Title:	The Multidisciplinary Vermont Extension Implementation Program Addressing Stakeholder Priorities and Needs for 2014-2017

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Program Code: EIP **Program Name:** Extension Implementation Program

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Comparison of Three Organic Apple

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Non-Technical Summary

The VT EIP uses a multi-disciplinary approach to address IPM priorities and needs identified by local and regional stakeholders. The focus of the program includes forages, grains and field crops, greenhouse and landscape operations, apples and grapes, communities, gardens and plant diagnostics for vegetable and berry growers and others. The priority of the program is to develop and promote diverse alternative pest managment tactics that will help growers produce high quality crops, produce, ornamentals or landscapes while miminimzing input costs and impacts to health and the environment. The VT EIP team includes a plant pathologist, horticulturist, agronomist, weed specialist, entomologist and a community outreach professional.

Accomplishments

Major goals of the project

The major goals of the project are to increase the adoption of IPM practices in a variety of crops and settings to reduce the amount of pesticides used and to lower costs while protecting the environment and human health.

What was accomplished under these goals?

Each facet of the VT EIP has accomplished goals toward increasing the adoption of IPM practices in a variety of crops and settings to reduce the amount of pesticides used and to lower costs while protecting the environment and human health. The VT EIP project areas include grains, oilseed, and hops; apples and grapes; greenhouse and landscape operations; communities; and plant diagnostics.

All project areas have held workshops/presentations that increased knowledge of IPM topics. Growers at the "Agronomy Winter Conference" have improved grain quality as a result of implementing practices highlighted. Apple and Grape presentations provided information that was "very pertinent to issues of recent season" and provided "needed review regarding pest control." Up to 98% of "Tri-State Greenhouse IPM Workshop" attendees have increased use of biological controls and plant-mediated IPM systems, decreased chemical pesticide use, and improved scouting programs and insect/disease identification. As a result of a "Regional IPM Workshop for Landscapers", one professional arborist is currently testing predatory midges against aphids on street trees to reduce public complaints. 83% of "Master Gardener Course" participants report that they have changed specific garden practices to better incorporate IPM. Presentations to grape growers

increased awareness of the Plant Diagnostic Clinic among this targeted stakeholder group by 71%.
Of other products that have been initiated, several have already achieved notable impacts. The "Grain Disease Survey" has been able to detect, and train farmers to identify, arthropods and diseases that have not previously been identified in their fields. Plant-mediated IPM systems are now used by 10 participating growers, which reduces their use of pesticides and increases crop quality, and a participating grower is transferring IPM knowledge to the public, high school students and other growers. Plant Diagnostic Clinic users indicated a 98% increased knowledge of a pest or disease through use of services and 74% found the information provided on IPM with the sample diagnosis resulted in use of less pesticides. Targeted stakeholder groups (apple and grape growers, landscapers) exceeded the targeted 20% increase in use of the Plant Diagnostic Clinic in this period.
Please see the following accomplishments available at this time for each product for more details.

Agronomy Winter Conferences

- 44.68% going to grow more grains and 38.80% change crop rotation.
- 48.15% improved grain quality as a result of implementing practices highlighted at the conference including proper cultivar selection, better rotations, and timely harvest.
- "This conference is a highlight of my year. It is so remarkable that such a good event is devoted to such a fringe agricultural endeavor."

- "I thought it was great that you were able to target both beginners and experienced folks."

Grain Disease Survey

- We have been able to identify some diseases that farmers have not previously identified in their fields (tan spot, Septoria sp., leaf rust) and arthropod pests (thrips, mites, leaf beetle, grain borer). Farmers have also learned how to identify these pests.

Apple Extension, Outreach, Education

- Vermont Tree Fruit Growers Association annual meeting
  - Percent of participants with moderate/considerable general knowledge following presentations:
    - 81% use and fit of new SDHI fungicides (49% increase)
    - 74% use of plant growth regulators (44% increase)
    - 90% on managing fireblight in modern orchard plantings in the ages of antibiotic resistance (57% increase)
  - "Information was very pertinent to issues of recent season."

Grape Extension, Outreach, Education

- Vermont Grape and Wine Council annual meeting:
  - Percent of participants with moderate/considerable general knowledge following presentations:
    - 96% Phomopsis symptoms (67% increase)
    - 96% Anthracnose symptoms (50% increase)
    - 100% Black Rot symptoms (33% increase)
    - 100% Powdery Mildew symptoms (30% increase)
    - 100% Downy Mildew symptoms (30% increase)
  - "I needed the review regarding pest control and the types."
  - "Broadened my grape growing knowledge and provided specific examples of IPM practices related to grapes."

