

# FY 2011 ACCOMPLISHMENTS

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As presented to the Forest Health Cooperative  
Advisory Committee

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# AUBURN UNIVERSITY - FOREST HEALTH COOPERATIVE

## FY 2011 WORK PLAN

### GOAL A: RESEARCH

#### **Objective 1. Identify research projects**

Delineating loblolly pine decline in the Southeast using FHM/FIA data – submitted to FHM, USFS for all travel and supplies associated with the project. (Eckhardt)

- *Accomplishments: Funded by USFS Forest Health Monitoring grant for year 2.*

Sudden Oak Death (*Phytophthora ramorum*) Detection Survey (Stream Sampling) in AL and MS – FHM, USFS for all travel, supplies and laboratory technician

- *Accomplishments: Funded by USFS Forest Health Monitoring grant. Laboratory technician hired – Daniel Anderson.*

#### **Objective 2. Recruit graduate students**

There is one opening for a graduate student in the Coop:

1. Open - Resistance of *Pinus taeda* families under artificial inoculations with native and non-native *Leptographium* species involved in premature mortality.

- *Accomplishments: Search underway*

#### **Objective 3. Initiate research projects: Determine location, cooperators, and set up research plots dependent upon projects chosen by the membership.**

*Hylastes* population dynamics and forest health evaluation in association with thinning and harvesting. Plots have been installed in Georgia on Rayonier and F&W properties, in Alabama on Weyerhaeuser, Westervelt and Sizemore & Sizemore properties.

- *Accomplishments: Plots have been installed in Georgia on Rayonier and F&W properties and in Alabama on Weyerhaeuser, Westervelt and Sizemore & Sizemore (SS) properties. All pre-treatment data has been collected which includes tree measurement and vigor, root infection, resin and insect. All treatments have been completed except for thinning at F&W and SS, and*

***clearcut at SS. SS is currently completing their treatment. We have no timeline for the thinning at F&W. Post-treatment data is currently being collected and will be completed in November.***

Cogongrass and ecologically based weed management strategies: Impacts on insect diversity and pine decline in the southeastern United States. Data about possible research stands is currently being collected. Stands will be visited in December and plots installed in January. Current members with possible available stands are Rayonier, Delaney Development Inc, Sizemore & Sizemore, Forest Investment Associates, and Westervelt.

- ***Accomplishments: Plots were identified December 2009 on Westervelt property in south MS. Plots were installed in January 2010. Insect traps were installed end of February 2010 and insect data collection started March 2010. Plot data currently being collected: tree measurement and vigor, root infection, and resin. Trapping will run through February 2012. Year one data is being analyzed for a FY11 Research Report.***

Delineating loblolly pine decline in the Southeast using county survey and FHM/FIA data. Data retrieval has recently been approved by FIA and an account set up to access all FHM data from FIA database for the southeastern states.

- ***Accomplishments: Data retrieval has recently been approved by FIA and an account set up to access all FHM data from FIA database for the southeastern states. Land use and vegetation data layers are being collected from various agencies. Travel and supplies for this project will shift to the funded FHM grant.***

Resistance of *Pinus taeda* families under artificial inoculations with native and non-native *Leptographium* species involved in premature mortality. Working with the Tree Improvement Cooperative to determine families to be tested for tolerance/resistance.

- ***Accomplishments: Data is currently being collected and analyzed from the screening and nutrition studies. Families were chosen and sown at Rayoniers' nursery in Glenville GA for FY12.***

## **GOAL B: TECHNOLOGY TRANSFER**

**Objective 1.            Serve as a clearinghouse of information related to forest health issues.**

### **Maintain and Update Forest Health Cooperative Web Site**

The Forest Health Cooperative Staff will continue to update the Forest Health Cooperative website for use by Forest Health Cooperative Members. (Eckhardt)

- *Accomplishments: The website is updated Advisory Agenda's with each speaker's presentation available for Forest Health Cooperative Members. Research Reports and Technical Notes are updated. Changes in Forest Health Cooperative staff updated and current.*

**Objective 2.            Efficiently and regularly transfer the results of cooperative research to the membership.**

### **Research Reports (Staff)**

We plan on producing Research Reports and Technical Notes in FY11 now that research projects are underway.

- *Accomplishments: Research Report 2010-1 Association between bark beetle population dynamics and silviculture disturbances in decline-impacted loblolly pine stands: year one data.*

### **Newletters (Staff)**

Newsletter distribution will be planned for March and September FY2011. Members are encouraged to submit articles.

- *Accomplishments: A Spring 2011 Newsletter was sent to all Forest Health Cooperative Members in March, approximately 17 on the mailing list.*

**Objective 3.            Provide a limited consultancy function to the membership in the area of forest health.**

### **Individual and Organized Contacts**

An on-going activity and is handled as individual situations and cases arise. (Staff)

	<b>Eckhardt</b>	<b>Kidd</b>	<b>Anderson</b>
<b>Phone calls</b>	<b>29</b>	<b>1</b>	<b>2</b>
<b>Letters</b>	<b>2</b>	<b>0</b>	<b>2</b>
<b>Emails</b>	<b>72</b>	<b>2</b>	<b>0</b>
<b>Site Visits</b>	<b>2</b>	<b>0</b>	<b>3</b>
<b>Diagnosis</b>	<b>12</b>	<b>0</b>	<b>12</b>

### **Short Courses**

Forest Health Short Course will be offered in odd years starting with FY2009. Not enough members signed up for the course in FY2009 or FY2011 and if there is enough interest, a Short Course in Forest Health will be planned for August 2013. (Staff)

- *Accomplishments:*

## **GOAL C: COOP DEVELOPMENT**

**Objective 1. Provide for the continual relevancy and efficiency of the Cooperative research and technology transfer programs.**

### **Advisory Committee Meeting**

The FY12 Advisory Committee Meeting will be held the fourth week in June 2012. A 2 day meeting will be planned. If there are any meetings that conflict with this time frame, let us know and we can try and accommodate Advisory Members. (Eckhardt/Anderson).

