Minutes for the RBAB-LW Working Group Meeting
July 19, 2010 – TREC, Florida
10:00am to 1:00pm

Date: July 19, 2010
Time: 10:00AM-1:00PM
Location: TREC Teaching Bldg
18905 S.W. 280 St.
Homestead, FL 33033
Tel: 305-246-7001

Present: Jonathan Crane, Wayne Dixon, Armando Monterroso, Adrian Hunsburger, Tim Schubert, Edward Evans, Medora Krome, Butch Calhoun, Andrew Derksen, Leroy Whilby, Mark Philcox, Bill Klien, Craig Wheeling, Sharon Inch, Randy Ploetz, Teresa Olczyk, Charles LaPradd, Jason Smith, Joan Dusky

Opening Remarks/Welcome ..... Jonathan Crane/Wayne Dixon

Status of the Section 18 Quarantine Exemption Request for Tilt (propiconazole) – Jonathan Crane

Mr. Charlie L. Clark, Administrator and Mr. Bob Moore, Asst. Adm. with the Pesticide Registration Section, Bureau of Pesticides, FDACS, continue to work with the staff of EPA that are reviewing the Quarantine Exemption Section 18 proposal for the use of propiconazole on avocado.

Crisis Exemption Considerations – Jonathan Crane

The language for the CRISIS Exemption has been completed and is in a form that could be used if and when the industry decides it needs the immediate use of propiconazole (Tilt) to protect avocado trees from laurel wilt (LW).

Trapping Results and Other Regulatory Considerations – Andrew Derksen, FDACS-CAPS Survey

- February 2010 – one redbay ambrosia beetle (RAB) trapped in a residential area adjacent to Everglades National Park, west-central Miami-Dade County
- February/May 2010 – RAB detection survey intensified; 111 manuka oil-baited Lindgren traps arrayed in west-central Miami-Dade County south to northern edge of avocado production area, checked every two-weeks
    - To date, no additional RAB has been detected and no avocado or native tree has been found positive for the laurel wilt pathogen (LW)
- May 2010 – sixty-five RAB detection survey traps employed, half with manuka oil and half with phoebe oil attractant; checked every 30 days
    - To date, no RAB has been detected
- July 2010 – with over 6 months of intensive trapping, 12 trap inspections, 10 survey transects of the initial RAB trap area, and 5 grove trap inspections, no new RAB has been detected and no LW confirmed

- FDACS-DPI and USDA-CAPS are working on an agreement to hire staff dedicated to continue RAB-LW surveys and RAB monitor traps for the foreseeable future

Research Updates/Reports

Dr. Jorge Peña, Research Update on Redbay Ambrosia Beetle

- Preliminary findings suggest the life cycle of RAB is approximately 20 days (at ~75F) and not 50 days as previously reported. Apparently RAB remain inside the infested wood feeding and mating for about 30 or more days and leave after the food source declines.
- The population pressure in natural areas appears to vary a lot and so far the populations of RAB in these areas increased during March and April; the populations will continue to be monitored throughout the year to determine peaks of activity on south, south-central Florida.
- Pesticide testing will continue with Endigo+NuFilm, Permethrin+LI700 and Hero. Several insecticides have been shown to be unreliable, e.g., Lorsban and Ednosulfan, and others such as Lannate do not work. Results with Malathion (no adjuvant) have been variable. So far the best materials include Danitol, Tolfenpyrad, Kryocide and Endigo.
- The repellent Verbone appears to reduce the number of RAB attacking host plants. However, the volatilization decreases during cool/cold weather as does its effectiveness. This material may be of use a part of a RAB protection program during warm/hot months
- Work with cooperators in Taiwan on RAB is ongoing.
- Preliminary finds suggest there is a large difference in the type of ambrosia beetles that emerge from redbay and avocado. Redbay-infested logs in RAB areas appear to have a preponderance of RAB beetles emerge whereas the number of non-RAB beetles that emerge from avocado logs is many fold greater than RAB beetles. This suggests that either avocado wood is not a good host for RAB and/or competition among ambrosia beetles inside avocado logs somehow depress RAB.
- The research funding on short-term RAB control is about to cease and the Florida Avocado Administrative Committee will seek to fund Dr. Peña's vital work in this area.