IPM First for Greenhouse Ornamentals

- On the pre-program questionnaire, growers at 2 sites indicated they had minimal-moderate knowledge about basic IPM components and 1 site indicated their knowledge was none-minimal.
- One participating grower is transferring IPM knowledge to the public, high school students and other growers. She works with a local school to produce aphid banker plants, which are used in production houses during the growing season. Three tours were held for growers and customers interested in learning about IPM and how to use biological control and limited pesticides.
- Plant-mediated IPM systems are now used by 10 participating growers, which reduces their use of pesticides and increases crop quality. All sites now rely on primarily on biological control agents for IPM.

Tri-State Greenhouse IPM Workshops

- A survey among growers who attended past workshops indicated that 85% increased use of biological controls, 69% increased use of plant-mediated IPM systems, 70% more effectively use fertilizers, 79% decreased chemical pesticide use, 90% improved their scouting programs, 98% improved insect id, 88% improved disease id and 82% improved diagnosis of nutrition deficiencies.

Regional IPM Workshops for Landscapers

- Biological Control for Landscapers seminar
  - As a result of the seminar, 1 professional arborist is currently testing predatory midges against aphids on linden trees on city streets to reduce public complaints of honeydew on vehicles from infested trees.
  - 87% of the attendees learned new techniques they intend to use in the coming year, including predatory midges for aphids and predatory mites for spider mite.

Master Gardener Course IPM Lectures

- The pre-course survey results reflect that 71% of students self-identified as being unfamiliar with the concept of Integrated Pest Management prior to the class.
- The post-course survey results
  - 99% report that the course gave them a better understanding of how to incorporate IPM practices.
  - 83% have changed specific garden practices to better incorporate IPM.
  - 95% were able to name a specific IPM practice for managing white grub in lawns and tomato late blight.

Master Gardener Advanced Training IPM Webinars

- Master Gardener Helpline volunteers received advanced training for dissemination to clients

Plant Diagnostic Clinic disease/insect/weed diagnostics

- 98% increased knowledge of a pest or disease through use of the PDC.
- 74% found the information provided on IPM with the sample diagnosis resulted in use of less pesticides.

Targeted stakeholder groups

- 10 apple growers, 3 grape growers and 10 landscapers have submitted samples. Exceeding the 20% increase for these grower groups
- Vermont Grape and Wine Council annual meeting:
  - 92% of participants indicated moderate/considerable general knowledge following presentation on UVM Plant Diagnostic Clinic services (71% increase)

Plant Diagnostic Clinic Extension presentations/workshops

- Vermont Vegetable and Berry Growers annual meeting:
  - 84% learned an IPM tool that will help improve pest management
  - 94% adopted a new IPM practice that reduces pesticides since the last annual meeting
  - 94% adopted a new IPM practice that reduces pesticides since the last annual meeting
- Field and Forage Disease and IPM workshop:
  - 88% increased their knowledge of IPM practices
  - 77% increased their knowledge of safe pesticide practices.
  - 70% adopted a new IPM practice since the last annual meeting that reduced pesticide use.
- Vermont Grape and Wine Council annual meeting:
  - Percent of participants with moderate/considerable general knowledge following presentations:
    - 88% Using FRAC/IRAC codes for resistance management (38% increase)
    - 92% Signal Words on pesticide labels (42% increase)

What opportunities for training and professional development has the project provided?

Agronomy Field Days

- 44 attendees. June 27, 2015. 3rd Annual Grain Research Tour, Borderview Research Farm, Alburgh, VT.
- 250 attendees. July 23, 2015. Annual Crops and Soils Field Day, Borderview Research Farm, Alburgh, VT

Agronomy Winter Conferences

- 161 Attendees + 20 participants in Live Broadcast. February 10, 2015. 6th Annual Hops Conference, Burlington, VT.
- 133 Attendees. March 18, 2015. The 11th Annual Grain Growers Conference-Grains in a Diversified Farming System, Essex, VT.

