at the Minnesota State Fair.
- [National Links](#)
National links regarding plant and crop security.
- [The Role of an Extension Educator](#)
As an Extension educator, you may play an important role in responding to a plant or crop disaster. EDEN has developed these pages to help Extension educators plan ahead and be prepared to respond.
- [Plant Diagnosticians](#)
Information about Plant Diagnosticians.
- [Sudden Oak Death](#)
Sudden Oak Death (SOD) is a forest disease, caused by a fungus known as *Phytophthora ramorum* that accumulates on host plants.
- [Soybean Rust](#)
Soybean rust is a serious disease causing crop losses in other parts of the world.
- [Plum Pox](#)
Plum pox is caused by a virus from the genus Potyvirus. These are one of the largest groups of plant viruses. The plum pox potyvirus is the only known potyvirus known to infect stone fruit (*Prunus* sp.).
- [Threats to U.S. Crops](#)
Detecting and identifying abnormalities in plants or crops is essential when bringing control to a potential threat. The following resources provide up-to-date information on a variety of biological agents and pests.
- [eXtension](#)
Contains information on avian influenza from eXtension.
- [BSE Definitions and Acronyms](#)
- [Federal Initiatives](#)
- [On the Farm](#)

Agricultural Disasters

- Agrosecurity**
 - DHS Chemical Security
 - Background Info
 - Protecting Farms - Agrosecurity Principles
 - Preparing for an Agroterrorism Event
 - Other Information Sources
- Avian Influenza**
 - eXtension
- BSE - Mad Cow Disease**
 - Confirmed BSE Cases
 - Surveillance and Detection
 - First U.S. Case
 - National Animal Health Laboratory Network
 - On the Farm
 - Federal Initiatives
 - BSE Definitions and Acronyms
- Classical Swine Fever**
- Foot and Mouth Disease**
- Plant and Crop Security**
 - Threats to U.S. Crops
 - Plum Pox
 - Soybean Rust



Agricultural Disasters



Families & Communities



Hazards & Threats



Human Health



Disaster Watch



protect u.s.
community invasive species network

First Detectors Protecting U.S. from Pests

eXtension

These resources are brought to you by the Cooperative Extension System and your Local Institution

Welcome! What's your local institution?

Florida A & M University
University of Florida



[Home](#) [About](#) [Resource Areas](#) [News](#) [Articles](#) [Answers](#) [Calendar](#) [Learning Lessons](#)

Search

Agrosecurity and Floods

Extension Disaster Education Network

Here are some of our featured articles and activities...



Evaluating Seafood for Petroleum Contamination

Seafood processors and regulatory authorities are working hard to ensure the safety of gulf seafood.

[More...](#)

1 2 3 4 5 6 7 Next

In This Resource Area

- Agrosecurity
- Avian Influenza
- Floods

Resources

- Video and Audio Files on preparedness and recovery.
- Coastal Hazards documents in the

Answers from our Experts

October 21, 2010

What is the best way to store water for an emergency?

September 24, 2010

What are PAHs?



This resource area was created by the: Extension Disaster Education Network community

In The News...

December 14, 2010

Winter Disaster Kits Should Protect Family and Farm

December 09, 2010

Prepare for Winter Road Trips

November 30, 2010

Strongest Hurricanes in Northern Gulf of Mexico Often Lose Intensity Just Before Making Landfall Along U.S. Coastline, New Study Says

[More ...](#)

Resource Area Feeds

- [Track all new content](#)



protect u.s.
community invasive species network

First Detectors Protecting U.S. from Pests

Research-Roles and Responsibilities



protect u.s.
community invasive species network

First Detectors Protecting U.S. from Pests

USDA-Agricultural Research Service

The screenshot shows the homepage of the USDA Agricultural Research Service. At the top, it features the USDA logo and the text "United States Department of Agriculture Agricultural Research Service The in-house research arm of the U.S. Department of Agriculture". Below this is a navigation bar with links for "Home", "About ARS", "Help", "Contact Us", and "En Español". A search bar is located on the left side, and a "Browse By Subject" menu is below it. The main content area includes a welcome message, a list of key services, a "Spotlights" section with three featured articles, and a "See Also" section with various links. A sidebar on the right contains a "I Want To..." section with a list of options and an "EMERGENCY READINESS SITE" button. The footer contains copyright information and a "Last Modified" date.

