

Annual Progress Report for FY 2003
USDA-APHIS Cooperative Agricultural Pest Survey for Maine
Cooperative Agreement: 03-8223-0360-CA

Year: 2003

State: Maine

Agency: Maine Department of Agriculture, Food & Rural Resources

I. Core level funding activities

A. State Survey Coordinator (hired 11 August 2003):

Karen Coluzzi
 Maine Department of Agriculture, Food & Rural Resources
 Division of Plant Industry
 28 State House Station
 Augusta, ME 04333
 (207) 287-7551 (phone)
 (207) 287-7548 (fax)
 Karen.L.Coluzzi@maine.gov

B. No state member serves on the National CAPS committee

C. State CAPS Committee:

Name	Organization	Title
Terry Bourgoin	Maine Dept. of Agriculture	Director, Plant Industry; SPRO
Karen Coluzzi	Maine Dept. of Agriculture	Entomologist, SSC
Ann Gibbs	Maine Dept. of Agriculture	State Horticulturist
Dave Struble	Maine Forest Service	Director, MFS; Entomologist
Don Ouellette	Maine Forest Service	Entomologist
Glen Koehler	UMaine Coop. Ext.	IPM Specialist
Bruce Watt	UMaine Coop. Ext.	Plant Pathologist
Dave Lambert	UMO	Plant Pathologist
Patsy Hartley	USDA-APHIS-PPQ	SPHD

The State CAPS steering committee met October 1, 2003. All members were in attendance; Andrew Wilds (USDA-APHIS-PPQ) attended in place of Patsy Hartley. The new State Survey Coordinator was introduced, and changes in CAPS guidelines and deadlines were reported. Thoughts on effectively using CAPS funds were shared. Proposal ideas for 2004 surveys were solicited. (Minutes attached).

D. NAPIS Database submissions:

All survey data for 2003 were solicited and entered into the NAPIS database by Karen Coluzzi and Glen Koehler (former SSC). See individual pest descriptions.

II. CAPS Survey Activities for 2003

A. Core level funding surveys (Part I):

- Chrysanthemum White Rust
- Soybean Pod Borer
- Swede Midge
- Lily Leaf Beetle
- Hemlock Woolly Adelgid
- Southern Bacterial Wilt

1. Chrysanthemum White Rust (*Puccinia horiana*) – **Maine Department of Agriculture**

A visual detection survey was conducted for Chrysanthemum white rust during routine inspections of nurseries, greenhouses and garden centers. One hundred and nineteen (119) mum-growing establishments were visited between March and October in 2003. The sites were located in the following counties: Androscoggin (6), Aroostook (4), Cumberland (33), Franklin (2), Hancock (2), Kennebec (11), Knox (7), Lincoln (8), Oxford (3), Penobscot (10), Piscataquis (3), Sagadahoc (3), Somerset (5), York (22). Information sheets were created and distributed to all the establishments visited. All surveys were negative, and data were entered into NAPIS on 10/30/03.

2. Soybean Pod Borer (*Maruca vitrata*) – **Maine Department of Agriculture**

A visual survey of soybeans was conducted between August and September 2003 at three (3) soybean farms, two of which were in Aroostook County and one in Somerset County. Soybean pods were inspected for holes and the presence of frass associated with Soybean pod borer feeding. Suspect pods were examined in the field for presence of larvae. All surveys were negative, and data were entered into NAPIS by 9/26/03. Information sheets on Soybean pod borer were created and distributed to the three sites surveyed.

3. Swede Midge (*Contarinia nasturtii*) – **Maine Department of Agriculture**

A visual detection survey was conducted for Swede midge, a serious pest of Brassica crops in Europe and Ontario, CA, on a 2800-acre broccoli farm in Aroostook County in August 2003. Two fields, one with an early-planted crop and one with a late-planted crop, were inspected for signs of feeding damage. Suspect plants were brought to the state's diagnostic lab where they were examined for the presence of larvae. All surveys were negative and data were entered into NAPIS on 8/29/03. Information sheets were created and distributed to the two largest cole crop producers in Maine.