Agronomy Web Resources

- All research reports on grains, hops, and oilseeds from our 2014 trials posted on website www.uvm.edu/extension/cropsoil/research
- 1 Grain Blog Post http://blog.uvm.edu/outcropn/
- 5 Hop Blog Posts http://blog.uvm.edu/hoppenin/
- 4 YouTube videos https://www.youtube.com/channel/UC7sh59UG2pKqfmPMfaVxpbA:

- Trials and Tribulations from Your Barley Field to a Beer Near You. 68 views
- 2015 Grain Growers Conference Keynote: Grains in a Diversified Farming System. 34 views
- Developing Barley for Food, Feed, and Malt--The Oregon Experience: 2015 VT Grain Growers Conference. 37 views
- April 10th Hop Webinar: Getting Started with Hops. 1,017 views.

Grain Disease Survey

- Scouted winter and spring wheat fields in Westfield, Shelburne, Bridport, and Shoreham, Vermont. One farm was also visited for scouting winter wheat in Northfield, MA.
- A pest ID "Cheat Sheet" developed on grain insect and disease pests.

Loose Smut Seed Lot Testing

- Farms are being identified for seed lot testing.

Guides of Pests in New England for oilseeds, grains, and hops

- Field guides are in progress for grain insect and disease pests.
- Contributed to USDA ARS publication "Field guide for integrated pest management in hops" update with section on "Potato leafhopper (Empoasca fabae)."
- "What Hops in a Hop Yard?" field guide to hop arthropod pests created and continues to be updated.
- An oilseed field guide to pests in the Northeast created.

Apple Extension, Outreach, Education

- 8,513 page views of UVM Fruit: Tree Fruit http://www.uvm.edu/~fruit/?Page=treefruit/tf_home.html&SM=tf_submenu.html
- 138 email addresses subscribed to vtapplegrower@list.uvm.edu listserv
- 28 blog posts providing orchard IPM guidance (apple scab, fireblight) and advertising IPM workshops/meetings.

- 1 post to eXtension
- 1 on-farm workshop tour; June 30, 2015; 32 attendees
- 9 blog posts referencing Cornell University's Network for Environmental and Weather Applications for use in management of apple scab, fireblight, and thinning
- 41 one-on-one consultations
- Annual revisions of the New England Tree Fruit Management Guide, released April 2015
- Planning and presentations at: Vermont Tree Fruit Growers Association annual meeting, Middlebury, VT, February 12, 2015; 2015 U.S. Association of Cider Makers Conference, Chicago IL, February 6, 2015.

Apple IPM Guideline Assessment

- 3 advisory stakeholders have been selected to participate
- Online assessment survey has been developed

Grape Extension, Outreach, Education

- 2,189 page views of UVM Fruit: Grapes http://www.uvm.edu/~fruit/?Page=grapes/gr_home.html&SM=gr_submenu.html
- 257 email addresses subscribed to vermontgrape@list.uvm.edu listserv
- 22 blog posts providing vineyard IPM guidance and advertising IPM workshops/meetings.

- Two blog post2 referencing Cornell University's Network for Environmental and Weather Applications for use in disease management
- 12 one-on-one consultations
- Planning and presentations at Vermont Grape and Wine Council annual meeting, Randolph, VT, June 25, 2015.

Grape IPM Guideline Assessment

- 3 advisory stakeholders have been selected to participate
- Online assessment survey has been developed

IPM First for Greenhouse Ornamentals

- Recruited 3 new greenhouse sites with 5 growers/owners/managers and continued to assist 6 growers at 4 sites from past years, who are receiving individualized training to increase their adoption of IPM in greenhouse ornamentals.
- Individual learning plans designed from pre-project needs survey

Tri-State Greenhouse IPM Workshops

- The 18th annual event held in Maine, New Hampshire and Vermont
- Cooperating regional specialists provided 3 hands-on, problem solving extravaganzas focused on diseases, fertility,

insect pest/natural enemy id, and IPM case study working groups reaching over 160 growers, pest specialists and researchers.

• Reached over 100 growers at the New England Greenhouse Conference, speaking about how to use of plant-mediated IPM systems.

• IPM educational display for ornamentals at the Champlain Valley Fair Garden Center included an eye-catching brochure, reaching thousands of members of the public.

Green Industry IPM ambassadors

• 5 growers at 3 sites were identified to receive individualized support to expand IPM adoption and to serve as Green Industry ambassadors

• Selected growers received at least 1 site visit.

• Individual learning plans designed from pre-project needs survey

Regional IPM Workshops for Landscapers

• 20 landscapers took part in a half-day seminar on biological control for landscape settings: Biological Control for Landscapers: Our New Frontier! November 20, 2014, Burlington, VT.

