

# **New England Pest Management Network 2006 STAKEHOLDER PRIORITIES AND FEEDBACK CENSUS**

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## **Individual state reports:**

Connecticut - Candace Bartholomew

Maine - Glen Koehler

Massachusetts – no report

New Hampshire - Alan Eaton

Rhode Island - Peggy Siligato

Vermont - Ann Hazelrigg, Sarah Kingsley-Richards

New England regional organizations – Glen Koehler

## **INTRODUCTION**

A telephone survey was used to ask New England pest management stakeholder organizations the following questions:

1. What pest issues are most important to you?
2. What comments or suggestions do you have for your state's university and government pest programs.
3. Do you have suggestions for the PRONewEngland website; survey topics; or an idea for a regional pest management educational meeting or other collaborative effort?

The phone contacts were also used to introduce people to the PRONewEngland website and recruit members for the state advisory committee. Each state liaison agreed to contact the organizations listed for their state in the PRONewEngland.org 'Interest Group' and 'University and Government Programs' directories. To preserve some degree of confidentiality, responses are not associated with their source.

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## CONNECTICUT

Number of responses acquired from private sector pest management interest groups, university programs, and state agencies: 8

### Stakeholder respondents.

Individual contacts not specified in state report. Subjects covered: bee keepers, Christmas tree growers, Farm Bureau, greenhouse, livestock, nursery and landscape, tree fruit, and vegetables.

### \*\*\* Most important pest issues.

1. Apples – Apple maggot, Plum curculio, European red mite.  
Some apple pesticides are so specific that they are hard to use.  
Concern about Imidan restrictions on apples. Alternative materials like Assail and Calypso are expensive and open to apple maggot late in season.
2. Bee keepers – Mites.
3. Christmas trees - Armored scale is #1 problem on Christmas trees.  
Cryptomeria scale has moved onto firs in the north.  
Deer feeding on fir.  
Hemlock elongate scale.
4. Corn - European corn borer.
5. Greenhouses – Thrips on vegetables and garlic.
6. Nursery and Landscape – Black Vine weevil grubs in containers and field grown stock.  
Bag worms on junipers.  
Viburnum leaf beetles showing up in north especially on native viburnum.
7. Pears - Pear psylla.
8. Winter squash - Shortage of fungicides, only have Bravo.

### \*\*\* Comments or suggestions for university and government programs that deal with pest management issues.

1. Need a registration program for bee hives and owners.
2. Demise of State Nursery has affected Christmas tree growers. Mission to keep CT forested is important to Christmas tree growers. Provide funding for field for research and extension.
3. The Pomological Society works together with UConn to put together lots of Sec. 18's. They don't have a lot of personnel. No Experiment station help with growers, but good disease diagnostic resource.

4. "Commissioner of Ag. doesn't know what IPM is."
5. Need an IPM certified program from the Department of Ag & UConn. Need two components, UConn and regulatory authority.
6. Push IPM, need dollars for bodies to work out in the field to help farmers to put together IPM programs.
7. We need more people to do work with growers, like helping to scout and do IPM. We need threshold information, what to look for next week, information on what's expected next. Need more funding for staff.
8. Few complaints with Department of Consumer Protection.
9. New chemicals get registered fast in CT.
10. UConn has good recertification programs.

**\*\*\* Suggestions for the website, survey topic, or idea for a pest management workshop or other regional collaborative effort.**

None

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## **MAINE**

Number of responses acquired from private sector pest management interest groups, university programs, and state agencies: 35.

### **Private Sector groups**

#### **Aquaculture:**

Maine Aquaculture Association

Maine Aquaculture Innovation

#### **Crops and Livestock:**

Maine Beef Industry Council

Maine Christmas Tree Association

Maine Cranberry Growers Association

Maine Farm Bureau

Maine Horse Council

ME Maple Syrup Producers

Maine Organic Farmers and Gardeners Association

Maine Potato Board

ME Pork Producers

Maine Sheep Breeders Association

Maine State Bee Keepers Association

Maine State Pomological Society

Maine Vegetable and Small Fruit Growers

Mid-Maine Greenhouse Growers

Small Woodlot Owners of Maine

Wild Blueberry Commission of Maine

#### **Environmental advocacy and Invasive species:**

Maine Audubon Society

Natural Resources Council of Maine

Maine Center for Invasive Aquatic Plants

#### **Ornamental horticulture and turf:**

Maine Arborists Association

ME Golf Course Superintendents Assoc.

Maine Landscape and Nursery Association

Maine State Florists and Growers Association

### **State agencies and University programs:**

UMaine Integrated Pest Management Program

UMaine Pesticide Safety Education Program

UMaine Water Quality Program

Maine Dept. Agriculture - Board of Pesticides Control

Maine Dept. Agriculture - Cooperative Agricultural Pest Survey (CAPS)

Maine Dept. Agriculture - Division of Plant Industry (horticulture)

Maine Dept. of Environmental Protection - Invasive Aquatic Plants

ME Dept. Transportation - Roadside vegetation management

Maine Forest Service

Maine office: USDA -Animal and Plant Health Inspection Service (APHIS)

Comments are sorted by topic area. Comments by state agency and university program heads that dealt with a particular subject area were assigned to that area. Comments about the functioning and priorities of state and university programs are placed under "State agencies and University programs."

### **\*\*\* Most important pest issues.**

#### **Aquaculture:**

- 1a. Saltwater finfish - Reinstatement of Infectious Salmon Anemia (ISA) control program is highest priority.
- 1b. Sea lice control is essential as direct pest and as ISA vector. Salmon farm industry is using sea lice IPM. Getting university or state agency staff position(s) to support sea lice IPM efforts is a high priority.
- 1c. Need more registrations for therapeutants, only one product currently registered for sea lice ("Slice" – amamectin).
2. Gill fluke is a background threat to finfish aquaculture.
- 3a. Shellfish – For mussels, top priority is tunicates that grow on gear (fouling).
- 3b. For Oysters – Drilling snails (*Urosalpinx cinera*) and gear-fouling organisms (blue mussels, tunicates (*Didemnum* spp.), barnacles) are the biggest pest problems.
- 3c. Oyster parasite threats need attention: Dermo, MSX, Perkinsis.
- 3d. Oyster predators are also a problem: green crabs and rock crabs.
4. Freshwater finfish (trout and bait fish) - Clochidia larval freshwater clam is biggest threat.