4. Lily Leaf Beetle (*Liloceris lili*) – **Maine Department of Agriculture**

The Lily leaf beetle was confirmed in Penobscot county in 2003. It has now spread to every county except Washington and Aroostook and has been reported to cause significant damage on *Lilium* spp. in some areas. New county data was entered into NAPIS on 9/23/03.

5. Hemlock Woolly Adelgid (*Adelges tsugae*) – **Maine Forest Service**

In response to calls from the general public, the Maine Forest Service confirmed the presence of Hemlock woolly adelgid on planted hemlocks in York, Cumberland, and Hancock counties, and on native hemlocks in York County. Delimiting surveys of York County were being conducted late in 2003, and will continue through 2004. Numerous efforts have been undertaken to alert the public and prevent further spread by removing infested landscape trees. This data has not been entered into NAPIS.

6. Southern Bacterial Wilt (*Ralstonia solanacearum* race 3 biovar 2) – **Maine Department of Agriculture**

In January and February 2003, 15 businesses in Maine received suspect geraniums from rooting stations in Michigan and New Hampshire, which received infected geraniums from a facility in Kenya. Horticulture staff made at least one site inspection at each suspect location. Symptomatic plants were sampled and brought back to the State Department's diagnostic lab where they were tested for *Ralstonia* with Agdia test kits. One greenhouse tested positive for *Ralstonia* and samples were subsequently sent to Beltsville, Maryland where they tested positive for *R. solanacearum* race 3 biovar 2. Under USDA-APHIS-PPQ supervision, 4500 geraniums from this greenhouse were destroyed. Negative and positive data have not been entered into NAPIS.

B. Additional Pest Detection Surveys (Part II):

- Giant Hogweed
- European Imported Fire Ant

1. Giant Hogweed (*Heracleum mantegazzium*) – **Maine Department of Agriculture**

Fourteen sites in 5 counties (Hancock, Kennebec, Penobscot, Piscataquis and York) were confirmed to have populations of Giant hogweed. These findings were generated in response to over 300 phone and email inquiries from 11 different counties across the state. Informational brochures were sent to all individuals who contacted the Department and newsletters were distributed to over 1000 nursery owners. Outreach efforts concerning this pest involved presentations to the state nursery association and field botanists and college students, and the development of a website (<http://www.state.me.us/agriculture/pi/horticulture/gianthogweed.htm>) with information specific to Maine. Positive finds were entered into NAPIS on 12/22/03.

2. European Imported Fire Ant (*Myrmica rubra*) – **University of Maine**

Over the past ten years, *Myrmica rubra* has become a significant problem for homeowners, landscapers, nurseries and tourist-related businesses on Mt. Desert Island and in several other coastal communities in Maine, including Isleboro, Castine, Rockland and Boothbay Harbor. This ant readily stings humans and animals that have the misfortune to slow or rest within the large areas where the ants are foraging. Many complaints have been registered by residents, tourists, and workers within the infested area about the aggressiveness of the ants and severity of their stings. *M. rubra* is primarily spread to new areas via transport of infested soils, which is a particular concern to the nurseries and landscaping industries in infested areas. Once introduced, this ant appears to establish in sizable colonies in disturbed and natural areas around residences and commercial buildings, where it aggressively defends its territory and dominates native species. It has been particularly problematic for daycare centers, gardeners and landscapers in infested communities, as the ants appear to preferentially establish in bark mulch and other high organic substrates that are commonly used in these areas.

Although the ant has been reported from locations as far south as Kittery and as far east as Eastport, the reports are spotty and indicate that the current infestations are likely disjointed. To date all of the confirmed infestations (with the exception of one infestation in Kennebec County, which is believed to have been introduced through infested nursery stock) have been restricted to coastal communities. It is likely that several of the initial infestations of this pest insect resulted

from separate introductions on plant materials in infested containers imported into the state from Europe.

Studies of *M. rubra* ecology and management have been initiated in Acadia National Park, but the best long-term management strategy for this pest within the state of Maine will depend on the extent of its infestations within the state. In 2003, a systematic survey for this ant was continued in coastal communities between Kittery and Eastport, Maine. Starting in mid June 2003, traps in state and community parks and public areas were deployed within 20 coastal communities in the state (ca, every 12-15 miles along the coast as the crow flies). At each sample location, 20 baited traps were placed in a transect, the minimum distance between traps being 200 m. The exact location of each trap was recorded with a GPS unit. Traps were deployed either early in the morning or later in the afternoon to avoid periods of low foraging activity. Vials were capped after one hour and returned to the University of Maine in Orono for positive identification of *Myrmica rubra*.