• 15 landscapers for regional educational facilities learned about the threat of exotic invasive and what they can do about it: The Threat of Invasive Exotic Pests. Northern New England Chapter of the Eastern Region of the Assoc. of Physical Plant Administrators (NNECERAPPA), March 16, 2015, St. Michaels College, Colchester, VT.

Master Gardener Course IPM Lectures

• A three hour Plant Disease and IPM class took place on 3/24/15, including a thorough discussion of tomato fungal leaf blights.

• A three hour Healthy Lawn Management class took place on 4/14/15, including a discussion of IPM management practices for weeds in lawns.

• A three hour Entomology class took place on 4/28/15, including an overview of IPM for white grubs.

Master Gardener Helpline

• 567 home gardener questions have been answered through the Helpline between September 1st and June 30th.

Master Gardener Advanced Training IPM Webinars

• An advanced training for Master Gardener volunteers held on April 15, 2015. A one hour lecture on IPM for Weed and Turf Management was provided, as well as a one hour lecture on Entomology IPM.

Master Gardener IPM Factsheets

• None to date

Plant Diagnostic Clinic disease/insect/weed diagnostics

• Diagnosed and provided IPM information to 229 commercial growers, Master Gardeners and the general public who submitted disease, insect and weed samples. With each diagnosis, IPM management information is supplied through an email, phone call, site visit or letter.

Targeted stakeholder groups

• Grape IPM was presented to 50 growers at the VT Grape and Wine Council annual meeting

• Advertised the Plant Diagnostic Clinic to the VT Tree Fruit Growers Association in their winter newsletter and meeting and 32 growers at the June apple tour;

• Article on Current Disease Issues and IPM for 200 growers in the VT Nursery and Landscape Association newsletter.

Plant Diagnostic Clinic Extension presentations/workshops

• Emerging Diseases and Insects at VT Vegetable and Berry growers association meeting. 200 growers;

• Post Harvest Diseases of Vegetables. 100 Vermont and NH vegetable growers;

• Plant Disease and IPM at Master Gardener Course. 160 students;

• Disease and Pest Issues. 75 field crop and forage growers;

• Grape IPM at VT Grape and Wine Council annual meeting. 40 growers;

• IPM for 35 UVM Farmer Training Program students

• Across the Fence Extension Television shows on Current Disease Issues and IPM management-June, July 1

• A disease factsheet for the Master Gardener Program on Tomato Fungal Blights produced to be circulated at fairs, farmers markets, etc.

• Column on current and emerging weeds, pests and diseases for 750 growers from VT and New England using the bi-weekly VT veg and berry listserv.

How have the results been disseminated to communities of interest?

• Agronomy IPM information is distributed through through websites, field days, winter meetings, blogs, websites, YouTube videos, phone calls and emails. A live broadcast of the hops winter conference was made available and archived online. Information collected in Loose Smut Seed Lot Testing" will remain confidential.
• Apple and Grape IPM information is distributed through newsletters, website, IPM alerts, winter and summer meetings, conferences, site visits, emails and phone calls. Information collected in assessment surveys will remain confidential.
• Greenhouse and Landscape IPM information is distributed through workshops, presentations, site visits, phone calls, emails, factsheets and websites.
• Master Gardener impacts have not yet been evaluated and will be disseminated upon receipt.
• Plant Diagnostic Clinic IPM information is distributed through sample diagnosis, websites, listservs, factsheets, television, presentations, workshops, emails, phone calls and site visits.

What do you plan to do during the next reporting period to accomplish the goals?

• Apple and Grape IPM Guideline Assessments online assessment survey will be administered in July 2015. Participants will be provided one-on-one consultations to discuss assessment results and to plan for IPM improvements. Follow-up assessment survey will occur in 2017
• Continue individualized training at site visits for "IPM First for Greenhouse Ornamentals" and "Green Industry IPM ambassadors".
• Hold the 19th annual Tri-State Greenhouse workshops in ME, NH and VT and the 2nd annual Biological Control for Landscapers Seminar.
• A one year follow up survey of Master Gardener Course participants will be administered in May 2016 and surveys of Helpline clients will be administered upon the completion of the season.
• Develop three (3) factsheets and hold three (3) advanced training webinars for Master Gardener volunteers dedicated to fungal diseases of tomato, white grub complexes and turf management. Distribute factsheets on the MG website and at information tables at fairs and farmers' markets.
• Grower surveys of general and targeted stakeholders using the Plant Diagnostic Clinic will occur September 2015 to measure short term/intermediate IPM impacts.
• Four additional presentation/workshops by the Plant Diagnostic Clinic will be accomplished through the end of the 2015 growing season. Growers will be surveyed at the time of the presentation/workshops.
• All other project programs will continue for another year until the end of the grant cycle.