- *Forest Health Advisory Meeting held in Auburn on November 17-18, 2011; Science Meeting held in Auburn on February 1, 2011; Joint Contact Meeting with the Forest Productivity Cooperative in Waycross GA on June 8-9, 2011.*

### **Forest Health Cooperative Membership**

The Forest Health Cooperative staff should make an effort to recruit new members. (Staff)

- *One new member joined the Forest Health Cooperative in FY2010 – Rayonier. Two new members joined the Forest Health Cooperative in FY2010 for FY2011 – The Westervelt Company and Arborgen. The Alabama Forestry Commission reduced their membership status due to state budgets, but will return to full status once state budgets are better. Forest Investment Associates ended their membership as of the end of FY10.*

## **Update the Cooperative Membership Directory**

An on-going activity. (Bowersock/Eckhardt)

- *Accomplishments: Membership directory updated and loaded onto website.*

## **Objective 2. Increase the visibility and effectiveness of the Cooperative as a source of information on issues related to forest health.**

### **Presentations at Meetings**

Forest Health Cooperative staff will continue to be encouraged to participate as a speaker or attendee in regional and national meetings. (Staff)

- *Accomplishments: Forest Health Cooperative Staff gave 6 presentations and published 6 articles on the subject of Forest Health.*
- *Brunson, B.A. and Eckhardt, L.G. 2011. Impacts of cogongrass on populations of bark beetles associated with pine decline. North American Forest Insect Work Conference, Portland, OR.*
- *Zeng, Y., Booker, K.R., and Eckhardt, L.G. 2011. Association between bark beetle population dynamics and silviculture disturbances in decline-impacted loblolly pine stands. Sixteenth Biennial Southern Silvicultural Research Conference, Savannah, GA.*
- *Eckhardt, L.G., Singh, A., Fischer, T., Angle, C., Dewitt, J., and Gillette, R. 2011. Timber dogs and root disease. South-wide Forest Disease Workshop, Quincy, FL*
- *Menard, R.D, Ward, J.D., Eckhardt, L.G., and Sediles, A. 2011. Evaluation of mortality in natural stands of Pinus oocarpa in Nicaragua. South-wide Forest Disease Workshop, Quincy, FL.*
- *Duong, T.A., de Beer, Z.W., Eckhardt, L.G., Wingfield, B.D., and Wingfield, M.J. 2011. Population diversity of the pine-infecting fungus Grosmannia alacris. South African Society of Plant Pathology 47<sup>th</sup> Congress, Kruger National Park, South Africa.*
- *Martin, S., Held, D., Enloe, S., Loewenstein, N., and Eckhardt, L. 2010. Impact of cogongrass management strategies on arthropod fauna in longleaf pine. ESA 58<sup>th</sup> Annual Meeting, San Diego, CA*

### **Publications**

Forest Health Cooperative staff are encouraged to publish research results in scientific journals. (Staff)

- Matusick, G., Eckhardt, L.G., and Somers, G. 2010. The pathogenicity of four *Leptographium* species to mature longleaf pine roots. *For. Ecol. Mgmt.* 260:2189-2195.
- Matusick, G. and Eckhardt, L.G. 2010. Variation in virulence among four root-inhabiting ophiostomatoid fungi on *Pinus taeda* L., *P. palustris* Mill., and *P. elliottii* Englem. seedlings. *Can. J. Plant Path.* 32:361-367.
- Zanzot, J.W., de Beer, Z.W., Eckhardt, L.G., and Wingfield, M.J. 2010. A new *Ophiostoma* species from loblolly pine roots in the southeastern United States. *Mycol. Progress.* 9:447-457.
- Matusick, G. and Eckhardt, L.G. 2010. The pathogenicity and virulence of four ophiostomatoid fungi on young longleaf pine trees. *Can. J. Plant Path.* 32:170-176.
- Zanzot, J.W., Matusick, G., and Eckhardt, L.G. 2010. Activity of root-feeding insects and their associated fungi on longleaf pine in Georgia. *J. Econ. Entomol.* 39:415-423.
- Eckhardt, L.G., Sword-Sayer, M.A., and Imm, D.W. 2010. State of pine decline in the southern United States: A Technical Note. *J. Appl. For.* 34:138-141.

### **Extramural Funding of Forest Health Cooperative Projects**

Forest Health Cooperative staff will continue to be encouraged to locate and generate extramural funding opportunities directly related to forest health. (Staff)

➤ ***Accomplishments: Forest Health Cooperative Staff were awarded the following grants totaling \$312,600.***

- Eckhardt and Menard. 2011. Delineating loblolly pine decline in the southeast using FHM/FIA data. USFS-FHM. \$17,000.
- Eckhardt and Enebak. 2011. Sudden Oak Death – *Phytophthora ramorum* surveys - \$49,000.
- Enloe, Loewenstein, Eckhardt and Held. 2009. Cogongrass and ecologically based weed management strategies: Impacts on insect diversity and pine decline in the southeastern United States. AFRI-NIFA. \$494,000 (FHC component: \$181,000). Additional funds from AU-SFWS \$18,100.
- Eckhardt. 2009. Evaluation of virulence and pathogenicity of invasive ophiostomatoid fungi in relation to southern pine. DoD, Fort Benning Military Reservation. \$47,500.