#### **Crops and Livestock:**

1. Rodent control on beef cattle feedlots.
2. Cattle lice.
3. Forage crop pests.

4. Lack of research on Christmas tree pest management topics.
5. Retirements at Maine Forest Service concern Maine Christmas tree growers. Also need to replace Max McCormack at Cooperative Forest Research Unit at UMaine.
6. Top pest issues for Christmas tree growers are weeds. Almost all growers use herbicide.
7. Top insect pests for Christmas tree growers are balsam wooly adelgid, balsam shoot boring sawfly, balsam twig aphid. Almost all growers spray for BWA. BWA and BSBS increased in 2006.
8. For cranberry growers, cranberry tipworm (also known as blueberry gall midge) is a serious problem.
9. Cranberry growers are barely holding ground against yellow loosestrife. Purple loosestrife is a concern, but has not been found in Maine cranberry plantings.
10. Late blight on potato is most important crop pest issue in Maine. Apple scab and other rain related crop diseases are also important.
11. Potential for bird flu virus to infect small flocks is a concern.
12. Eastern equine encephalitis is a worry to horse owners.
13. Maple syrup producers in Maine have few pest concerns. Concern about potential tree losses if Asian longhorned beetle became established.
14. For organic vegetable and fruit growers, annual weeds and fungal diseases are key problems.
15. Late blight in potatoes, especially resistance to fungicides.
16. Colorado potato beetle on potatoes, especially resistance and need for new chemistry to control.
17. Potato growers concerned about potential new pest threats such as cyst nematode in Idaho and golden nematode in Quebec.
18. Pork producers need better access to virus testing.
19. For sheep producers, a key concern is pesticide resistance in barber's pole worm Barber's pole worm (*Haemonchus contortus*). Other key pests are sheep ticks (keds) and filth flies.
20. For beekeepers, Varroa mite is the main issue. There is resistance to the effective controls, other registered materials are not effective. The materials that do work are not registered. Beekeepers are fighting EPA over registrations. Need government coverage to make honeybee pesticides economically viable.
21. Other honeybee pest issues are American foulbrood resistance, South African small hive beetle, virus associated with tracheal mite. Beekeepers are getting inferior bees infected with mites. Concern about legislation to restrict air transport of live honeybees. Concern about potential political panic and over-reactions to Africanized honeybees.
22. EPA proposal to cancel Imidan use in pick your own apple orchards is a concern (ed. - since survey was done stakeholder comments have caused EPA to rescind that proposal.)

23. For apple growers, plum curculio is a big issue and the control methods used are under regulatory review.
24. Loss of broad spectrum apple pesticides requires more attention to different individual pests, and possibly more pesticide applications.
25. Section 18 and Special Local Needs labels can be too difficult to get for small fruit and vegetable growers.
26. Cucurbit diseases are under-recognized by vegetable growers.
27. There are limited herbicide options for small acreage crops like beets, carrots, greens.
28. Primary pests concerns for tree farmers are new threats posed by hemlock wooly adelgid (HWA), pine shoot beetle, sudden oak death. Worried about potential over-reaction to HWA.
29. Lyme disease is a major concern for woodlot owners. Association sold over 600 tick removal tools.
30. Lowbush blueberry growers need registrations for effective pesticides for resistance management. There is only one fungicide labeled for mummyberry disease. Growers are heavily reliant on Imidan for maggot control. Minor crop registrations are difficult. Section 18 requests are used frequently.

#### **Environmental advocacy and Invasive species:**

1. Invasive plants are top priority.
2. Hemlock wooly adelgid, purple loosestrife, oriental bittersweet.
3. Homeowner overuse of pesticides, especially herbicides.
4. Aquatic invasive plants - Eurasian milfoil, variable milfoil, hydrilla; and nonpoint pollution as a factor in lake algae blooms.
5. Concern about broad use of herbicides in agriculture and forestry. There are concerns about insecticide use and whether pesticide regulations may be inadequate to protect humans and the environment.
6. Key concern is preventing spread of aquatic invasive plants. Variable milfoil, Eurasian milfoil, hydrilla, curly leaf pondweed are the ones currently present. There is great deal of awareness, but how to get people to change behavior, i.e. boat inspection to prevent moving plants. Need to balance prevention vs. control.
7. Forest pest priorities are the invasive species: hemlock wooly adelgid, emerald ash borer, sudden oak death, Asian longhorned beetle, pine shoot beetle, cedar longhorned beetle.
8. Beyond invasives, forest pest priority is fluctuations of native species such as spruce budworm and saddled prominent.
9. Forest pests Siberian silk moth, emerald ash borer, Asian longhorned beetle. Also Cixes wood wasp, exotic bark beetles moved through human pathways, especially ones that vector tree diseases.

### **Ornamental horticulture and turf:**

1. State passed restrictive laws about spraying near waterways. This creates problems for browntail moth treatments which are often made near the coast.
2. For arborists the most important pests are the defoliators - browntail moth, gypsy moth, saddled prominent.
3. For arborists, on flowering ornamentals such as crabapple, fungal problems are hard to control bad in wet springs.
4. For golf course managers, Canadian geese, Japanese beetle, and Asiatic beetle are significant problems. Environmental problems are primary. Diseases are below economic threshold. Some courses have preventative management, others have only curative interventions. Trend towards lower grass cut height probably increases pesticide use.
5. Crab grass and Japanese beetle are main landscape problems in 2006. Invasive species not a big issue.
6. For greenhouse operators, fungus gnats are difficult to manage, even with Zerotel. Pythium is another common problem.
7. Need someone from university or state to give state of the art recommendations on greenhouse control options, what actually works.
8. Exotic pest concerns are a major concern, in particular emerald ash borer and sudden oak death.