Four new locations were found to have infestations of *M. rubra* in 2003. These new sites occur along the coast in Cumberland, Hancock, Knox and York counties. Currently, there are 22 towns, all but one along the coast, with known infestations. These towns are in the following counties: Cumberland (2), Hancock (6), Kennebec (1), Knox (6), Lincoln (1), Waldo (1), Washington (3), York (2). Survey results from the two previous years were entered into NAPIS on 11/03/03 and were the first entries for this pest in the NAPIS database.

C. Line Item Pest Surveys (Part III):

- Gypsy Moth
- Pine Shoot Beetle

1. Gypsy Moth (*Lymantria dispar*) – **Maine Forest Service**

Trapping continued in 2003 for European gypsy moth in the transition zone spanning six (6) counties (Aroostook, Franklin, Oxford, Penobscot, Piscataquis, and Somerset), and in one quarantined county (Kennebec). A total of 264 pheromone traps were set out from mid-June to mid-September 2003. Two hundred and fifty (250) out of 261 traps caught 5734 male gypsy moths in the transition zone, and 3 out of 3 traps caught 1055 males in the quarantine zone. In regard to these results, the Maine Forest Service and USDA-APHIS are contemplating a shift of the quarantine boundary. Data were entered into NAPIS 10/16/03.

2. Pine Shoot Beetle (*Tomicus piniperda*) – **Maine Forest Service**

A trapping survey was conducted in 2003 by the Maine Forest Service to monitor for spread of the Pine Shoot Beetle (PSB) in Oxford County, Maine for purposes of maintaining the state designated quarantine area north of the Appalachian Trail.

The State of Maine first established a quarantine regulating the area north of the Appalachian Trail (AT) in Oxford County in early 2001 after PSB had been trapped there in 2000. A revision of the quarantine to add Franklin County to the area under quarantine was later initiated by the State after survey catches confirmed PSB north of the AT in Franklin County in 2001 and south of the AT in Franklin County in 2002, however finalization of the state quarantine was postponed pending results of the USDA review of the federal quarantine. The federal quarantine included all of both Franklin and Oxford Counties in the regulated area. Since these counties were considered to be infested by USDA, trapping in these two counties was relinquished to the

Maine Forest Service in 2002. There were no PSB trapped south of the AT in Oxford County in 2001 and no PSB trapped in Oxford County in 2002. The Maine Forest Service continued to press USDA to regulate only the northern portion of Oxford County during the federal review process and continued to monitor for spread of PSB in this county in 2003. USDA informed the state that it would not consider a split-county quarantine for PSB in Oxford County and threatened to put the entire state of Maine under quarantine unless all of Oxford County was included in the state quarantine. The state quarantine was modified and finalized in July of 2003 to parallel the federal quarantine (i.e. to include all of both Oxford and Franklin Counties).

Between March 17 and April 10, 2003 a total of 36 8-funnel Lindgren traps baited with alpha-pinene lure formulated for *Tomicus piniperda* were placed at 20 sites south of the AT in 7 counties (Oxford, Franklin, Androscoggin, Cumberland, Kennebec, Sagadahoc, and Somerset) and 2 sites north of the AT in Oxford and Franklin counties. Traps were placed either in pairs approximately 100' apart or singly per site. Selected trap sites were either around stands and plantations of red pine or in log or bark concentration yards of concerns operating under a Maine Forest Service compliance agreement for receiving regulated logs and bark. An ethanol-standard lure was added to one trap at each site. All traps were checked every two weeks until July 1. Trap catches were inspected at the Maine Forest Service Insect and Disease Laboratory. *Tomicus piniperda* specimens were pinned and identified by Don Ouellette of the Maine Forest Service.

Traps set north of the AT in Oxford and Franklin Counties contained positive finds of *T. piniperda*. The 34 traps south of the AT yielded negative findings for *T. piniperda*. All data were entered into NAPIS by 10/7/03.

