



Laurel Wilt Update

Statewide Pest Polycom Update

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Crop Specialist*

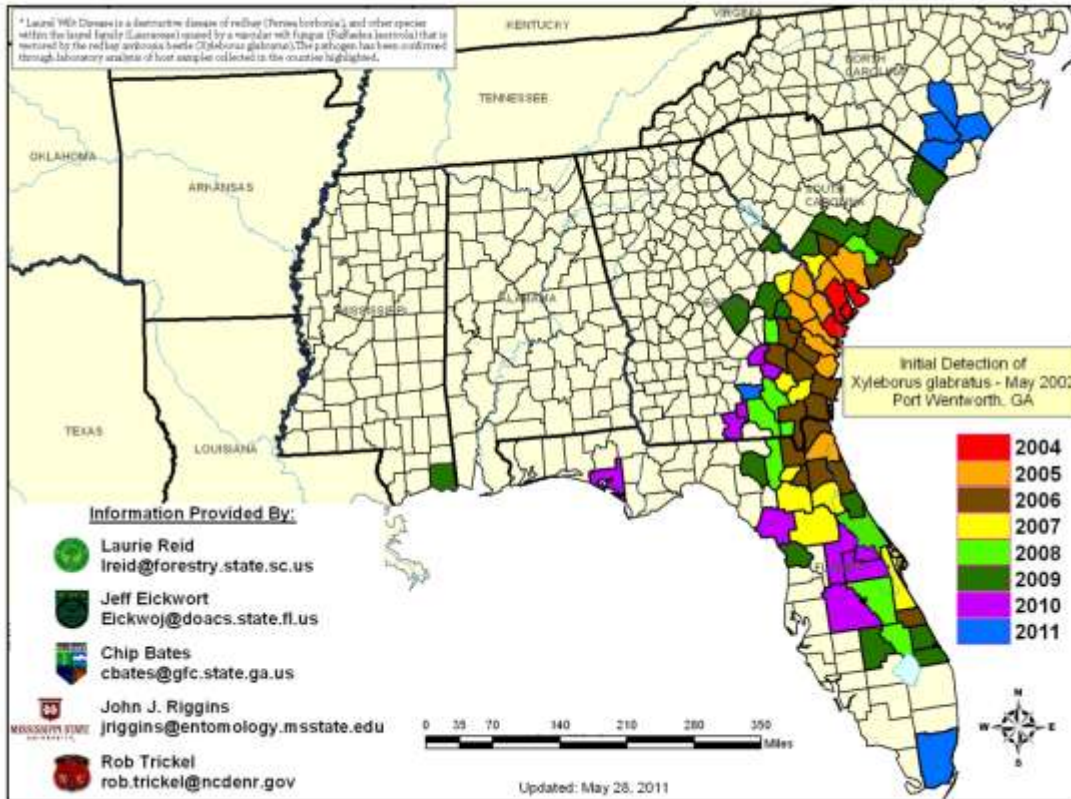
University of Florida, IFAS

Tropical Research and Education Center

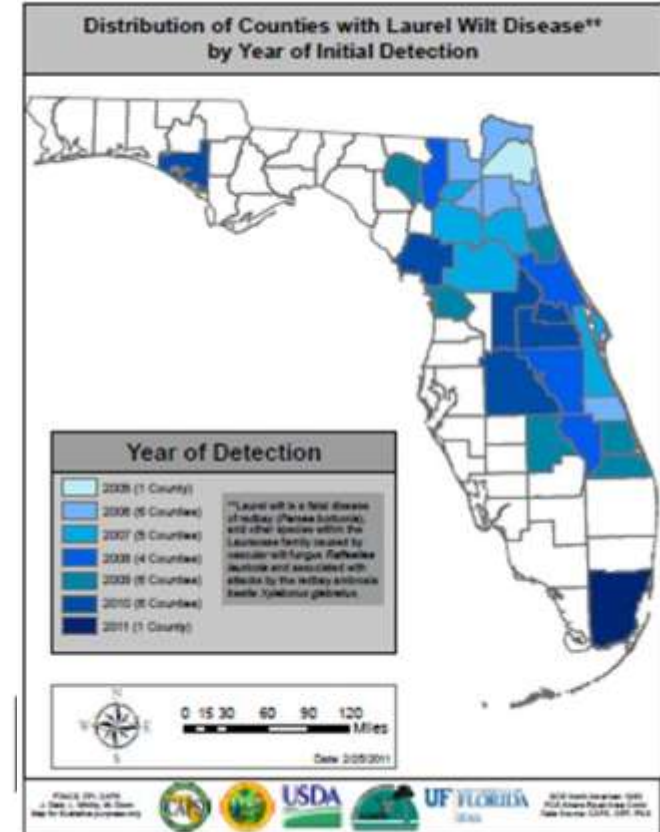
Homestead, Florida

Current spread of Laurel Wilt (LW)

Distribution of Counties with Laurel Wilt Disease* by year of Initial Detection



Distribution of Counties with Laurel Wilt Disease** by Year of Initial Detection



Location of the LW positive trees in Miami-Dade County

- Bird Road Basin
 - Natural area
 - Numerous land owners
 - Well-field recharge location
- RAB trapped Feb., 2010
- Three swampbay (*Persea palustris*) trees were sampled and found positive for LW, Feb., 2011.
- Between mile marker ~20 and 21 on east side of Krome Avenue. About 4 miles to the nearest avocado grove, 15 miles to the main production area.
- Samples were sent to 3 laboratories
 - DPI, Gainesville
 - J. Smith, UF-SFRC
 - R. Ploetz, UF-TREC
- Confirmed by:
 - Visual – CSMA selective augur - symptoms
 - Molecular testing
 - PCR amplification of diagnostic small subunit (rDNA)
 - PCR amplification of diagnostic microsatellite DNA loci
 - Koch's postulates
 - Inoculate container-grown 'Simmonds' avocado trees with isolates from suspect trees

