

FY 2014 PROPOSED WORK PLAN

As presented to the Forest Health Cooperative
Advisory Committee

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FY 2013 WORK PLAN

GOAL A: RESEARCH

Objective 1. Identify research projects

Proposed FY2014:

1. Seedling production and forest health in the Southeastern United States – NSF-CAFS - \$300,000 – *Have received verbal approval but waiting for official notification*
2. Novel analytical tools for the selection of superior loblolly pine genotypes for improved plant health, fuels, and chemicals – NIFA-AFRI for travel, supplies, graduate students and post-doc \$494,377 – *Decision expected July 2013*
3. Rapid assessment tools for the genetic improvement of forest products and bioenergy – HATCH for travel, supplies and graduate student \$50,000 – *Decision expected late summer*
4. Ecology of siricids and fungal associates in southeastern pine forests: potential for biological control and competition – APHIS for travel, supplies and graduate student \$99,493 - *Decision pending dependent upon continuation of funds*
5. Exploring soil microbial communities as mediators of complex threats to southern conifers – Agriculture and Food Research Initiative Competitive Grant (3 years) \$497,000 - *Will resubmit fall with modifications if suitable RFP released*
6. Sudden Oak Death (*Phytophthora ramorum*) Detection Survey (Stream Sampling) in AL and MS – FHM, USFS for all travel, supplies and laboratory technician \$36,000 – *Will submit March 2014*

Newly Funded FY2013:

1. Testing of a rapid PCR Screening test for the presence of *Fusarium circinatum*, the causal agent of pitch canker on pine planting material – FHM for supplies, travel and postdoc - \$150,000
2. Identification of Climate Effects on Microbial Symbionts of Longleaf Pine – ERDC-CERL in collaboration with CERL personnel (Ryan Busby) and University of Mississippi for all travel and supplies - \$50,000
3. Interactions of future climate change scenarios of elevated tropospheric ozone and decreasing rainfall amounts with loblolly pine decline – HATCH for all travel, supplies and graduate student - \$49,986.
4. Sudden Oak Death (*Phytophthora ramorum*) Detection Survey (Stream Sampling) in AL and MS – FHM, USFS for all travel, supplies and laboratory technician \$36,000

Funded FY2013:

1. Field evaluation of a controlled vapor delivery method in an integrated pest management system for citrus and loblolly pine – AU-IGP in collaboration with AU Chemical Engineering for all travel, supplies and student worker - \$97,000
2. Root disease model to determine how pine decline and annosum root rot interact – SFWS for travel, supplies, graduate student stipend - \$64,000
3. Mycorrhizal fungal colonization and disease resistance – SFWS and University of Mississippi for all travel, supplies and graduate student stipend - \$25,000
4. Wood chemistry and disease resistance – SFWS and Forest Products Development Center (to get preliminary data for larger grant) \$5,000
5. Collaboration between SFWS and FABI – University of Pretoria South Africa to work on *Pinus* related diseases and molecular aspects. \$5,000 per participant (3 years)

Funded FY2012:

1. Hylastes population dynamics and forest health evaluation in association with thinning and fertilization on new RW19 in Louisiana – Funding through FHP and FHC
2. Delineating loblolly pine decline in the Southeast using FHM/FIA data – submitted to FHM, USFS for all travel and supplies associated with the project \$35,000 – (Funded Year 2 for \$17,000)
3. Sudden Oak Death (*Phytophthora ramorum*) Detection Survey (Stream Sampling) in AL and MS – FHM, USFS for all travel, supplies and laboratory technician \$47,000
4. Mature root inoculation of families from screening study found in the LGEPop study in GA and FL (Study 3 of the Resistance of *Pinus taeda* families under artificial inoculations with native and non-native *Leptographium* species involved in premature mortality under different nutritional regimes project) – SFWS and Forest Health Cooperative.

Objective 2. Recruit graduate students

Currently searching for masters student for FY2014 starting Fall to continue family screening.

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

Cogongrass and ecologically based weed management strategies: Impacts on insect diversity and pine decline in the southeastern United States.

1. Complete thesis.
2. Submit Research Reports and Manuscripts

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

1. Family screening data being collected and analyzed.
2. Families for FY15 screening will be determined and a growing location needs to be found (Rayonier grew FY11 and FY12 seedlings; Plum Creek grew FY13 seedlings; Arborgen growing FY14 seedlings).

Hylastes population dynamics and forest health evaluation in association with thinning and fertilization.

1. Data collection for the RW19 study in Leesville, LA completed. Data analysis underway.
2. Plots and insect traps installed on the RW19 study in GA (Rayonier and Plum Creek). Data collection underway.

Forest health evaluation of stand health in association with biomass removal and standard silvicultural practices between two land managers.

1. Treatments currently underway. Insect traps will be reinstalled upon completion.

Mature root inoculation of families from screening study found in the LGEPop study in GA and FL (Study 3 of the Resistance of *Pinus taeda* families under artificial inoculations with native and non-native *Leptographium* species involved in premature mortality under different nutritional regimes project).

1. Inoculations and data collection of Plum Creek site (near Nahunta, GA) and Rayonier site (near Yulee, FL) were completed in August 2012. Research Report is being completed.
2. Families chosen for FY14 screen will be checked against LGEPop study to determine if there are more inoculations to take place summer 2013.

Blue-stain fungi associated with feral hogs causing rooting damage in longleaf and loblolly pine stands.

1. Working on manuscripts for publication.

Wood Chemistry and disease resistance.

1. Plum Creek site (near Nahunta, GA) has been cored and being processed for NIR.
2. Rayonier site (near Yulee, FL) has been cored and being processed for NIR.

Field evaluation of a controlled vapor delivery method in an integrated pest management system for citrus and loblolly pine.

1. Year one trapping complete. Data being analyzed. Traps will be redeployed February 2014.

Root disease model to determine how pine decline and annosum root rot interact.

1. Proposal will be written and sites selected for inoculations Spring 2014.

Mycorrhizal fungal colonization and disease resistance.

1. Families selected and growing at Auburn in growth chamber awaiting mycorrhizal inoculation.

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)

Leveraging Forest Health Cooperative Data

The Forest Health Cooperative staff will continue to stress the importance of the Cooperative membership and when possible, leverage Cooperative information for grant proposals. (Staff)

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 FY14.

Newsletters

Newsletter distribution will be planned for April (Spring) 2014. Members are encouraged to submit articles.

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. (Eckhardt/Bauman)

Short Courses

The Forest Health Cooperative will offer a Forest Health Short Course in Auburn for member personnel in July 2014. We need a minimum of 20 attendees and will survey the membership in January 2014 for interest.

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 FY14 Advisory Committee Meeting will be held on June 25-26, 2014. 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/Bowersock)

Forest Health Cooperative Membership

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

Update the Cooperative Membership Directory

An on-going activity with an updated directory distributed annually. (Bowersock)

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)

Publications

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

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 forest health.

Interaction with other Research Cooperatives

The Forest Health Cooperative staff will make efforts to interact, attend, work with other regional and national forest research Cooperatives in an attempt to broaden and strengthen research ties that can benefit forest health.