Dr. Randy Ploetz, Past, Current, and Potential LW Fungicide Research findings and Application Technology and Discuss the Relationship between Dutch Elm Disease and Oak Wilt Control to Laurel Wilt Disease and Control

- Dr. Ploetz discussed the importance of protecting the sapwood (living xylem) and the impediments to obtaining efficacious amounts of fungicide through bark into the xylem and/or having enough fungicide absorbed into the xylem through root applied applications. He also spoke about the similarities of Dutch elm disease (DED) and oak wilt and laurel wilt (LW) and that these other diseases are managed by macro-infusions of propiconazole; Dutch elm disease is also managed with macro-infusions of thiabendazole. He also cited a review of previous fungicide control testing for DED which concluded propiconazole was the most efficacious material found to date. It was pointed out that there are no examples of successful tree management of a vascular wilt disease with topically applied (bark applied) fungicides.

- Current work in his lab and with collaborators has shown that part of the xylem blockage observed with LW is caused by cellular tyolose formation in affected areas of the sapwood. This suggests the avocado is attempting to wall off or block spread of the LW.
- Current work in progress includes analysis of the high rates of propicaonazole + PentraBark used at the DuPuis Reserve site and at TREC.

Dr. Ploetz outlined the requirement for a obtaining a second fungicide to control LW.

- Manufacturer support
- Efficacy against the disease
- Allowable rates of material and application methods
- Acceptable fruit residue levels

The potential of Rally (myclobutanil) was discussed.

- Least efficacious at 0.01 and 0.1 pp a.i. of the triazoles examined in 2010
- The highest label rate for Rally at this time is 4 oz a.i./acre which may not be enough

If macro-infusion is not an option then a multi-faceted approach may need to be utilized. A discussion of these included:

- Reduce or eliminate pathogen – prompt removal of affected trees
- Reduce insect vector levels – prompt removal of affected trees
- Prevent healthy trees from insect vectors – insecticides, repellents
- Sever root grafts among diseased and healthy trees
- Grow disease resistant cultivars of avocado
- Avoid planting solid stands of susceptible cultivars or species
- Disinfestations of pruning equipment?
- Fungicide injection/infusion?
- Remove affected sections of trees; remove affected sections of trees+fungicide infusion/injection; or fungicide infusion/injection?

Mr. Armando Monterroso - <u>Current Status of Alternative Fungicides for Control of LW</u>

- Mr. Monterosso outlined the need for alternative fungicides to control LW including resistance management, sustained residual effect and management, and complimentary modes of action for sustained LW control; also potential reduced costs of treatment.
- Discussed and presented soil drench results with propiconazole (Tilt), Tilt+13-0-6, Tilt+Impel, Pristine, and Switch and detection of these fungicides in leaves 2 to 8 weeks later; Abound+PentraBark as a directed spray resulted in leaf detection 23 days later.
- Recommendations were discussed and included:
- Continued and expand in-vitro efficacy testing
- Evaluate alternative formulations and rates of efficacious fungicide and bark penetrants
- Continue to test soil drench applications of Tilt
- The group then discussed the various recommendations and concerns

Dr. Jason Smith

- Developing a survey instrument for arborists.
- Continuing to develop an improved identification procedure for LW.
- Reported LW could be transmitted with handsaws using laboratory inoculums and discussed the potential for LW transmission using high speed circular saws or hand-held pole saws.
- LW mulch studies are underway.

Regulatory Efforts

- Impending regulations on the movement of wood products nearing final approval.
- Impending agreement among FDACS-DPI and USDA-CAPS on RAB surveying in Florida.

Outreach/extension Efforts – Denise Feiber and Jonathan Crane

- Posters, tweets, press releases and additions to LW-RAB websites are on-going
- Educational outreach to 22 county governments and county regulatory agencies completed.
- Educational outreach to plant societies, urban residents, UF Extension Agents and Master Gardeners are on-going.
- Save the Guac campaign efforts continue.

Next Steps - Group

- Continued RAB-LW surveying throughout Florida and intensively in Miami-Dade County.
- Continued research into short-, mid- and long-term control measures for RAB and LW.
- Continued extension activities to update the agricultural community, county governments, regulatory agencies and citizens.

Working Group Leadership Consideration ..... Wayne Dixon/Jonathan Crane

- Richard Gaskalla is retiring from DPI and Wayne Dixon and Jonathan Crane will jointly lead the Laurel Wilt Working Group.

Next Meeting..... Group

The group discussed when might be an appropriate time to meet again. The consensus was that if a major breakthrough in control occurs or more RAB and/or a positive LW find occurs in the avocado production area then the group will be convened immediately. Otherwise, the sense of the group was to obtain funding for Dr. Peña to continue his work and that the researchers' time is better spent on the RAB-LW work than meeting frequently.

(c://extension/programs 2010/LW Working Group/Minutes for the LW Working Group 7-19-10.doc)