United States Department of Agriculture
Agricultural Research Service
The in-house research arm of the U.S. Department of Agriculture

Home | About ARS | Help | Contact Us | En Español

Printable Version | E-mail this page

Search
Enter Keywords
o Advanced Search
o Search Tips

Browse By Subject

- Research
- Products & Services
- People & Places
- News & Events
- Partnering
- Careers

Welcome to the Agricultural Research Service—one of the world's premier scientific organizations.

- Our scientific [research](#) solves problems that affect Americans daily.
- We perform the research at about 100 [locations](#).
- We often form science [partnerships](#) with others.
- Every research project is coordinated through our [National Research Programs](#).

[More about us](#) | [Latest news](#) | [Agricultural Research Magazine](#)

Spotlights

-  **Seeds to Svalbard**
U.S. seed collection delivers valuable varieties of chili peppers
-  **Kids and diabetes risk**
do chromosomes hold new clues?
-  **ARS H1N1 Research Program**
-  **ARS Recovery Act Information**
American Recovery and Reinvestment Act and ARS
-  **Come work with us**
Career paths from agronomy to zoology.
-  **Science for Kids**
Fighting weeds with vinegar?

I Want To...

- Find an ARS location
- Find a person
- Search for a research project
- Search for a publication
- Ask a question
- Find ARS OCIO
- Find AFM
- Outreach, Diversity, & Equal Opportunity
- Know about the Freedom of Information Act and Privacy Act

See Also

- Quality of Information
- Peer Review Guidelines
- Human Capital Management

EMERGENCY READINESS SITE

Agricultural Outlook Forum 2011
Feb 23-25, 2011

Last Modified: 12/13/2010

ARS Home | USDA.gov | Site Map | Policies and Links
FOIA | Accessibility Statement | Privacy Policy | Nondiscrimination Statement | Information Quality | USA.gov | White House



protect u.s.
community invasive species network

First Detectors Protecting U.S. from Pests

US Forest Service

The screenshot shows the US Forest Service website homepage. At the top, there are navigation links for 'ABOUT US', 'CONTACT US', 'FAQs', and 'NEWSROOM'. The main header features the 'US FOREST SERVICE' logo and the tagline '100 Years of Caring for the land and serving people'. A search bar is located in the top left. A large scenic image of the Bridger-Teton National Forest is featured, with a text box stating: 'A scenic picture of the Bridger-Teton National Forest with large, snow-covered mountains in the background and lake in the foreground.' Below the image is a search bar with 'Find a Forest or Grassland' and filters for 'By State' and 'By Name'. The 'National News' section highlights 'Capitol Christmas Tree is lit' with a photo of the tree and text: 'WASHINGTON, DC, December 7, 2010 -- The 2010 U.S. Capitol Christmas Tree - a 67-foot Engelmann Spruce from Wyoming's Bridger-Teton National Forest, was lit tonight in a public ceremony attended by congressional representatives of the state of Wyoming. At dusk, Speaker of the House Nancy Pelosi lit the tree with the help of David Sitter, a Fairview, Wyo. sixth-grader who won the honor in a state contest. Read about the tree's journey in the [Capitol Christmas Tree's blog](#). Learn more at the [Capitol Christmas Tree 2010 website](#).' Other news items include 'USDA Researchers Receive Prestigious Presidential Award for Early Career Scientists' and 'Welcome to the USDA Forest Service' with a photo of Chief Tom Tidwell. The footer includes contact information for the US Forest Service and logos for E-GOV and USA.gov.



protect u.s.
community invasive species network

First Detectors Protecting U.S. from Pests

Land Grant Universities

The screenshot shows the USDA National Institute of Food and Agriculture website. The header includes the USDA logo and the text 'United States Department of Agriculture National Institute of Food and Agriculture'. Below the header are navigation tabs for 'research', 'education', and 'extension'. A secondary navigation bar contains links for 'Home', 'About Us', 'Grants', 'Forms', 'Newsroom', 'Help', and 'Contact Us'. The main content area is titled 'About Us' and 'State & National Partners'. It includes a search bar, a 'Browse by Subject' menu, and a 'Related Information' section. A map of the United States is displayed, with states labeled with their abbreviations. Below the map is a table listing territories and their abbreviations.