### **State agencies and University programs:**

1. Most important IPM topics are potato late blight and mosquito management for EEE and West Nile Virus.
2. Need more IPM program funding support from federal, state, and region. Can't build programs on competitive funds.
3. Pesticide drift and work protection standards are the hot issues in pesticide safety training.
4. Need funding to continue pesticide safety education as a viable program, current funding is inadequate and a house of cards ready to collapse.
5. Lawn pesticide use and watershed runoff, blueberry herbicide leaching into groundwater. Aerial spraying and drift.
6. Organophosphate pesticide use in crop production looking for alternatives to protect human health.
7. Aerial spraying near residential areas.
8. Invasive species.
9. Need more funding for pesticide applicator continuing education.
10. Our priority is pests that affect trade. This includes forest insect pests, especially wood boring bark beetles; and potato pests of phytosanitary concern such as golden nematode, mop top virus, and potato wart.

**\*\*\* Comments or suggestions for university and government programs that deal with pest management issues.**

**Aquaculture:**

1. ISA Control advisory board, University and State need to hire an aquatic pest specialist, animal health specialist.
2. SEA Grant Extension does a pretty good job. Don't know research needs. Regulatory controls are needed to reduce/prevent invasive species pest problems, and especially for disease control.
3. A workshop on Northeast Aquaculture Pest Management would be useful.

**Crops and Livestock:**

1. Get an animal vet for Extension.
2. Beef producers need a place send fecal parasite samples and carcasses for post mortem analysis.
3. Need research to help Christmas tree growers reduce insect and disease management costs.
4. Christmas tree growers appreciate the Maine Forest Service staff and the pest newsletter. Hope retired positions are refilled.
5. Christmas tree growers have had positive experience with Maine Board of Pesticides Control.
6. Christmas tree growers would welcome any help from UMaine.
7. University and state programs are doing a good job but need more money.
8. Horse card basics 101 for new owners by Extension was very good, would like to see more like this.
9. Increase public awareness of Asian longhorned beetle as a way to protect maple syrup trees.
10. Focus on alternatives to organophosphate insecticides, take the lead and go beyond EPA.
11. University is doing lots of good work that general public doesn't know about, need to tell the story.
12. Maine Department of Agriculture tends to be defensive of current practices regardless of whether there are better alternatives. Needs to lead not follow.
13. Maine Department of Agriculture policy for genetically engineered crops is not workable, will not prevent off site impacts.
14. A potato pest management survey would be of education value and provide info to respond to queries from EPA to defend pesticide registrations.
15. Look at potential for privatizing IPM monitoring in case publicly funded services are cut.
16. Need more educational programs for sheep producers to increase awareness, identification, and management of external and internal parasites.

17. Maine Department of Agriculture does not seem to give much notice or action around honeybee threats, its left up to beekeepers to band together, need state leadership.
18. Extension has done a great job for apple growers, when we ask questions they are answered well and quickly.
19. Would like to see the Ag. Experiment Station stay an active part of UMaine, needs continued funding.
20. There should be requirement that at least one third of pesticide applicator recertification credits should be related to the crops that you grow.
21. IPM for sweet corn should have more flexibility for different markets. Wholesale growers have much tighter thresholds than needed for retail markets.
22. It would be nice if there were IPM programs for more crops in Maine.
23. Could benefit from better coordination for pests shared between commodities, for example the sweet corn IPM program tracks European corn borer but the potato program is not using that information.
24. PRONewEngland site is useful for links to resources, people contacts, and event listings.
25. Maine Forest Service is good at putting out information for woodlot owner, but need to make information easier to get and written for what landowner needs to know, i.e. a landowner guide to tree pests telling what to look for and what to do if found. Don't need too much detail on life cycle.
26. Need to maintain robust research programs for lowbush blueberry IPM and integrated crop management.

#### **Environmental advocacy and Invasive species:**

1. Educate public about when pesticides should and should not be used, relative danger, especially for lawn care and household insect control. Counteract pesticide advertising.
2. Increased public education about invasive species, especially about not importing invasive plants and fish. Use successful methods developed elsewhere, do not reinvent the wheel. Make invasive species training a part of Master Gardener program. Get landscape and ornamental horticulture industry involved to not sell invasive plants and focus on native plants.
3. Public education about Lyme disease.
4. Need greater effort to communicate with public about control of invasive aquatic plants.
5. State and university Extension should look into organic agriculture as way to both increase profitability and decrease pesticide use.
6. Need more promotion by state and university of IPM.
7. Would like to see regulations requiring IPM in schools extended to other arenas.

8. Visit to PRONewEngland was useful. What is it's philosophical viewpoint?
9. Extension is doing good job getting word out to the public. Academic side of University seems to have less and less involvement with plant pest issues. Would like to see resurgence of entomology research.
10. Need more outreach to make the public more aware of pest management activities by state agencies and university.
11. Need outreach to tribal nations, pull in the tribal foresters. Need access to tribal lands for pest monitoring.
12. PRONewEngland website is very useful.

### **Ornamental horticulture, greenhouse, turf:**

1. For arborists, there is concern about recent retirements at the Maine Forest Insect Lab, losing 105 years experience with three retirements. The Forest Insect Lab is a valuable resource for arborists.
2. Need the Maine Forest Insect Lab newsletter to be renewed.
3. Spray notification requirements for golf course managers are an issue. Don't want more regulations.
4. Gary Fish (Maine Board of Pesticides Control certification training) is accessible and does a good job.
5. Many golf courses are outsourcing spray applications to contractors who also manage school grounds.
6. Maintain horticulture positions in the Maine Department of Agriculture.
7. State should research what is truly invasive and what isn't before issuing plant bans. Don't issue blanket bans on all varieties in a species if only a few are invasive.
8. Extension (Bruce Watt and Lois Stack) do a fabulous job providing quick answers.
9. Never ending need to expand horizons for greenhouse biocontrol, need practical methods for year round greenhouses.

### **State agencies and University programs:**

1. Collaborate on web pest ID guide that links to fact sheets for homeowners.
2. For invasive aquatic plants, research is a lower priority than prevention. Can rely on experience in other states. There are good relationships between government programs.
3. Black locust trees along roadsides become fixed deadly objects that also block drainage, sun, and wind.
4. Much lower roadside vegetation priorities are Japanese knotweed, oriental bittersweet, buckthorn, multiflora rose. Phragmites and purple loosestrife are minor issues in terms of roadside safety but are important issue in wetlands reconstructions generated by roadwork.

