

## **CAPS Work Plan for Calendar Year 2006**

**Cooperator: Connecticut Agricultural Experiment Station**

**State: Connecticut**

**Project Category: Part III Survey for Pine Shoot Beetle**

**Project Coordinator: Victoria Lynn Smith, Deputy State Entomologist, Connecticut Agricultural Experiment Station, 123 Huntington St., New Haven, CT 06504; Victoria.Smith@po.state.ct.us**

### **I. OBJECTIVES AND THE NEED FOR ASSISTANCE:**

The pine shoot beetle (*Tomicus piniperda*) is an introduced pest of pines that was originally discovered near Cleveland Ohio in 1992. In the intervening 14 years, this beetle has expanded its range to include 11 northeastern states, including New York, which shares a border with Connecticut. The beetle is a pest of most species of pines, including those used for Christmas trees and nursery plants.

Natural dispersal of the pine shoot beetle (PSB) can occur when adult beetles emerge, but the most efficient means of spread is through the transport of infested Christmas trees or nursery plants. Pine logs and bark mulch are also routes of dispersal.

The proposed survey would be conducted in conjunction with inspections of commercial production nurseries for detection of other pests and diseases, and by inspection of cut Christmas trees arriving into Connecticut from infested areas. Truckloads of Christmas trees in transit through the state will not be examined.

The pine shoot beetle causes cosmetic damage to Christmas trees, and renders them unusable for decorative use. In addition, many Christmas trees in CT are grown at choose-and-cut farms, and infestation of these areas by PSB would have a severe economic impact on this facet of CT agriculture.

### **II. RESULTS/BENEFITS EXPECTED**

**The Cooperator seeks to conduct a cooperative agricultural pest survey program which is expected to result in:**

- Data on the presence or absence of this non-native pest in Connecticut. Early intervention is important in successful eradication of non-native pests. If pests are discovered before they become widespread and established, eradication can be a relatively simple process.
- Educational outreach will be accomplished by distribution of written information such as fact sheets, to professional nursery personnel and Christmas tree growers, through their respective organizational meetings. Oral presentations will be made to professional and hobbyist organizations as requested. When oral presentations

are given, a count will be made of those present in the audience, as a way to assess the impact of these outreach efforts. Attendance at the above mentioned meetings will also be included.

### **III. APPROACH:**

#### **A) The Cooperator and APHIS mutually agree to/that:**

- i) Maintain a State Cooperative Agricultural Pest Survey Committee that will meet at least once a year to discuss fostering the goals of CAPS.
- ii) Work together in carrying out field surveys, trapping, and data collection, setting emphasis on the pest/diseases particularly identified (**see attached list**), that may pose an immediate risk to the agriculture of this state and the United States.
- iii) Have representation at National and/or Regional **annual** planning meetings.
- iv) Utilize Cooperator and APHIS program funding, as outlined in the Financial Plan, within the authorized parameters to support survey and detection activities. In addition, specific appropriated funding in the level authorized by the PPQ Eastern Region, will be dedicated to the delivery of CAPS objectives listed above.

#### **B) The Cooperator will:**

- i) **Conduct surveys for Pine Shoot beetle (PSB).** Each year, during the course of regular nursery inspections, registered nurseries and nursery dealers are inspected for presence of pests and diseases on the stock on hand and in production. Plants are examined visually by trained inspectors, and signs of infestation are noted. Nursery inspections for PSB generally occur in late summer or early autumn. When warranted, samples are transported to the Connecticut Agricultural Experiment Station for further examination by a trained and experienced diagnostic entomologist.

Shipments of Christmas trees arriving from out-of-state beginning in November of 2006 will be inspected for presence of PSB, by examination of a sample of at least 10 % of the trees in the shipment. Experienced inspectors will visually examine the trees, and if warranted, take samples for further examination. The number of shipments into CT varies each year.

- ii) Lundgren traps baited with alpha-pinene lures will be located in all counties of the state, with 5 traps per county. Since the geographic area is small, 5 traps will be sufficient to cover the state. Traps will be monitored bi-weekly and insects identified to species. Experiment Station personnel will monitor traps in 5 counties, and PPQ personnel will monitor traps in the remaining 3 counties. Traps will be placed in mid-February 2006 and monitored bi-weekly until mid-May 2006. Insects will be identified as soon as possible after picking up from the traps.