Search NIFA

Search Help

Browse by Subject

- Agricultural Systems
- Animals
- Biotechnology & Genomics
- Economics & Community Development
- Education
- Environment & Natural Resources
- Family, Youth & Communities
- Food, Nutrition & Health
- International
- Pest Management
- Plants
- Technology & Engineering

State & National Partners

By definition, NIFA cooperates with many institutions, or partners. The most prominent among our many partners are the more than 100 colleges and universities that comprise the nation's Land-Grant University System. A land-grant college or university is an institution that has been designated by its state legislature or Congress to receive unique federal support. The map and links below provide access to land-grant institution information.

If you are looking for your nearest extension office, please see our Cooperative Extension System Offices page.

- Printable Land-Grant system maps and lists
- Text version of map below

Related Information

- Cooperative Extension System Offices
- Discussion of NIFA partnerships
- A-Z Index
- FAQs
- Glossary
- Grant Search

Printable Maps

American Samoa	Guam	Federated States of Micronesia	Northern Marianas	Virgin Islands	Washington, D.C.
----------------	------	--------------------------------	-------------------	----------------	------------------



protect u.s.
community invasive species network

First Detectors Protecting U.S. from Pests

Private Sector-Roles and Responsibilities



protect u.s.
community invasive species network

First Detectors Protecting U.S. from Pests

Certified Crop Advisors

Quick Links: [India CCA](#) | [American Society of Agronomy](#) | [Careers](#) | [Crops & Soils Magazine](#) | [Calendar](#) | [Society Store](#) | [Contact Us](#) | [Sitemap](#)

Certified Crop Adviser

A Program of the American Society of Agronomy

About Certification | About the Program | Certifications | Continuing Education | Exams | Promotional Materials | Self Study

Search [] My Account: Log In | Certify | Renew

Soil Organic Carbon Trends Over 100 Years

Accumulated soil organic carbon is an important factor in quality and productivity of soil, and maintaining or increasing soil organic carbon is an important goal of current crop and soil management. The current interest in removing crop residue to serve as a fuel source and the ongoing concern about the use of fertilizer, especially nitrogen, has increased the interest in research that addresses the effects of cropping system, residue removal, and nitrogen fertilizer rates on soil organic carbon.

The purpose of this study, conducted by researchers from the Univ. of Illinois, was to reexamine existing soil organic carbon (SOC) data from the Morrow Plots, including the use of regression to assess changes in SOC with rotation, management, and nitrogen (N) fertilizer use over time.

[More information>>](#)

Fundamentals Course

Have a new hire or know someone who would like to increase their basic agronomy skills? Need a refresher on the fundamentals? ASA is offering a 12-week online course, January-March 2011, that is based on the Certified Crop Adviser exam performance objectives. Register by Jan. 3. [More Info>>](#)

FUNDAMENTALS IN Applied Agronomy

Crops & Soils Magazine

A new issue, November-December 2010, of *Crops & Soils* magazine is now posted online. Articles include:

- **Feature:** Controlling nitrogen runoff with on-farm bioreactors
- **Industry Perspective:** Natural resource conservation: hidden agronomic practice
- **CEUs:** Earn up to 2.5 CEUs in Nutrient Management

[Dig It! at The Durham](#)

The SSSA...