5. Maine lacks direction for control of invasive species, such as regulations on required control for various terrestrial invasive species. Need coordination between invasive species programs to harmonize species lists and coordinate efforts. Maine is at end of the road for invasive species problems, we have opportunity to prepare for problems other states have dealt with previously. Detection and rapid response saves much money. Establishing contingency plans will save time and money when threat is detected.
6. There has been better channeling of home pest calls to Extension. This helps reduce load on Maine Forest Insect Lab, which formerly handled more homeowner general pest calls. Getting together on projects with Extension is useful, like fire ant problem.

**\*\*\* Suggestions for the website, survey topic, or idea for a pest management workshop or other regional collaborative effort.**

**Aquaculture:**

1. Shellfish and fresh water aquaculture folks could benefit from introductory IPM training. It is not currently in their vocabulary.

**Crops and Livestock:**

1. PRONewEngland useful for finding Extension contacts.
2. There is need for forage pest education.
3. Need for education about beef cattle parasite lifecycles.
4. Christmas tree growers would like to see a survey of pest management practices and needs.
4. Maine Christmas tree growers annual meeting is the major venue for keeping growers up to date with pest management situation, especially pesticide label changes.
5. PRONewEngland surveys are well done.
6. Need survey to define equine industry pest management needs. Need to quantify strangles incidence and education needs.
7. Need to get the information available to commercial farmers available to hobbyist level producers also.
8. New England states should work together to develop alternatives to pesticides, especially organophosphate (OP) insecticides. Could have a multi-state workshop on identifying gaps brought by new OP regulations. For example, Christmas tree growers say they need OP and will keep using until they have cultural, biological, or chemical alternatives. Lay out a research agenda for next five years. Set up an OP transition fund that would pay producers change in profit caused by giving up OPs.
9. Would like to see survey of sheep tick problems and control methods.
10. Would like to see an online edition of a regional sheep parasite handbook.

11. Need a regional public education program on Africanized bees. Local beekeeping groups are too small and isolated to effectively handle this. Need state agency involvement (such has been done in CA and AZ) to deliver calming, informative message. Requires multiple level approach – website, brochures, school programs. Message is “See a bee, leave it alone.”
12. Would like to see the public get more information on why pesticides are used on crops, and that conventional farmers are responsible stewards.
13. Ag producers are getting plenty of information, but still need updates on new materials and softer environmental methods
14. Homeowner pesticide use is less informed than commercial agriculture. Maine Board of Pesticides Control has begun to address homeowner pesticide use on lawns.
15. Keep support for New England Vegetable and Fruit meeting. Help with online proceedings.
16. We don’t need more stakeholder meetings. Send an email query once a year, collate responses and send back out for secondary responses, reactions, new thoughts. Compile that as stakeholder feedback.
17. Provide information on new pest threats for woodlot owners. Use electronic forms and partner with other organizations for workshop to discuss in person. Lyme disease speaker was inundated with questions at last year’s meeting.
18. There needs to be a wider public understanding of pest management, especially for agricultural pests. There is a disconnect with the public. Ag is cutting back pesticide use while lawn pesticide use increases. Need to reach kids early, and to reach parents through kids. About the only other way to reach adults is through public service ads on TV which are of questionable impact.
19. Survey public opinions on pest management in agriculture to understand what the concerns are, and to what level, as a way to figure out what the public education needs are.
20. Already addressing regional needs through regional Certified Crop Advisor training.

### **Environmental advocacy and Invasive species:**

1. IPM means nothing to 99.9% of the public. Need short focused presentations, such as nonchemical lawn maintenance.
2. Survey university and state agency programs around New England about their invasive pest efforts, investigate how to coordinate efforts. An example is the RI DEP purple loosestrife program, it is effective model to communicate to other states. Combat hopelessness by picking winnable battles.
3. Inform people of the financial benefits of lower-input nonchemical approach.
4. There is good stuff on PRONewEngland.
5. Need a list of groups dealing with invasive plant issues to clarify their roles.

6. Anything we can do through education efforts (media, presentations, mailings) to reduce pesticide inputs and substitute safer alternatives for higher risk pesticides would be good. Look at universe of options, identify preferable options, and find ways to shift to preferable options.
7. Would be useful to have a Maine conference on aquatic invasive plants, what works and what doesn't. There are numerous groups dealing with this issue, so many that there may be benefit in getting them all together to clarify roles, compare notes, network for mutual advantage.
8. Need regular updates on invasive species news for New England, such as an email distribution list with alerts to allow early intervention.
9. An invasive species coordination meeting for all the government agencies and private sector groups dealing with invasive species would be useful.
10. Need more public education on artificial spread of invasive species, and which ones to be on the lookout for. Need notices about firewood importation at state entry points.
11. Would like to collaborate with Extension to get volunteers for hemlock wooly adelgid (HWA) survey. Maybe use Master Gardener training for HWA scouts.
12. Need an official list of discouraged plants that is coordinated across state lines.
13. Love to see effort to pull in campers, distribute information at campgrounds, at visitors centers, and as inserts in camping information sent out by Tourist agency.
14. Love to reach into high schools for invasive species education. If only to get more eyes out looking.
15. Would like to work with DOT and other agencies to check firewood coming in from out of state for invasive species. Use Bill Green's Outdoor Maine TV program and other opportunities for outreach.
16. Would like to see more research on native or non-invasive species for low input prevention of brush regrowth.

**Ornamental horticulture, greenhouse, turf:**

1. Maine Arborist Association annual meeting is in March. This brings about 135 people from across Maine. Meeting has 1 hour pest session update. This is good venue for getting a message to arborist community.
2. Would appreciate updates on tree pest situation, especially for potentially devastating invasive pests such as hemlock wooly adelgid, emerald ash borer, Asian longhorned beetle.
3. It is good that all New England states have reciprocal pesticide recertification credits.
4. Aquatic weeds are an issue for golf course managers.
5. Greenhouse operators are adequately served by current meetings.

**Pesticide safety education:**

1. Need more cooperation on a regional basis, national cooperation is too broad. A regional drift conference would be useful.

**Residential, structural, and public health pest control:**

1. For school IPM, all the New England states need to operate at the same level. At present, Maine and Massachusetts are way ahead of the other states.
2. Need homeowner and community IPM effort for mosquito management.
3. Need a regional pictorial home pest guide.