Participants

Actual FTE's for this Reporting Period

Role	Non-Students or faculty	Students with Staffing Roles			Computed Total by Role
		Undergraduate	Graduate	Post-Doctorate	
Scientist	4	0	0	0	4
Professional	4	0	0	0	4
Technical	5	0	0	0	5
Administrative	3	0	0	0	3
Other	0	0	0	0	0
Computed Total	16	0	0	0	16

Student Count by Classification of Instructional Programs (CIP) Code

{NO DATA ENTERED}

Target Audience

Target audiences include commercial agricultural growers and associated industry such as crop consultants, professional pest managers, extension educators, researchers and similar stakeholders. Commercial growers include: new and established grain farmers, apple growers, grape growers, growers of greenhouse ornamentals/cut flowers/vegetables, growers of landscape/perennial/nursery stock, landscape managers/groundskeepers, and product end-users such as

brewers, bakers, or millers. Master Gardeners, home gardeners, general public, and communities are also target audiences for portions of this project.

Products

Type	Status	Year Published	NIFA Support Acknowledged
Journal Articles	Submitted	2015	YES

Citation

Bradshaw, T., Berkett, L., Parsons, R., Darby, H., Moran, R., Garcia, E., Kingsley-Richards, S., Griffith, M., Bosworth, S., and Gorres, J., 2015. Disease and arthropod pest incidence in two organic apple orchard systems in Vermont, USA, 2008-2013. Acta Hort submitted.

Type	Status	Year Published	NIFA Support Acknowledged
Journal Articles	Published	2015	NO

Citation

Noel, Z.A., Bradshaw, T.L., Kingsley-Richards, S.L., and L.P. Berkett. 2014. Evaluation of the efficacy of natural resistance in 'Honeycrisp' to reduce fungicide applications for Venturia inaequalis, 2012-2013. Plant Disease Management Reports 9:PF004.

Type	Status	Year Published	NIFA Support Acknowledged
Other	Published	2015	YES

Citation

Sullivan, C.E.F. and Skinner, M. 2015. Greenhouse IPM Resources: Apps, Printed Publications, Websites & More. Tri-State Greenhouse IPM Workshops, Maine, New Hampshire, Vermont.

Type	Status	Year Published	NIFA Support Acknowledged
Other	Published	2015	YES

Citation

Sullivan, C.E.F., Skinner, M. and Parker, B.L. 2015. What Have We Been Up To In 2014? Tri-State Greenhouse IPM Workshops, Maine, New Hampshire, Vermont.

Type	Status	Year Published	NIFA Support Acknowledged
Other	Published	2015	NO

Citation

Skinner, M., C.E.F. Sullivan and B.L. Parker. 2015. Murdering Thrips with Marigolds, Fungi & Mites. UVM Entomology Research Lab., Burlington. 2 pp.

Type	Status	Year Published	NIFA Support Acknowledged
Websites	Published	2015	YES

Citation

Sullivan, C.E.F. and Skinner, M. 2015. Greenhouse Integrated Pest Management Website: http://www.uvm.edu/~entlab/Greenhouse%20IPM/UVMGreenhouseIPM.html

Type	Status	Year Published	NIFA Support Acknowledged
Conference Papers and	Published	2014	YES

Citation

Sullivan, C.E.F., Skinner, M. and Parker, B.L. 2014. If You Build It, They will Come! Habitat and Banker Plant Systems Explained. New England Greenhouse Conference and Expo, Springfield, MA.

Type	Status	Year Published	NIFA Support Acknowledged
Other	Published	2015	YES

Citation

Skinner, M. 2015. Integrated Pest Management Action Worksheet Factsheet. Univ. of Vermont, Burlington, VT

Type	Status	Year Published	NIFA Support Acknowledged
Websites	Published	2015	YES

Citation

Sullivan, C.E.F. and Skinner, M. 2015. Landscape Integrated Pest Management Website: http://www.uvm.edu/~entlab/Landscape%20IPM/LandscapeIPM.html

Type	Status	Year Published	NIFA Support Acknowledged
Other	Published	2015	NO

Citation

Parker, B.L., D. Tobi, D., Wanderlich, S. and Skinner, M. 2015. Biological Control of Conifer Root Aphids in Christmas Trees: An Update. UVM Entomology Research Lab., Burlington. 2 pp.