CCA Certification

Report
Report your CCA CEUs

Check CEUs
Check your CCA CEUs

Renew
Renew your Certification

Self Study CEUs
Earn CEUs Online

Find a CCA

Search for certified professionals

CCA Toolbox

Applications for working agronomists

Become Certified

[Steps to Certification](#)

[Check Credentials](#)

[Credential Forms](#)

[Certification Exams](#)

Educational Event Calendar

[View or Post Educational Events](#)

[Offer CEUs at Your Meeting](#)

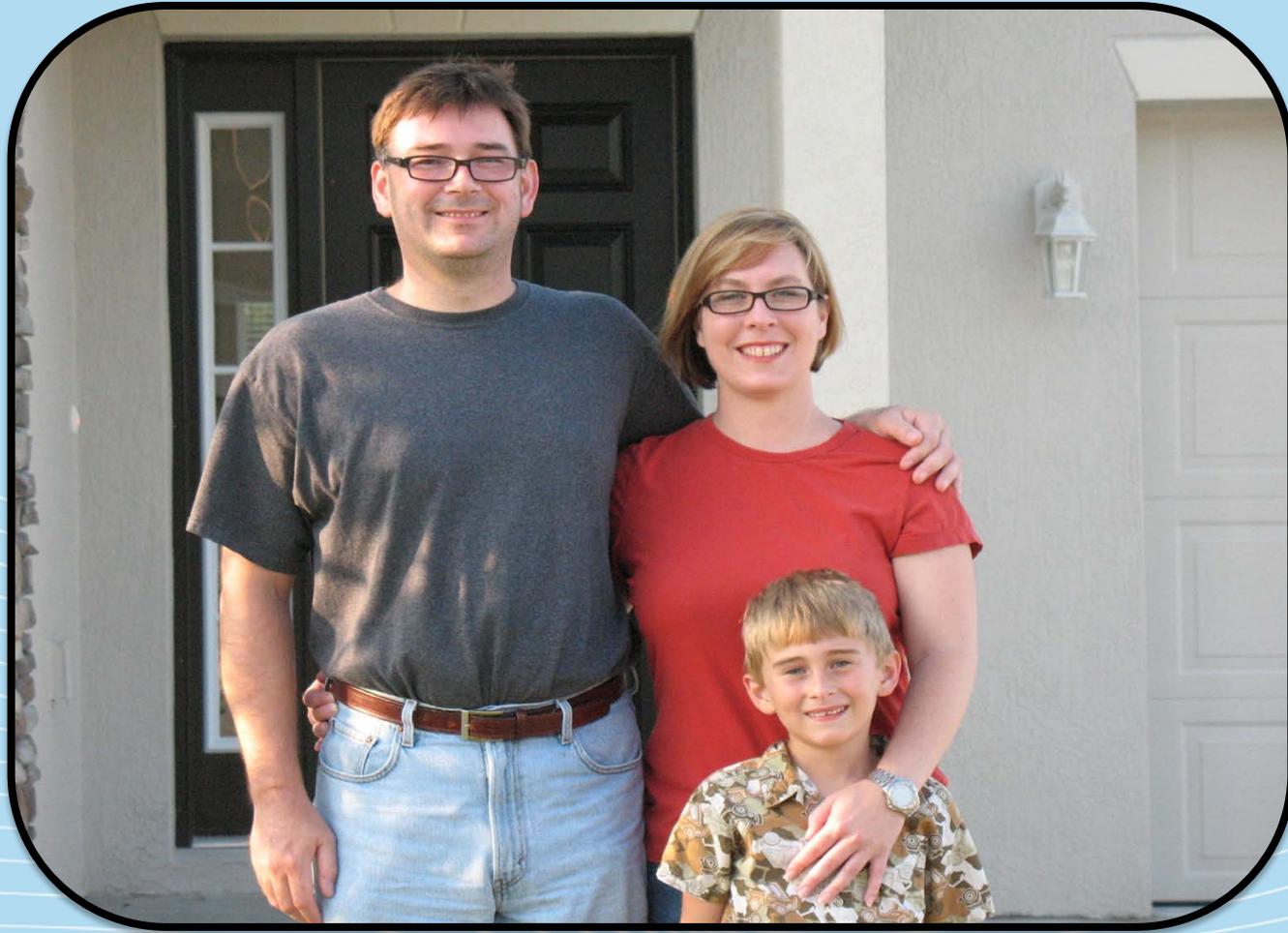
[Online Seminars](#)



protect u.s.
community invasive species network

First Detectors Protecting U.S. from Pests

Homeowners and You!



protect u.s.
community invasive species network

First Detectors Protecting U.S. from Pests

Questions?