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## NEW HAMPSHIRE

Number of responses acquired from private sector pest management interest groups, university programs, and state agencies: Not specified in state report.

### **\*\*\* Most important pest issues.**

1. Corn and other forage crops.
2. Pests impacting forestry.
3. Forestry - Exotic/invasive pests that have made it to NH are our # 1 problem. Insects like hemlock woolly adelgid and balsam woolly adelgid demand a lot of our resources each year. Exotic insects that are threatening our forest but have not been found in NH yet are also extremely important to us and we spend considerable resources monitoring for these pests.
4. Mosquitoes.
5. All pests that affect the landscape industry.
6. Vegetable pests – Colorado Potato beetle, striped cucumber beetle.
7. As a grower these: Cucumber beetles, squash bugs, caterpillars, cabbage worms, slugs, wet weather diseases, weeds, weeds, weeds.
8. For organic farmers, all of the above, and add tomato hornworms, tomato early blight, flea beetles, blossom end rot, “corn worms” (ed. presumably this means corn earworm, European corn borer, and fall armyworm), deer pressure, potato beetles, Japanese beetles.
9. Organic management of flea beetles and aphids on salad greens.

### **\*\*\* Comments or suggestions for university and government programs that deal with pest management issues.**

1. NH Pesticide Licensing too restrictive. Experience requirement creates a catch 22 for some people to become certified.
2. Need appropriate pesticide package sizes for small/part time growers.
3. I would like the NH Division of Pesticide Control to communicate with Extension's PSEP work team. We are given no details on what sections of pesticide exams people have the most trouble with. This means that we have to guess how and what to change when we teach pesticide safety.
4. Need more attention to pests of economically important crops; less hoopla about invasives which we probably can't do much about anyway.
5. Focus on non-toxic, pro-nature solutions to pest issues. Soil building, bio-diversity, and other aspects of pest control must always be what universities and government suggest and subsidize.

6. I wish you would send out email notices to announce action alerts and workshops. I do not have time to go to your website and inquire.
7. Do more research with nonchemical methods of pest control.
8. I would like to see UNH take the lead in looking at many of the most threatening insects and diseases in our forests. Examples would be current forest tent caterpillar outbreaks, winter moth and fall cankerworm outbreaks, birch decline in the north, balsam woolly adelgid, and hemlock woolly adelgid.
9. Could use some weed info, also bird pests.

**\*\*\* Suggestions for the website, survey topic, or idea for a pest management workshop or other regional collaborative effort.**

1. Site is well organized, easy to read and a great format to go from one page to the next. Colorful and eye catching main page. Fairly easy to navigate. Possibly somehow title the square picture links at the top of the page.
2. Add more forest pest information to website, list of pests would be helpful.
4. I was on the PRONewEngland website this morning. More pictures of apple pests would be helpful. The ones that are there are excellent.
5. Suggest focusing educational efforts on a state-by-state basis. Need consistent message between states using existing education channels and expanding upon them.
6. It would be nice to have uniformity between the New England state's pesticide control agencies. As part of N.E. Vegetable & Berry Growers Association, I know it's tricky trying to gather the different states' credit forms, sign-in sheets, etc.
7. Maybe we could combine a PRONewEngland educational meeting with the New England Fruit & Vegetable Conference. Most of the region's Extension Specialists and Educators (who are interested in pest management) are there for at least part of the conference.
8. Something that would enhance the relationship between Extension-research with Health Depts./ Regulators in all NE states to develop uniform, regional preventive strategies for most consequential pests.
9. Interested in organic pest management techniques.
10. The current hot issue for salad greens growers is all the leaf diseases that we have been seeing the past few years. I would love to see a workshop on leaf diseases put on by plant pathologists that specialize in this area.

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## **RHODE ISLAND**

Number of responses acquired from private sector pest management interest groups, university programs, and state agencies: 18.

### **Stakeholder respondents.**

#### **Private Sector**

##### **Crops:**

Grape grower, Vineyard manager  
Pesticide distributor - vegetable crops

##### **Ornamental horticulture:**

Arborist, Tree care contractor.  
RI Nursery and Landscape Association  
Commercial landscaper  
Nursery grower and garden center manager

##### **Residential and structural pest control:**

Private pest control operator  
Structural pest control products distributor

##### **Turf:**

Pesticide distributor – turf  
New England Regional Turf Foundation  
Turf grower

##### **State agencies and University programs:**

RI Center for Commercial Agriculture  
RI Good Agricultural Practices Program  
RI Department of Environmental Management (RI pesticide regulatory agency).  
URI Cooperative Extension Plant Clinic  
URI Sustainable Agriculture Program  
URI Master Gardner Program  
URI Food Safety Program

### **\*\*\* Most important pest issues.**

#### **Crops:**

1. Changing vegetable pesticide labels.
2. Keeping updated on recommendations
3. Disease and fungicide management. Which products can be used close to harvest.

#### **Ornamental horticulture and turf:**

1. Up to date and pertinent news for nursery and landscape professionals.
2. Information on herbicide timing and application.
3. Losing many products that are effective, need information on new products.
4. Organic practices in nursery production.
5. Lawn and garden pesticide and cultural information.
6. Pest life cycles and pesticide controls for turf managers.
7. Products that can be used on sod farm are limited. Research needed on turf pest management.

#### **Residential and structural pest control:**

1. Bed Bugs.
2. IPM Regulations.
3. Pesticides use in public areas.
4. School IPM.
5. Safe products to use around the public.

#### **State agencies and University programs:**

1. Organic practices for diversified growers.
2. Pesticide safety.
3. Least Toxic methods for Master Gardeners and homeowners.

### **\*\*\* Comments or suggestions for university and government programs that deal with pest management issues.** - Not included in state report.

### **\*\*\* Suggestions for the website, survey topic, or idea for a pest management workshop or other regional collaborative effort.**

1. Continue to keep website links updated.
2. Pest fact sheets on PRONewEngland are useful.
3. Web links to MSDS sheets and labels are useful.
4. Web link to New England Vegetable Guide useful.
5. Publications and information on the website are useful, we used for Hotline.