III. Additional Core level funding activities

- CAPS/Cooperative Agreement Training
 - National CAPS Meeting
 - Maine CAPS website
1. The new State Survey Coordinator attended an Eastern Region training session in Amherst, MA, November 5-6. This meeting was intended to provide understanding and clarity about entering into cooperative agreements with USDA-APHIS. This training was extremely beneficial, not only for learning proper paperwork processing, but in being introduced to the CAPS community.
 2. The new State Survey Coordinator (SSC) attended the National CAPS Convention in Las Vegas, NV, December 1-5. The last National CAPS meeting was held 8 years prior. The agenda included, but was not limited to, discussion on the current state and direction of the CAPS program; procedures for assessing pest risks and creating target pest lists; integration of other agencies and services into the CAPS effort; and post-detection strategies. This was another great opportunity for the new SSC to network with other people in the CAPS program.
 3. The SSC created a Maine CAPS webpage that is hosted by the Maine Department of Agriculture and is accessible through the Division of Plant Industry website. The page gives a brief overview of CAPS' objectives, and includes information on the pests for which the Maine CAPS program will be surveying in 2004. Also included are links to NAPIS and USDA-APHIS-PPQ Pest Detection sites.

The url address for the webpage is <http://www.state.me.us/agriculture/pi/CAPS.htm>

CAPS CORE COMMITTEE MEETING
1 October 2003

AGENDA

Introduction and Description of Changes to the CAPS Program

Discussion - Role of the Core Committee

Topics:

Changes in Procedure for Submitting CAPS Proposals
Descriptions of Category Levels
FY2004 Core Level CAPS Work Plan (in progress)

Discussion - Pests to Survey

By Committee Members
By the State Survey Coordinator

Discussion - Outreach and Involvement
of Other Agencies/Groups in the CAPS Program

Handouts:

List of Committee Members
Report Requirements and Deadlines
Descriptions of Category Levels
Pest Lists (CAPS guide FY2004)

- Eastern Region Primary and Secondary Pests
- National CAPS Committee Target Pests
- Pests With Special Funding Resources Other Than CAPS
- Homeland Security Pest List / National Pest Pathogen List

**CAPS CORE COMMITTEE MEETING
1 October 2003**

MINUTES

In attendance:

Terry Bourgoïn, Dave Struble, Don Ouellette, Andrew Wilde (for Patsy Hartley), Bruce Watt, Glen Koehler, Karen Coluzzi, Andrew Plant (student), Ann Gibbs, ? (student), Dave Lambert

Terry gave an introduction to familiarize people with the CAPS program and report on changes that have taken place in the past two years. Some highlights:

- About 18 months ago, The Department of Homeland Security (DHS) gave an appropriation to USDA with about \$10M going to APHIS. As a result, each state receives a minimum of \$75K to develop an enhanced CAPS program. Since then, about 2/3 of APHIS employees went to DHS, limiting that agency's ability to prevent pest introductions at the borders and ports. For this reason, APHIS wants to enhance its and the state's abilities in pest survey work.
- September 2002, the CAPS Eastern Region meeting reported a national policy change – APHIS wanted CAPS to be put under state guidance.
- The core CAPS committee has primarily consisted of entomologists; Terry expressed a desire to beef up the plant pathology side and include Dave Lambert and Bruce Watt on the committee.
- Committee meetings – Terry recommended having the core committee meet annually in the fall, possibly again every spring. The full committee will meet annually in January, as always.

Karen (new state survey coordinator (SSC)) talked about the changes in the program:

- Agreements are now to be done on a calendar year. Andrew said deadlines (not just CAPS) will be more strictly enforced by APHIS.
- All proposals, work plans and financial plans for CAPS-related activities should be submitted to the SSC. APHIS wants all CAPS proposals to be submitted as one package.
- All CAPS activities can be broken down into 3 categories:
 - o Part I: Core CAPS – includes infrastructure for a SSC and some survey activities. Can request up to \$75K.
 - o Part II: Exotic Pest Surveys – pests on the following lists are given priority: Eastern Region Target Pests, National Primary Target Pests, Pests of Export Significance, and Homeland Security Pests/Bioterrorism Select Agents. Can request up to \$25K total.
 - o Part III: Pests with own funding source – separate line items, e.g. Gypsy Moth, Pine Shoot Beetle, Plum Pox...