- For more information, check out www.protectingusnow.org
- You can also contact:
 - Amanda Hodges, Ph.D., Associate Extension Scientist, Department of Entomology and Nematology, University of Florida, achodges@ufl.edu
 - Stephanie Stocks, M.S., Assistant –In, Extension Scientist, Department of Entomology and Nematology, University of Florida, sstocks@ufl.edu



protect u.s.
community invasive species network

First Detectors Protecting U.S. from Pests

Author and Publication Dates

- Amanda Hodges, Ph.D., Associate Extension Scientist, Department of Entomology and Nematology, University of Florida
- Stephanie Stocks, M.S., Assistant –In, Extension Scientist, Department of Entomology and Nematology, University of Florida
- Published - March 2010
- Edited – December 2011
- Updated – July 2013



protect u.s.
community invasive species network

First Detectors Protecting U.S. from Pests

Reviewer Credits

- Stephanie Bloem, Ph.D., Risk Analyst - Training Specialist, USDA-APHIS-PPQ-CPHST
- Rachel L. McCarthy, MPS, Education and Training Coordinator- Northeast Plant Diagnostic Network, Department of Plant Pathology and Plant-Microbe Biology, Cornell University
- Julieta Brambila, MS, Entomologist, USDA-APHIS-PPQ



protect u.s.
community invasive species network

First Detectors Protecting U.S. from Pests

Educational Disclaimer and Citation

- This presentation can be used for educational purposes for NON-PROFIT workshops, trainings, etc.
- Citation:
 - Hodges, Amanda and Stephanie Stocks. 2010. Overview: Invasive Species that Affect Plants. Accessed (add the date) – www.protectingusnow.org.



protect u.s.
community invasive species network

First Detectors Protecting U.S. from Pests

Our Partners

Much of the authorship of e-learning content has occurred through partnerships. Some of our partnering organizations have included:



[National Institute of Food and Agriculture \(NIFA\)](#)



[Center for Invasive Species and Ecosystem Health](#)
(i.e. the Bugwood Network)



[Local and Regional Integrated Pest Management programs \(IPM\)](#)



[U.S. Department of Homeland Security \(DHS\)](#)



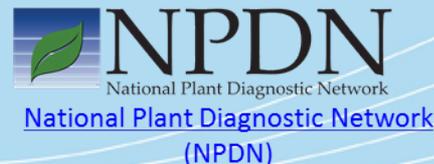
[USDA-APHIS](#)



[Extension Disaster Education Network \(EDEN\)](#)



[U.S. Forest Service](#)



protect u.s.
community invasive species network

First Detectors Protecting U.S. from Pests

References

- Asian Soybean Rust Development in 2005: A Perspective from the Southeastern United States. accessed 7/2/2013
 - <http://www.apsnet.org/publications/apsnetfeatures/Pages/SoybeanRustDev.aspx>
- Economos, C. and W.D. Clay. Nutritional and health benefits of citrus fruits. FAO Corporate Document Repository. accessed 7/2/2013.
 - <http://www.fao.org/docrep/x2650t/x2650t03.htm>
- Emerald Ash Borer Website. Accessed 7/2/2013
 - <http://www.emeraldashborer.info/#sthash.Fc3WYiKy.dpuf>
- Florida Agricultural Statistics Service. Citrus Summary 2007-2008. Accessed 7/2/2013
 - http://www.nass.usda.gov/Statistics_by_State/Florida/Publications/Citrus/cs/2007-08/cs0708all.pdf
- Halbert, S. Florida Department of Agriculture and Consumer Services, Division of Plant Industry. Personal communication.
- Halbert, S. Florida Department of Agriculture and Consumer Services, Division of Plant Industry Pest Alert. accessed 7/2/2013
 - <http://www.freshfromflorida.com/pi/pest-alerts/huanglongbing.html>