6. Fact sheets and people contacts on website are useful.
7. Feature calibration guide on site.
8. Link to pesticide regulations.
9. Training and resources for non-English speaking and low literacy workers.
10. Emphasize new technologies and product updates.
11. Continue with production of homeowner level materials that address cultural controls.
12. People contacts on website helpful.
13. PRONewEngland People finders are useful.
14. Meetings posted on PRONewEngland site are helpful.
15. Conference and meeting dates on website are helpful.
16. I think the Orchard Radar should continue.
17. I use Orchard Radar, would like more of the same.
18. Used Orchard Radar and found very useful.

\*\*\*\*\*

## **VERMONT**

Number of responses acquired from private sector pest management interest groups, university programs, and state agencies: 11.

### **Stakeholder respondents.**

#### **Private Sector groups**

##### **Crops and Livestock:**

New Hampshire-Vermont Christmas Tree Association.

Vermont Maple Sugar Makers' Association.

Vermont chapter of Northeast Organic Farmers Association.

Vermont Sheep Association.

##### **Ornamental horticulture:**

Vermont Association of Professional Horticulturists.

#### **State agencies and University programs:**

UVM Center for Sustainable Agriculture.

UVM Integrated Pest Management Program.

UVM Pesticide Applicator Program.

VT Agency of Transportation, Maintenance and Aviation Division, Roadside Vegetation Management.

VT Agency of Agriculture, Food & Markets.

VT Department of Environmental Conservation - Aquatic Nuisance Species.

### **\*\*\* Most important pest issues.**

#### **Crops and Livestock:**

1. Tarnished plant bug is challenging for organic growers.
2. Organic options for Colorado potato beetle, cucumber beetle, cabbage flea beetle.
3. For maple sugar producers, key issues are forest tent caterpillar, lecanium scale, and pear thrips.
4. Parasites in sheep and goats.
5. Balsam twig aphid and spider mites on Christmas trees.
6. Annual/perennial/broadleaf herbicides.
7. Soil fungi (*Phytophthora*, *Armillaria*) are an emerging issue for Christmas tree growers, especially at 2<sup>nd</sup> or 3<sup>rd</sup> rotation of crop. This is a bigger problem with Fraser fir (non-native but fetches higher price) than balsam fir.

### **Ornamental horticulture:**

1. Invasive plants and insects.

### **State agencies and University programs:**

1. More base funding is needed to support IPM programs (i.e., more funds for personnel and operating expenses).
2. Apples, Grape, Vegetables & Small Fruit, Field Corn, Greenhouse, Ornamental, and School IPM.
3. Vegetable and small fruit pest issues.
4. Systems-based methods for reducing pest pressure / biologically-based pest controls.
5. Invasive species which encroach on wetlands.
6. Pesticide use by homeowners is becoming more and more of an area of concern. Primarily as it relates to water quality. We have substantial regulation in place to manage pesticide use in most non-homeowner venues.
7. Vector control is becoming a larger and larger use pattern. As the public's fears grow over vector-borne disease, I am afraid more indiscriminate pesticide use may follow.
8. Aquatic invasive plant and animal management, early detection and spread prevention.

### **Roadside vegetation:**

1. Trees which encroach into clear zones or sight distance areas.
2. Vegetation beneath guardrail and in rock ledges which we cannot mechanically remove.
3. Poisonous plants such as Poison Ivy and Wild Parsnip.
4. Vegetation that blocks the flow of water through culverts or prevents water from leaving the roadway or which causes snow to build up on the roadway.
5. Trees which prevent sunlight from drying the roadway
6. Hazardous trees which by their location or health pose a problem to the public.

### **\*\*\* Comments or suggestions for university and government programs that deal with pest management issues.**

#### **Crops and Livestock:**

1. More research geared toward organic management.
2. Extension does a pretty good job.
3. Need for technical assistance for growers.
4. Need education and seminars on invasive species rules – they are not well known.
5. Get info to maple syrup producers and general public on management options, alternatives, cultural methods, i.e. what to do, is it necessary, when to do it.

6. Continued research on new methods of controlling parasites.
7. Develop resistant Christmas tree varieties.
8. Education for Christmas tree growers on right tree for the site (relates back to fungus issue).
9. Have speakers come to Christmas tree grower meetings.
10. Regional meeting on Christmas tree replant fungus diseases.
11. Would like more hands on materials for growers and/or home gardeners.
12. Need more attention to small-scale highly diversified farms for whom many standard IPM procedures such as intensive scouting of single crops is not of great interest.
13. Need info on efficacy and use of biological controls, habitats for beneficials.

**Ornamental horticulture:**

1. I like the PRONewEngland pest ID cards.
2. Good job getting info out to horticulturalists – thanks for keeping us in the loop.

**Other:**

1. Need to work collaboratively on roadside vegetation solutions, it's everyone's problem. Need education for the public to explain why it is necessary to remove this vegetation, particularly if it involves the use of herbicides.
2. Work cooperatively with state agencies on needed aquatic invasive species research.
3. University and government programs do a good job here. Funding is always an issue.

**\*\*\* Suggestions for the website, survey topic, or idea for a pest management workshop or other regional collaborative effort.**

1. On-farm pest ID, hands-on workshops for organic growers.
2. Really good web site.
3. Site has been useful.
4. Like the regular updates.
5. I visit the Pro New England site - usually to catch up on news in other states.
6. VT Assoc. of Professional Horticulturalists is a small association with limited budget, would be great to coordinate with other states. There are some current regional workshops (IPM) that are appreciated.
7. There are current state and North American meetings for maple syrup producers, but nothing regional.
8. Lifecycle, management information for maple pests.
9. Website is well done. I do not use it very often but have found some of the events listings to be helpful. Need to be more thorough in listing events from all states.

10. A New England regional pest management meeting for small fruit pests and disease problems. Christmas tree growers also interested in a regional meeting. All other commodities seem well served.

11. Develop training for road crews about invasive species.

\*\*\*\*\*

## **NEW ENGLAND REGIONAL ORGANIZATIONS**

Number of responses acquired from multi-state private sector pest management interest groups: 13.