- iii) **Provide the following resources:**
  - (1) **Personnel:** One part-time nursery inspector to conduct field survey activities. This person is on staff at the Experiment Station. He will work under the direction of current Station Personnel. A portion of his salary will be paid by APHIS funds.
  - (2) Type of equipment provided by Cooperator for personnel: None
  - (3) Provide office space at 123 Huntington St, New Haven, CT with associated services and utilities, computers, and other office equipment for the use of Cooperator Personnel in entering survey data into the NAPIS database
  - (4) Vehicles for the Cooperator personnel in conducting field surveys and collecting data.
  - (5) Supplies:
    - (a) Laboratory supplies for examination, preservation, and shipping of any plants with signs of infestation by PSB.
    - (b) digital camera to document signs/symptoms of PSB.
- iv) **Contracts**—not applicable
- v) **Reports**
  - (1) narrative accomplishment reports (**Accomplishment Report—Appendix H of the ER CAPS Guide**) in the frequency and time frame specified in the Notice of Award, Article 4.
  - (2) Financial Status Reports, SF-269, in the frequency and time frame specified in the Notice of Award, Article 4.
- vi) **Adhere to APHIS ADP security guidelines as referenced in the Notice of Award when entering pest survey data and transmitting it to NAPIS.**

**C) APHIS will:**

- i) Provide any new information that becomes available on PSB, provide appropriate forms, and review the data
- ii) Provide the following resources: funds to the Cooperator to cover costs outlined in the Financial Plan.
- iii) Make arrangements for Taxonomic support in identification of PSB should this pest is found.
- iv) **Provide PPQ personnel to set and monitor traps in 3 Connecticut counties**

**IV) QUANTITATIVE PROJECTION OF ACCOMPLISHMENTS TO BE ACHIEVED**

- The survey will take place when regular nursery inspections occur, usually beginning in mid summer 2006. Inspections continue until completed, usually in September.

- Examination of Christmas trees will occur when trees begin arriving in Connecticut, usually the second week of November, and continue until the Christmas tree season concludes, usually 24 December.
- Trapping will occur when adult beetles are active and likely to be flying, March through May.
- Educational outreach will be accomplished by distribution of written information such as fact sheets, to professional nursery personnel and Christmas tree growers, through their respective organizational meetings. Oral presentations will be made to professional and hobbyist organizations as requested. When oral presentations are given, a count will be made of those present in the audience, as a way to assess the impact of these outreach efforts. Attendance at the above mentioned meetings will also be included.

#### V) DATA COLLECTION AND MAINTENANCE

A) All survey data will be maintained in the office of the Deputy State Entomologist at the CT Agricultural Experiment Station in both paper and Excel Spreadsheet files. Data will also be provided by the cooperator to the state survey coordinator for entry into NAPIS according to the guidelines below. .

- First record for the State and/or County will be entered within **48 hours** of confirmation by a qualified identifier.
- All other required records, both positive and negative, must be entered **within 2 weeks** of confirmation.
- All records are to be entered into the NAPIS database by **December 1** of the year of the survey, so these data are included in the yearly Plant Board Report.

B) Data to be collected for each survey at each nursery: date of nursery inspection, location of nursery, name and address of the owner, names and cultivars of the host plants, and pests or diseases detected. For samples from the public, similar information will be collected. Records of PSB finds will be submitted to the NAPIS database.

From the traps, data will be recorded on the number of individuals trapped, identity, and location and time of trapping. As above, records of PSB finds will be submitted to the NAPIS database.

C) Data will be maintained in the NAPIS database and in both paper and Excel spreadsheet files at the Connecticut Agricultural Experiment Station. Excel files are converted to Access for report generation.

D) Criteria to evaluate the project:

- Whether survey goals are met
- Whether the Cooperator is able to adequately document signs and symptoms of infection by PSB.

E) Methodology used to determine if:

- Identified needs are met: Identified nurseries are sampled and infested plants examined to determine if PSB is present
- Results and benefits are achieved: evaluation if sampling is adequate to determine whether PSB is present in the areas sampled.

## **VI) GEOGRAPHIC LOCATION OF THE PROJECT**

**Surveys will be conducted throughout the state of Connecticut. Data will be provided to the Cooperator's State Regulatory Official (SPRO) for entry into the database.**

- A) Type of terrain: nurseries and Christmas tree yards, pine stands-trapping
  - i) Features which may have an impact on the project: none

## **VII) TAXONOMIC SUPPORT**

- A) Person/institution that will screen samples and request taxonomic support if suspicious pests are found: Gale Ridge
- B) List of target pests by scientific name: *Tomicus piniperda*
- C) Survey dates: The survey will take place when regular nursery inspections occur, usually beginning in mid summer 2006. Inspections continue until completed. Examination of Christmas trees will occur when trees begin arriving in Connecticut, usually the second week of November, and continue until the Christmas tree season concludes. Trapping will occur when adult beetles are active and likely to be flying, March through May.
- D) Number of survey sites: 8 counties, 5 traps per county, and an unknown number of Christmas tree yards
- E) Number of visual surveys of nurseries: approximately 100
- F) Number of Christmas trees shipped in inspected: approximately 125 dealers and about 35,000 individual trees.
- G) Number of collections. Trap collections- approximately 400