Andrew specified pests that APHIS will survey for, and that Patsy Hartley thinks are worthwhile surveys to do in the State of Maine. In addition, Andrew mentioned that APHIS plans to hire 5 permanent employees, including a federal pest survey specialist and a domestic program coordinator (a sub-SPHD), plus at least 6-10 seasonal employees. Plans are underway for a local (Northeast or New England?) database (Oracle – password-protected) which involves a move towards electronic data collection with PDAs to make data management easier on field personnel. APHIS would like to account for all pests trapped – not just the target species. They may request more funds to help with the identification process.

Dave Struble expressed interest in requesting CAPS funds to do bark beetle-warehouse surveys. Funds could be used for 12-week position interns, non-status project positions and work-study help. Dave suggested the development of a database of candidate warehouses, distribution centers, and other locations where solid-wood packing material (SWPM) is stored. He will request around \$10K as a Part II survey. Karen will also include this activity as part of the core level survey. Terry mentioned that the Ag. Dept. is trying to create 2 Conservation Aide positions to assist the SSC or other staff with surveys.

Ann suggested that the horticulture staff could check nurseries for Emerald Ash Borer. Dave mentioned he could get community or forestry people to help out with this pest also.

Glen could request \$1.2 – 1.5K to do apple pest surveys.

Don mentioned doing a light trap survey to get a baseline of forest pests. Extra help could be obtained through temp employment agencies or volunteers.

The list for Pests of Export Significance was pointed out in the CAPS guide.

Some discussion occurred about Ralstonia and Potato Wart (PW) surveys. Terry indicated Ralstonia could be done in conjunction with testing/inspecting for Bacterial Ring Rot (BRR) (since visible symptoms in potato plants are very similar). If plants with BRR symptoms are tested and found free of this disease, the plants can then be tested for Ralstonia. With respect to PW, Terry indicated the seed inspectors look at a great volume of potatoes during their regular shipping point inspections and would look for this disease during those inspections.

More ideas to wisely use CAPS money:

- Public assistance
- Training
- Outreach Programs – do garden shows, trade shows, fairs, etc. Displays and handouts could be developed which could reach a great many people at these shows. Glen maintains ProNewEngland – a web site that hosts information on pests, crop profiles, strategic planning, and survey news for 6 states – which can be an on-line face for CAPS outreach.

Bruce talked about the Northeast Diagnostic Network. Each state will receive \$30K to beef up diagnostic capabilities and to purchase microscopes and digital cameras to better share information and resources, and enhance their ability to detect and diagnose disease. They are still waiting for the check from Cornell.

Dave Lambert and Terry mentioned that the Homeland Security/Plant Pathogen Pest List had fairly common diseases and wondered if strains and races have been/will be differentiated. *Ralstonia* is on this list. As mentioned previously, survey for this disease could be connected with BRR testing, although Mike Vayda may need some \$ for probes, etc.

Questions were brought up about the detection of quarantined pests. Of course APHIS would like everyone to report quarantined pests if found.

Karen mentioned surveys to be covered under core level (Part I) funding: soybean pests (Soybean Pod Borer, Soybean Rust, possibly Soybean Dwarf Virus), Swede Midge, *Chrysanthemum White Rust*, and bark beetle/warehouse survey.

Andrew said that if he could get a list of greenhouses, bark generators, etc. he can build a database so that information can be available. He also mentioned that he could get info from DHS to see what is coming into the state and where it is going. Andrew said that he could share this information, so if people are going into a particular area, they would possibly survey for other things and the work could be coordinated.

Dave Struble agreed to prepare a work plan on warehouse inspections for around \$10K. He would include salaries for a couple of interns. Dave also might request some money (around \$3700) for Pine Shoot Beetle trapping working with bark generators. Ann indicated she would prepare a request for inspection of nurseries for Emerald Ash Borer. Glen indicated he would request \$1200-1500 for apple pests.

The group briefly discussed the annual meeting in January. Core committee members indicated potential topics could include outreach activities; work plans that were submitted/approved for the year; and possible cooperation on survey activities, along with the normal reporting of activities for the year.