### **Crops, Livestock and Forestry:**

New England Vegetable and Fruit Growers Assoc  
Forest Resource Association - Northeast Technical Division

### **Environmental advocacy and Invasive species:**

New England Wildflower Society  
Northeast Aquatic Nuisance Species Panel  
Northeast Aquatic Plant Management Society  
Toxics Action Center

### **Multiple sites**

Northeastern Weed Science Society

### **Ornamental horticulture and turf:**

Golf Course Superintendents of New England Association  
New England Greenhouse Conference  
New England Regional Turf Foundation  
New England Sports Turf Managers

### **Residential, structural, and public health pest control:**

New England Pest Management Association  
Northeastern Mosquito Control Association

### **\*\*\* Most important pest issues.**

#### **Crops, Forestry, and Livestock:**

1. Continued pressure to restrict or limit aerial application pesticides is a huge concern for forestry community.
2. Another concern for forest protection is the potential for regulatory elimination of useful pesticides.
3. Invasive forest pests such as emerald ash borer, gypsy moth, yellowheaded spruce sawfly, hemlock wooly adelgid are threats being watched.
4. For vegetable and fruit growers wildlife damage (birds, deer, rabbits, woodchucks) is important. Also concerned about loss of pesticide registrations.

5. Shrinkage in weed science staff positions in New England. Emergence of herbicide resistant weeds is another important issue. Need alternatives to herbicide and tillage. Herbicide technology has come to a standstill, no new modes of action and few new active ingredients are coming on, especially for minor crops.

**Environmental advocacy and Invasive species:**

1. Educating public about invasive plants. Invasive insects such as lily leaf beetle and hemlock woolly adelgid are also a concern.
2. Hydrilla is an important regional pest. Public education is a component in its control.
3. Lack of consistency in regulations between states for invasive aquatic plants, inconsistencies in aquatic herbicides use regulations.
4. Concerned about impacts of off-target pesticide application, working to prevent or minimize pesticide use in the community and promote least toxic approaches.

**Ornamental horticulture:**

1. For greenhouse operators, finding effective registered pesticides is a priority, registrations change quickly, restricted entry intervals are a constraint on operations, and pesticide costs are high. It is difficult to find a product that will work on diverse crops in a small space.
2. Greenhouse employee pesticide safety training is an important issue. Greenhouse industry is seasonal, and has to annually deal with applicator trainer education. Regulations require training workers before they work.

**Turf:**

1. Priorities are site specific, for some courses biggest need is fungicides for dollar spot. Dollar spot seems harder to control.
2. For other courses, grub species are biggest issue. Insecticide options reduced for grub control, good ones lost and not much new in the pipeline. Changing species mix.
3. Changing weather is affecting timing and overlap of insect generations, disease cycles are different. Especially affects people on low input programs.
4. Golf course managers are seeing fungicide (Dollar spot) and insecticide resistance
5. Many landscapers/lawn care contractors are not licensed and do not get training as much as needed. That group of applicators needs more regulatory oversight.
6. Turf managers are worried about losing key pesticide registrations. For example, Daconil is a key pesticide that looks threatened by cancellation.
7. Pesticide restrictions on school ground are on the radar

### **Residential, structural, and public health pest control:**

1. Getting new employees licensed is a concern. There are regulatory difficulties in some states. The certification questions used for recertification tests are not pertinent to job activities in some states (MA).
2. Regulation on mosquito control pesticides are too restrictive at state level. Making applications on school property has become a bureaucratic difficulty.

### **\*\*\* Comments or suggestions for university and government programs that deal with pest management issues.**

#### **Crops, Forestry, and Livestock:**

1. Training is adequate.
2. Agencies and universities should be more aggressive in advocacy for right to use pesticides. Staff persons with most knowledge about pesticide use often take a low profile in disputes, this allows policy to be driven by emotion rather than facts.
3. Concern with loss of research interest in forest pest issues. Invasive insect, disease, and plants are emerging concerns for forest industry. Forestry community can't handle that by themselves, need government involvement.
4. Staff cuts are a problem. There are fewer people in Extension, it is a problem that Extension does not do as many farm visits. Basic research replacing applied research, and focus on getting grants favors basic research. State Dept Ag also shorthanded.
5. State departments of agriculture are too reactionary at the expense of long term planning. It is difficult for state programs to create measurable impacts because of the time spent putting out temporary fires. Need to see the forest instead of the trees.
6. Grant programs at USDA and NRI are not supporting applied research in weed science.

#### **Environmental advocacy and Invasive species:**

1. Need more collaboration on invasive species. Invasive species problems are not going to be solved by individual programs, requires public education. Universities need to communicate about new research.
2. More education and outreach on invasive aquatic plants in small farm ponds, golf course ponds is needed. This should include information on IPM, including herbicides in conjunction with physical or biological controls.
3. Need more research on biocontrol of variable milfoil and Eurasian milfoil.
4. Board of Pesticide Control in Maine should test for drift from aerial applications and off-target pesticide from aquatic application. Maine needs stronger drift regulations.
5. Should be more public access to Board of Pesticides Control actions, and access to information about pesticides being used in their community. Call lists often don't happen, no-spray registries are little known and not fully used.

### **Ornamental horticulture:**

1. It would be nice to have research done on locally important problems such as deer and Japanese Beetles.

### **Turf:**

1. Could use help from Universities in dealing with weather induced changes.
2. There are increased customer expectations for playing conditions with decreased time frame to accomplish the work. Cultural practices are frowned upon by people giving direction to course superintendents because of the effect on playing conditions. Need to emphasize the effect of cultural conditions on plant health to course management.
3. Research on nematode and bacterial control of grubs seems unproductive, would like to see more research done on effective chemical controls.
4. Golf course manager would like to get feedback after MA pesticide safety inspections.
5. Budget issues at many of the universities have affected Extension delivery. There is pressure on industry to raise funds for program operations and endow positions to preserve positions. New revenue sources need to be established.
6. There is going to be legislation for pesticide use on school grounds.
7. Need IPM education and info on cultural practices and pesticide use reduction for professional turf managers/ landscapers and homeowners.

### **Residential, structural, and public health pest control:**

1. Keep an open dialogue with residential pest control industry, they want to be a partner.
2. Would like to see university and state agency programs defuse public fear about pesticides, the risks are well publicized but not the benefits.

