

# FY 2023 PROPOSED WORK PLAN

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As presented to the Forest Health Cooperative  
Advisory Committee

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AUBURN UNIVERSITY - FOREST HEALTH COOPERATIVE

## FY 2023 WORK PLAN

### GOAL A: RESEARCH

#### Objective 1. Identify research projects

##### Proposed FY2023:

1. 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 – *Reviewed as high priority with good reviews. Wanted more preliminary data, asked to resubmit. More preliminary data acquired by the Forest Products Development Center. Will resubmit with modifications when a suitable RFP is released.*
2. Identifying volatile chemicals of *Amylostereum areolatum* and ophiostomatoid fungi to develop of highly novel lures for monitoring and evaluating *Sirex noctilio* populations in the United States – USFS-STDP for travel, supplies, and graduate student \$120,000

##### Funded FY2022:

1. Mitigating Needle Blight: A growing Economic Threat to Pine Forests – Senate Appropriations – Proposal requested by Senator Shelby’s office. \$3,000,000 (\$2,400,000 to Auburn)
2. Sudden Oak Death (*Phytophthora ramorum*) Detection Survey (Stream Sampling) in AL and MS – FHM, USFS for all travel, supplies and laboratory technician \$37,000
3. Collaboration between SFWS and FABI – University of Pretoria South Africa to work on *Pinus* related diseases and molecular aspects. \$5,000 per participant
4. Wood chemistry and disease resistance – SFWS and Forest Products Development Center \$5,000

##### Funded FY2021:

1. Sudden Oak Death (*Phytophthora ramorum*) Detection Survey (Stream Sampling) in AL and MS – FHM, USFS for all travel, supplies and laboratory technician \$42,000
2. Collaboration between SFWS and FABI – University of Pretoria South Africa to work on *Pinus* related diseases and molecular aspects. \$5,000 per participant
3. Wood chemistry and disease resistance – SFWS and Forest Products Development Center \$5,000

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

1. We will be hiring several graduate students to work on the Mitigating Needle Blight project funded through the USFS. Proposal to be discussed in the business meeting.

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

Quantifying the impact of pine decline in the southeastern United States

1. Manuscripts in preparation and revision
  - a. Mensah, J. K., Sayer, M. A. S., Nadel, R. L., Duwadi, S., Fan, Z., Carter, E.A., & Eckhardt, L.G. (Submitted) Effect of *Leptographium terebrantis* and drought on foliage, new root dynamics and stemwood growth in plantation *Pinus taeda* L.
  - b. Mensah, J. K., Sayer, M. A. S., Nadel, R. L., Matusick, G., & Eckhardt, L.G. (In preparation) Foliar nutrients response of *Pinus taeda* L. to *Leptographium terebrantis* infection.
  - c. Mensah, J. K., Sayer, M. A. S., Nadel, R. L., Matusick, G., & Eckhardt, L.G. (In preparation) Effect of *L. terebrantis* on the production of defensive chemical compounds.

Isolation and identifying of fungi associated with loblolly pine needle damage in the southeastern United States

1. Manuscripts in preparation and revision
  - a. Datta, D., Coleman, J., Enebak, S., and Eckhardt, L.G. (In preparation) Survey of fungal pathogens associated with loblolly pine defoliation and mortality in the southeastern United States
  - b. Datta, D., Erramuspe, I.V., Enebak, S., and Eckhardt, L.G. (In preparation) *Lecanosticta acicola* impacts foliar nutrient content and total phenolics of *Pinus taeda* needles

Identifying volatile chemicals of ophiostomatoid fungi to develop of highly novel lures for monitoring and evaluating bark beetle populations in the United States.

1. Manuscripts in preparation and revision
  - a. Menanyih, S., Cale, J., Calderon, A., and Eckhardt, L.G. (In preparation)

Production of volatile organic compounds from ophiostomatoid fungi

- b. Menanyih, S., Cale, J., Calderon, A., and Eckhardt, L.G. (In preparation) The influence of different fungal interaction on the production of fungal metabolites *in vitro* and *in situ*

## **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. (Staff - Baldwin)

### **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 in FY23.

### **Newsletters**

Newsletter distribution will be planned for Spring 2023. 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 as cases arise. (Eckhardt)

### **Short Courses**

The Forest Health Cooperative will offer a Forest Health Short Course in Auburn for member personnel in July 2023. We need a minimum of 20 attendees and will survey the membership in January 2023 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 FY24 Advisory Committee Meeting will be held on June 21-22, 2023. 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.