Type	Status	Year Published	NIFA Support Acknowledged
Other	Published	2014	NO

Citation

Parker, B.L., Skinner, M., Tobi, D. and Wanderlich S. 2014. General facts about conifer root aphids and management considerations. UVM Entomology Research Lab., Burlington. 2 pp.

Type	Status	Year Published	NIFA Support Acknowledged
Conference Papers and	Published	2015	YES

Citation

Skinner, M. and Parker, B.L. 2015. The Threat of Invasive Exotic Pests. Northern New England Chapter of the Eastern Region of the Association of Physical Plant Administrators (NECERAPPA), St. Michaels College, Colchester, VT

Type	Status	Year Published	NIFA Support Acknowledged
Websites	Published	2014	NO

Citation

UVM Extension Master Gardener. 2014. http://www.uvm.edu/mastergardener/

Type	Status	Year Published	NIFA Support Acknowledged
Websites	Published	2015	YES

Citation

Hazelrigg, A. Plant Diagnostic Clinic. 2015. http://www.pss.pdc

Type	Status	Year Published	NIFA Support Acknowledged
Other	Published	2015	YES

Citation

Hazelrigg, A. Tomato Fungal Leaf Blights

Type	Status	Year Published	NIFA Support Acknowledged
Theses/Dissertations	Published	2015	NO

Citation

Hazelrigg, A.L. 2015. The Efficacy and non-target impacts of an organic disease management systems containing biostimulants compared with two sulfur-based systems on four apple cultivars in Vermont. Ph.D. Dissertation. http://scholarworks.uvm.edu/cgi/viewcontent.cgi?article=1333&context=graddis

Type	Status	Year Published	NIFA Support Acknowledged
Conference Papers and	Awaiting Publication	2015	NO

Citation

Hazelrigg, A.L., L.P Berkett, H.M Darby, J. Gorres and R. Parsons. 2015. The efficacy and non-target impacts of an organic disease management system containing biostimulants compared with two sulfur-based systems on foliar and fruit diseases, tree growth, yield and fruit quality on three apple cultivars in Vermont, USA. Avignon, France. June 2015. Paper.

Type	Status	Year Published	NIFA Support Acknowledged
Conference Papers and	Awaiting Publication	2015	NO

Citation

Hazelrigg, A.L., L.P Berkett, H.M Darby, J. Gorres and R. Parsons. 2015. Non-target impacts of an organic disease management system containing biostimulants compared with two sulfur-based systems on pest and beneficial arthropod populations on three apple cultivars in Vermont, USA. Avignon, France. June 2015. Poster.

Type	Status	Year Published	NIFA Support Acknowledged
Conference Papers and	Awaiting Publication	2015	NO

Citation

Hazelrigg, A.L., L.P Berkett, H.M Darby, J. Gorres and R. Parsons. 2015. Non-target impacts of an organic disease management system containing biostimulants compared with two sulfur-based systems on phytophagous mite populations on the apple cultivar ‘Zestar!’ in Vermont, USA. Avignon, France. June 2015. Poster.

Type	Status	Year Published	NIFA Support Acknowledged
Websites	Published	2015	NO

Citation

Darby, H. Northwest Crops & Soils Program. 2015. http://www.uvm.edu/extension/cropsoil/

Other Products

Product Type

Other

Description

Agronomy Field Days highlighting grain, oilseed, and hops pest management trials, scouting strategies, and pest identification tools.

Product Type

Other

Description

Agronomy Winter Conferences on pests, diseases, weeds and IPM specific to grain, oilseed, and hops. Webinars will be streamed live from each event.

Product Type

Audio or Video

Description

Agronomy Web Resources: website, blogs, YouTube videos, pest management information briefs

Product Type

Data and Research Material

Description

Grain Disease Survey: survey New England farms for foliar disease.

Product Type

Data and Research Material

Description

Loose Smut Seed Lot Testing. Farmers sent results and info on how to reduce loose smut in fields and seed lots.

Product Type

Educational Aids or Curricula

Description

Guides of Pests in New England for oilseeds, grains, and hops including pest id, lifecycle and management tools.