Current status

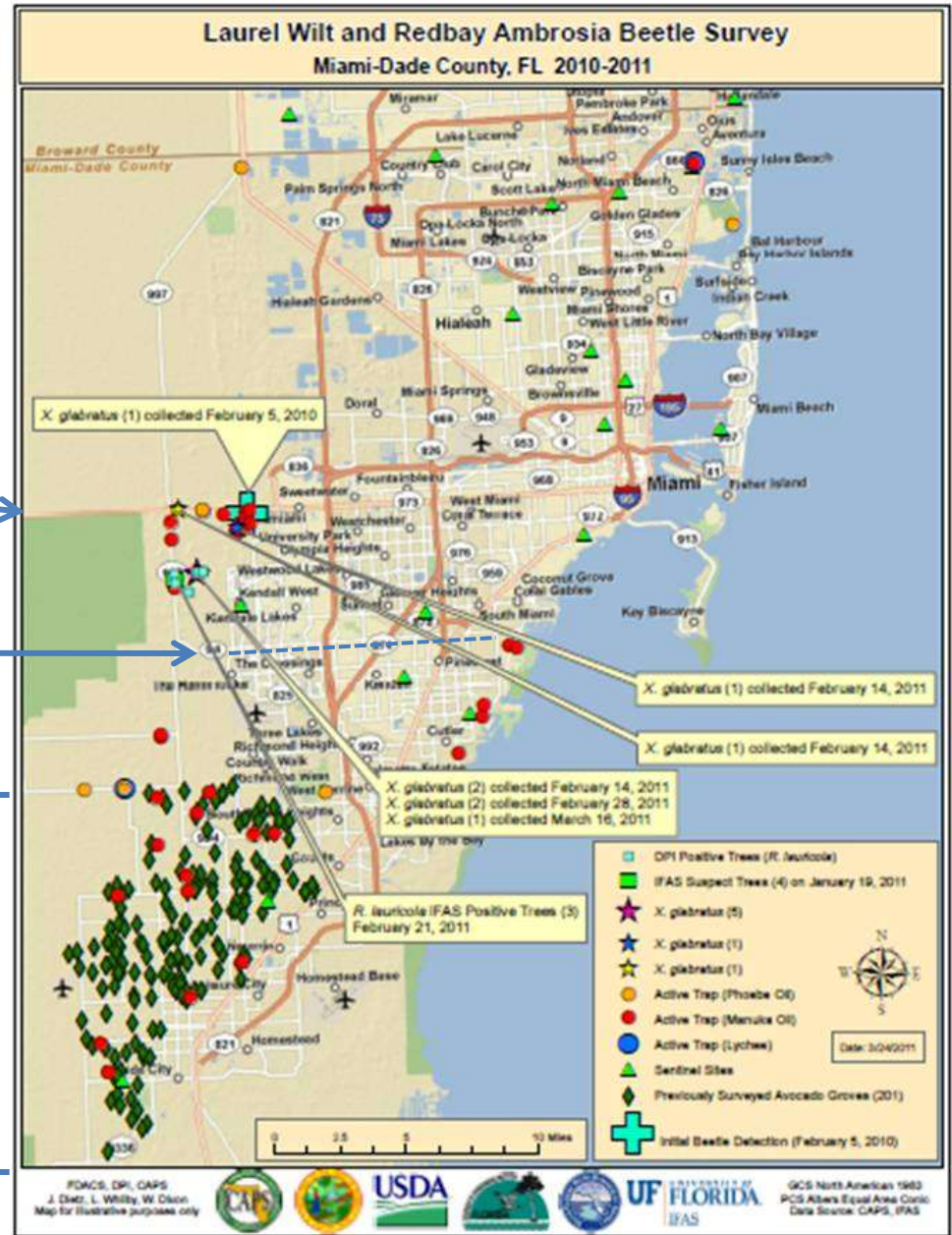
- LW was positively identified in about 30 additional swampbay samples in the Bird Road Basin and numerous trees show the wilting/dead leaf symptoms.
- The disease (insect) appears to be spreading mostly north and west into the natural areas. There has been some southern spread on native trees but not beyond SW 88 St. (Kendall Drive).
- LW has not been detected in any avocado trees in the urban areas to the east or groves to the south.

Location of the LW positive swampbay trees in Miami-Dade County

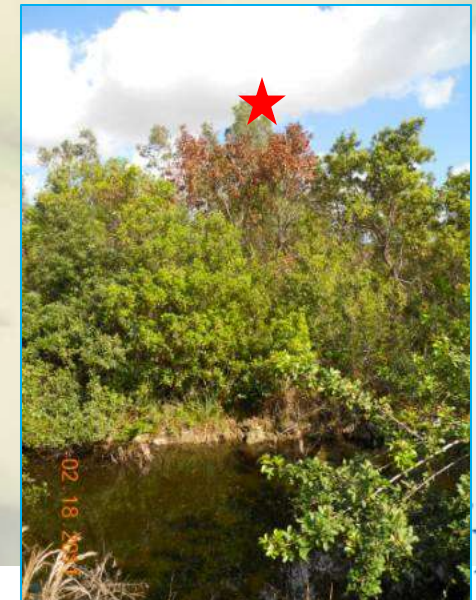
Tamiami Trail/
Rt. 41/SW 8th St.

SW 88 St.
(Kendall Drive)

Agricultural/avocado
production area



Swampbay – just south of mi. marker 20 and between mi. marker 20-21 along SW 177 Ave. (Krome Ave.)



★ = dying tree

9/23/2011

Swampbay along SW 42 St. canal (off of SW 162 Ave.)