References

- Holmes, T.P., E.A. Murphy, D.D. Royle. “The economic impacts of hemlock woolly adelgid on residential landscape values: Sparta, new jersey case study”. Presentations at the Third Symposium on Hemlock Woolly Adelgid. accessed 7/2/2013
 - http://www.fao.org/uploads/media/The_economic_impacts_of_hemlock_woolly_adelgid_on_residential_landscape_values_Sparta_New_Jersey_case_study.pdf
- Levy, L., V. Damsteegt, R. Scorza, M. Kolber. Plum Pox Potyvirus Disease of Stone Fruits. accessed 7/2/2013
 - <http://www.apsnet.org/publications/apsnetfeatures/Pages/PlumPoxPotyvirus.aspx>
- Miller, R.H. and K.S. Pike. 2002. Insects in Wheat-Based Systems. Pages 367-393, found in B.C. Curtis, S. Rajaram, and H. Gomez Macpherson (eds.). Bread wheat, improvement and production. FAO Plant Production and Protection Series, No. 30. Rome. 553 pp. accessed 7/2/2013
 - <http://www.fao.org/docrep/006/Y4011E/Y4011E00.HTM>
- Ombrello, T. Plant of the Week – Kudzu. accessed 7/2/2013
 - <http://faculty.ucc.edu/biology-ombrello/POW/kudzu.htm>



References

- Scora, R.W. “On the History and Origin of Citrus”, Bulletin of the Torrey Botanical Club, Vol. 102, No. 6 (Nov. - Dec., 1975), pp. 369-375. Accessed 7/2/2013 –
 - <http://www.jstor.org/stable/2484763> .
- Steck, G., W. Dixon, and D. Dean. Florida Department of Agriculture and Consumer Services, Division of Plant Industry Pest Alert. Accessed 7/2/2013 –
 - <http://www.freshfromflorida.com/pi/pest-alerts/drosophila-suzukii.html>
- USDA APHIS. Plant Health - *Phytophthora ramorum*/Sudden Oak Death. accessed 7/2/2013
 - http://www.aphis.usda.gov/plant_health/plant_pest_info/pram/index.shtml
- USDA Citrus Fruit Summary 2010. accessed 7/2/2013
 - <http://usda01.library.cornell.edu/usda/nass/CitrFrui//2010s/2010/CitrFrui-09-23-2010.pdf>
- USDA-APHIS-PPQ FAQ fact sheet (2007).
- USDA-APHIS-PPQ Fact Sheet. Plum Pox. accessed 7/2/2013
 - http://www.aphis.usda.gov/publications/plant_health/content/printable_version/fs_rev_plumpox_2009.pdf



protect u.s.
community invasive species network

First Detectors Protecting U.S. from Pests

References

- USDA ERS. Soybean and Oil Crops. accessed 7/2/2013
 - <http://www.ers.usda.gov/Briefing/SoybeansOilCrops/> USDA-ERS. Strawberry. accessed 7/2/2013 -
 - <http://usda.mannlib.cornell.edu/MannUsda/viewDocumentInfo.do?documentID=1381>
- USDA ERS. Wheat. accessed 7/2/2013
 - <http://www.ers.usda.gov/Briefing/Wheat/>
- USDA ERS . Wheat Statistics. accessed 7/2/2013
 - <http://www.ers.usda.gov/data/wheat/YBtable05.asp> and
 - <http://www.ers.usda.gov/data/wheat/YBtable03.asp>
- US. Forest Service. Northeastern Area. Forest Health Protection—Hemlock Woolly Adelgid. Accessed 7/2/2013
 - <http://www.na.fs.fed.us/fhp/hwa/>
- Winterhalter, A.C. Potyvirus: genome structure, organisation, processing and possible functions of mature proteins. accessed 7/2/2013
 - <http://www.uq.edu.au/vdu/VDUPotyvirus.htm>