### **\*\*\* Suggestions for the website, survey topic, or idea for a pest management workshop or other regional collaborative effort.**

#### **Crops, Forestry, and Livestock:**

1. Regional forest pest management meeting in conjunction with Society of American Foresters meeting would be useful.
2. Address wildlife issues for vegetable and fruit growers. Continue cooperation among New England Land Grant universities for the New England vegetable and fruit conference.

### **Environmental advocacy and Invasive species:**

1. Need coordination of invasive species activity within individual states. Need single state focus because state law is controlling factor. Include all the stakeholders (landscape industry, state Dept. of Environmental Protection etc.)
2. Key priority to come together for management of invasive plants. There are lots of pockets without coordination. Need a conference to identify priority areas and structure working groups. Need to bring university departments, state agencies, NRCS and ARS together to connect them more efficiently. Without coordination they can send out mixed or even conflicting messages. For example, NRCS in mid-Atlantic states is promoting no till, but university staff might have different emphasis on problems that come with no till.
3. Would like a synopsis of invasive species issues in New England. Need more information and updates on invasive and introduced insect pests and diseases.
4. A pilot project on hydrilla control is working across state lines. This might be a model for addressing other invasive pest issues.
5. Love to see more consistency among New England states in permitting invasive aquatic plant management strategies (physical removal, herbicide use). Showcase what works and bring all states up to same level.
6. Need more consistency in state prohibited species lists. ME, NH and VT are fairly uniform, other New England states have different regulations.
7. More communication about the current geographic range of invasive species.
8. Support for students at Northeast colleges who have an interest in aquatic plant management and cyanobacteria.

### **Ornamental horticulture:**

1. Need a Japanese beetle project. Extension needs to work on problems of local concern such as deer and tarnished plant bug on cut flowers.

### **Turf:**

1. Turf researchers at UMass, UConn, URI, and UNH each seem to go their own direction. More cooperative effort needed, not sure of how to make that happen.
2. All the golf course superintendent associations should be under roof. There is not a good sense of New England-wide situation. It would be good to get New England superintendents working together. This could help in communicating with EPA and pesticide manufacturers.
3. For golf course turf, need to find ways to reach the end users (e.g. golfers) as source for fund raising. Other states have taxed fertilizers, if each golf course in New England (1000 courses) did this, then hefty funds could be raised. Legislative efforts across state lines don't seem feasible. Cooperative educational effort across New England is beneficial, not sure how much is being done. IPM is a good topic that seems to have

died out. Would like to see an effort to promote turf IPM guidelines and their use by golf course managers. This requires some kind of incentive. IPM needs to regain the prominence it had 5-10 years ago.

**Residential, structural, and public health pest control:**

1. IPM in schools is an issue that always comes up, need uniformity between states. Getting school staff participation is difficult.
2. It would be useful to have a regional database for current mosquito trapping observations. It is tough to get information from other states and municipalities.

## F7. Stakeholder feedback from 2006 mail survey

An introductory letter about PRONewEngland.org website was sent to approximately 620 pest management stakeholders and state legislators in the six New England states in January 2006. The letter included a three-question mini-survey asking people 1) to identify the pest issues most important to them, 2) to make comments and suggestion for the university and government programs in their state that deal with pest management issues, and 3) for comments and suggestions for PRONewEngland.org. A postage-paid pre-addressed return mail envelope was included with each letter. The packet also included a set of eight pest photo ID website promotional cards and information about the Northeastern IPM Center.

The mailing may have succeeded to publicize the website, but as a survey method it failed. The response rate to the mini-survey was very poor, only 12 questionnaires were returned for a response rate of 2%. In contrast, the response rate for our IPM tactic surveys has been over 60%. This indicates that mass mailings, even those targeted to pest management stakeholders, are not an ineffective way to census pest management issues. The lack of structured questions or conversational clarification also results in some responses being hard to interpret. Therefore, we will not be rely on similar mailings again and are focusing acquisition of stakeholder input from advisory committees in each New England state.

Comments received from the mailed mini-survey:

### **\*\*\* Most important pest issues.**

1. Forestry related pest issues.
2. Non-toxic grub control in lawns, kitchen pest control.
3. Potato bugs, thrips, blight, wireworms.
4. Tarnished plant bug and invasive species.
5. Urban pests common and local to New England – ants, termites, flies.
6. Borers and other woody plant pests.
7. Release of genetically engineered crop and turf plants that through pollination and mutagenesis lead to hard to control superweeds.
8. Thrips, whitefly.
9. Application to livestock and barns.
10. Balsam gall midge, spider mite, twig aphid.
11. Invasive species, pest threats to natural communities.
12. Potato, squash (garden), lily beetle, scale (indoors/out).

**\*\*\* Comments or suggestions for university and government programs that deal with pest management issues.**

1. Collaborate and cooperate to minimize duplication and ensure states have adequate staff to deal with pest problems as they arise.
2. Educate the public on the non-toxic/preventative pest control measures.
3. More site visits and on-farm help.
4. UMass is woefully lacking in the area of urban and applied structural entomology
5. Fact sheets are important tools. Updating is key!
6. Work with Christmas tree experts to update and consolidate information already done. Make this available to growers.
7. More certified pesticide applicator training offered in NH (in daytime for workers), more courses offered through Cooperative Extension in NH, more general public awareness.
8. Set up booths at regional, local fairs etc. with handouts on pest/beasts of all kinds.
9. I wish I could get a card listing invasive pests, or even a poster for my customers.

**\*\*\* Comments or suggestions for PRONewEngland.org.**

1. Great fact cards!
2. The pest pictures and information are good. Management/control measures would be a nice addition.
3. Keep up the good work.
4. Keep issuing timely updates such as those on winter moth and northern fire ant.  
Keep up the good work.
5. How about direct links to growing degree day info being collected at various locations.
6. Fact sheets are terrific.
7. Very disappointed with the balance in the Biotech section.
8. Great collection of IPM information in one place!
9. Sustainable use and environmental deposition are important issues to New England.
10. Please don't duplicate what is already done, spend money on new research and an easy way to get information out to growers.
11. I think what IPANE is doing is a great way to track and get info about invasives, like how site is broken up by state. Would like to see more info relating to natural communities (vs. agricultural).
12. I very much like the cards you sent.