

## GREENING MANAGEMENT

- Restricted propagation and movement of *Murraya paniculata* and *Severinia buxifolia*, plants known to harbor the bacterium
- Routine scouting (minimum of 4 times a year)
- Removal of infected trees
- Integrated pest management
- Use of disease-free nursery trees
- Reduction of the inoculum by frequent disease surveys and removal of symptomatic trees
- Suppression of Asian citrus psyllid populations through chemical, biological and cultural controls

## DIAGNOSTICS

- PCR (Polymerase Chain Reaction) is the only way to positively identify citrus greening
- Three testing sites are available :
- Southern Gardens Diagnostic Laboratory  
111 Ponce de Leon Avenue  
Clewiston, FL 33440  
(863) 902-2249
- UF/IFAS Southwest Florida REC  
2686 SR 29 N  
Immokalee, FL 34142  
(239) 658-3400  
<http://swfrec.ifas.ufl.edu/hlb/>
- Florida Division of Plant Industry  
1-800-282-5153

## RESOURCES

- Citrus Research and Education Center website [www.crec.ifas.ufl.edu](http://www.crec.ifas.ufl.edu)
- Greening Symptoms Laminated Sheet
- Greening Symptoms versus Nutritional Deficiencies Laminated Sheet
- Greening Symptoms versus Blight and Tristeza Laminated Sheet
- Greening Field ID Pocket Guide
- Greening Training DVD
- Greening Screensaver
- 2008 Florida Citrus Pest Management Guide

## CONTACTS

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## CITRUS GREENING



CH198

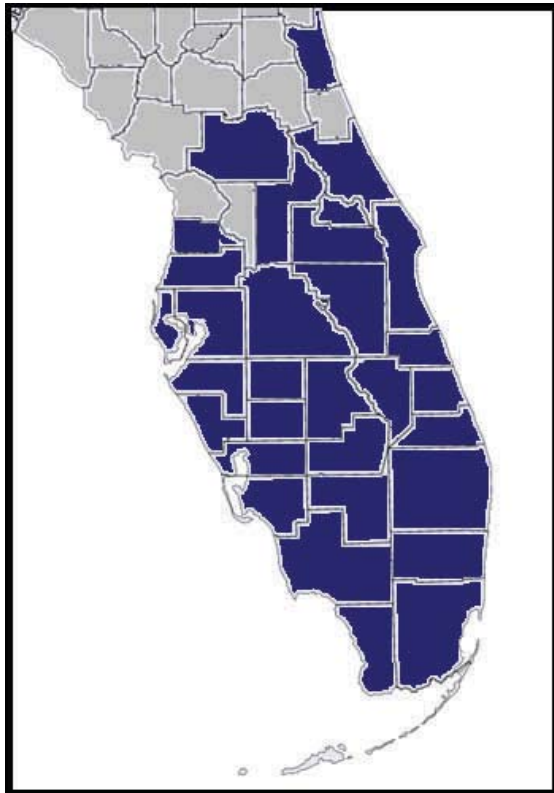
A serious threat to the  
Florida Citrus Industry

**UF** UNIVERSITY of  
**FLORIDA**  
IFAS Extension

July 2008

## GREENING HISTORY

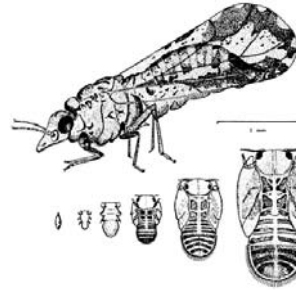
- The vector, Asian citrus psyllid, was first found in Florida in 1998
- Citrus greening disease was first detected in south Florida in August 2005
- As of October 2006, greening infected trees had been found in twelve counties
- By October 2007, infected trees had been discovered in twenty-eight counties
- Symptoms can be found year round, but are more prominent September through March



Counties in dark blue have confirmed greening finds as of July 2008

## GREENING VECTOR

- Asian citrus psyllid (*Diaphorina citri*)
- Five nymphal stages
- Numerous generations per year
- Egg to adult in 2 weeks at 75° to 85° F
- The egg stage lasts an average of 3 to 4 days
- The duration of the nymphal stages is about 12 to 14 days at 82°F
- Adult psyllids may live for several months
- Psyllids can acquire the greening pathogen from infected trees, regardless of whether symptoms are present on the tree
- The longer psyllids remain uncontrolled and allowed to feed on infected trees, the higher the chance that those psyllids will become capable of acquiring and spreading greening to other trees
- Psyllid populations are best managed by controlling adults prior to the presence of new flush which facilitates rapid population growth
- Chemical control of the psyllid and removal of infected trees are the only methods currently available to manage the spread of greening disease



D.L. Caldwell, UF



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## GREENING SYMPTOMS



Vein corking

Fruit remain green at the blossom end



Yellow shoots



Yellow veins



Reduced fruit size



Blotchy mottle – key diagnostic symptom

**For more information, please contact the University of Florida, IFAS, Citrus Research and Education Center, Lake Alfred 863-956-1151**