Product Type

Other

Description

Apple Extension, Outreach, Education: newsletters, blog posts, and/or factsheets containing time- and crop-sensitive IPM information integrating weather and pest models, on-farm workshop to demonstrate IPM practices, one-on-one consultations, revisions of the New England Tree Fruit Management Guide, planning and presentations at regional grower meetings.

Product Type

Educational Aids or Curricula

Description

Apple IPM Guideline Assessment: selected group of advisory stakeholders will participate in a survey of crop-specific IPM practices practiced in their orchard operation.

Product Type

Other

Description

Grape Extension, Outreach, Education: newsletters, blog posts, and/or factsheets containing time- and crop-sensitive IPM information integrating weather and pest models, on-farm workshop to demonstrate IPM practices, one-on-one consultations, planning and presentations at regional grower meetings.

Product Type

Educational Aids or Curricula

Description

Grape IPM Guideline Assessment: selected group of advisory stakeholders will participate in a survey of crop-specific IPM practices practiced in their vineyard operation.

Product Type

Educational Aids or Curricula

Description

IPM First for Greenhouse Ornamentals: a statewide individualized grower program. UVM personnel will visit each grower to provide one-on-one instruction and support on selecting, adopting and using plant-mediated IPM systems.

Product Type

Other

Description

Tri-State Greenhouse IPM Workshops: hands-on IPM demonstrations and IPM information packets.

Product Type

Educational Aids or Curricula

Description

Green Industry IPM ambassadors: a statewide individualized landscape/nursery industry stakeholder program. UVM personnel will visit each stakeholder to provide one-on-one instruction and support on selecting, adopting and using plant-mediated IPM systems. Stakeholders will subsequently assist with promoting IPM to other growers.

Product Type

Other

Description

Regional IPM Workshops for Landscapers: hands-on IPM demonstrations and IPM information packets. Presentations also given at Green Industry association meetings.

Product Type

Educational Aids or Curricula

Description

Master Gardener Course IPM Lectures: a 13 week course with 200 students including three lectures on IPM topics.

Product Type

Other

Description

Master Gardener Helpline: a popular statewide toll-free source for gardeners needing information on current insect, weed and diseases

Product Type

Educational Aids or Curricula

Description

Master Gardener Advanced Training IPM Webinars: part of the training for the MG volunteers in advanced IPM concepts and emerging insect, weed and disease problems.

Product Type

Educational Aids or Curricula

Description

Master Gardener IPM Factsheets: developed by subject matter specialists and made available to the public on the Master Gardener website, and provided for MG information tables at fairs and farmer's markets.

Product Type

Other

Description

Plant Diagnostic Clinic disease/insect/weed diagnostics: diagnosis and IPM recommendations. Clients include commercial growers (agronomic, apple, grape, greenhouse, landscape, nursery, vegetable, berry, etc.), Master Gardener Helpline, the gardening public and urban consumers.

Product Type

Other

Description

Targeted stakeholder groups: apple growers, grape growers, and landscapers targeted through presentations and grower listservs to make them aware of the Plant Diagnostic Clinic's services.

Product Type

Other

Description

Plant Diagnostic Clinic Extension presentations/workshops: addressing current and emerging insect, weed and diseases using IPM tactics in commercial crops, for the vegetable and small fruit growers, and for Master Gardeners. Also information on insect, weed and disease outbreaks, id and IPM management strategies provided for MG volunteers, home gardeners and urban consumers through television, factsheets, listservs, MG blogs, websites, webinars, articles and newsletters.

Changes/Problems

- "Grain Disease Survey" has been expanded this field season to include scouting for arthropod pests and downy mildew severity in all hop trials at the Alburgh, VT research farm in addition to eight other farms. On-farm scouting occurs in North Hero, Calais, North Starksbroro, Addison, Ferrisburgh, and two farms in Berlin, VT. One additional scouting visit has been made to a collaborating hop yard in Northfield, MA.

- Due to reduced funding, the number of recruits was reduced for "IPM First for Greenhouse Ornamentals" and "Green Industry IPM ambassadors" and sites limited primarily to Northwestern VT. "Regional IPM Workshops for Landscapers" have been limited to VT.
- Due to the loss of the 11 VT interactive television facilities used to deliver the MG course, funding will be used to secure alternate facilities in the coming year.
- No changes/problems of note for other project programs.