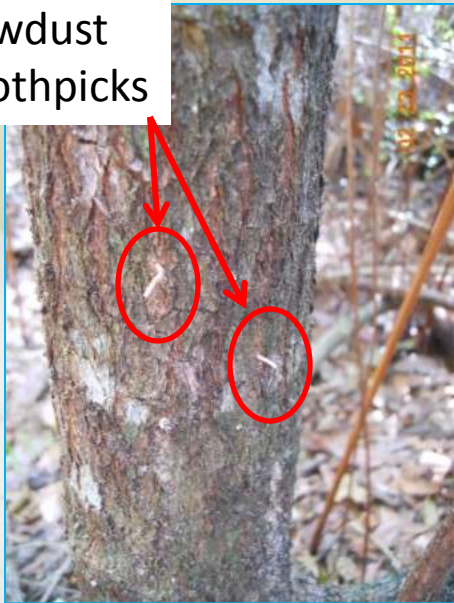


Swampbay along SW 42 St. canal (off of SW 162 Ave.)



Sapwood
discoloration

Sawdust
toothpicks



Sawdust



9/23/2011

Avocado symptoms Brevard County



9/23/2011

Current recommendations

Urban/residential

- Report declining trees in Lauraceae to DPI (1-888-397-1517)
- Remove declining or dead host wood but do not move from property (unless to incinerator)
 - Chip/tarp, burn, or bury
- Alamo[®] (propiconazole) is legal for infusion into redbay trees
- Merit[®] and Malathion[®] are registered
 - When to apply?
 - Environmental issues

Commercial avocado industry

- Detection and suppression
 - Early detection of LW and suppression of RAB
 - Remove and destroy infested/infected wood or tree
- Limited area insecticide applications upon detection
 - Danitol[®], Permethrin[®], Malathion[®], Admire[®]
- No fungicide recommendations at this time (Tilt[®] is legal but...)

Current research - TREC

Plant Pathology (RC Ploetz)

- Biology of LW
 - Host-pathogen interactions
 - Physiology of avocado reaction
 - LW Epidemiology
- LW avocado cultivar evaluations
- Fungicide infusion testing under grove conditions
 - Propiconazole
 - Thiabendazole
 - Tebuconazole

Entomology (JE Peña)

- Insecticide efficacy
 - Contact
 - Systemics
 - Repellents
- Biological control
- Biology of RAB
 - Flight behavior and host selection
 - Investigating attack severity to disease incidence

Current research

Plant pathology

- J Smith, UF-SFRC
 - Diagnostics
 - Transmission of LW
 - Effect of chipping/composting on RAB and LW survival

Agricultural economics

- E Evans, UF-TREC
 - Economic impact
 - Cost of control

Entomology

- L Stelinski et al., UF-CREC
 - Host RAB attractants (host plant volatiles, fungal volatiles, others) and host attractiveness
- P Kendra, USDA-ARS
 - Host RAB attractiveness
 - RAB boring behavior/cues
 - Host wood volatile analysis
 - RAB flight behavior
 - Trap and kill systems

J Crane - Extension-research

Extension

- In cooperation with FDACS-DPI and UF-Extension Agents
- Laurel Wilt Working Group
- Avocado Administrative Committee and Industry
 - Liaison, reports, updates, advice
 - Control strategy
- In-person seminars, webinars/polycom, brochures, postcards, print and electronic documents and presentations
- Research funding advocate and liaison

Research

- Entomology
 - Assist chemical control investigations with Dr. Peña
- Plant pathology
 - Fungicide infusion evaluation team with Rainbow Tree Care (Tom Prosser/Greg Krogstad) and Dr. Ploetz and Dr. Evans
 - Fruit residues
 - Efficacy



FDACS/DPI Helpline

888-397-1517

DPI links:

www.fl-dpi.com

http://www.freshfromflorida.com/pi/enpp/pathology/laurel_wilt_disease.html

savetheguac.com

UF/IFAS Extension offices:

<http://solutionsforyourlife.ufl.edu/map/index.html>

UF/IFAS publications: <http://edis.ifas.ufl.edu>

UF/IFAS Tropical Research and Education Center:

<http://trec.ifas.ufl.edu>