

Vermont IPM Report 2018-2019

Vermont IPM Extension Implementation Program: 2017-2020

Agronomy; Specialty Crops (Fruit; Greenhouse/Nursery) Communities; IPM for Pollinator Health; Pest Diagnostic Facilities and IPM Education for Pesticide Applicators

PI: Ann Hazelrigg

Co PI: Heather Darby, Terence Bradshaw, Margaret Skinner, Sid Bosworth

Agronomy Accomplishments/Outputs

Agronomy Field Days

Getting Started with Grains, Berlin, VT. June 21, 2016. 27 attendees.

Annual Grain Research Tour, Alburgh, VT. June 28, 2016. 29 attendees.

Organic Wheat Production and Processing, Quebec, Canada. July 13, 2016. 14 attendees.

Annual Crops and Soils Field Day, Alburgh, VT. July 28, 2016. 185 attendees.

Hopping and Milling, Northfield, MA. August 18, 2016. 53 attendees.

Successfully Starting a Hop Yard, Starksboro, VT. September 1, 2016. 52 attendees.

Growing Dry Beans in VT, Glover, VT. October 11, 2016. 28 attendees.

Agronomy Winter Conferences

8th Annual Hops Conference, Burlington, VT, February 25, 2017. 177 attendees + 19 in Live Broadcast.

13th Annual Grain Growers Conference-Grains in a Diversified Farming System, Essex, VT, March 23, 2017. 132 attendees + 17 in Live Broadcast.

Agronomy Web Resources

20 research reports on disease/insect/weed pest management on grains, hops, oilseeds from 2016 trials www.uvm.edu/extension/cropsoil/research

14 Hop Blog Posts <http://blog.uvm.edu/hoppenin/>

5 grains, beans, oilseeds pest management blog posts <http://blog.uvm.edu/outcropn/>

40 hops, grains, beans, oilseeds facebook posts <https://www.facebook.com/uvmcropsoil/>

Grain Disease Survey

Scouted wheat in Alburgh, N. Troy, Glover, Shelburne, Bridport, Berlin, VT & Northfield, MA.

Scouted spring barley in Essex, NY.

Scouted dry beans in Alburgh, Glover, Cambridge, N. Ferrisburgh, Danby, VT.

Scouted hops in Alburgh, VT, North Hero, Calais, N. Starksboro, Ferrisburgh, Berlin, VT & Northfield, MA.

Identified pathogens on diseased plants with the help of the UVM Plant Diagnostic Clinic.

Loose Smut Seed Lot Testing

Four contaminated seed lots sent for testing using embryo count method.

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

Oilseed field guide to pests in the Northeast updated to include soybeans, soybean pests.

Field guide for growing grains in the Northeast being updated to disease/insect pests.

"What Hops in a Hop Yard?" hop arthropod pest field guide continues to be updated.

Session planning/IPM presentations at:

- VT Tree Fruit Growers Association annual meeting, Middlebury, VT, February 16, 2017 (Lepidopteran Complex; Fire Blight 101; Insect Pests; Modern Apple Scab). 65 attendees.
- Eastern NY Commercial Horticulture Program Champlain Valley Petal Fall Meeting, Peru, NY, May 23, 2017. (Petal Fall Management). 40 attendees.
- U.S. Association of Cider Makers Conference: Advanced Cider Orchard Production Workshop, Chicago, IL, February 9, 2017. (Reduced Pruning Inputs for Dessert Apples grown for Cider Making). 100 attendees

Apple IPM Guideline Assessment

3 selected advisory stakeholders responded to the online assessment survey, obtained initial scores. Responses reviewed with participants during one-on-one consultations; IPM practices identified to adopt.

The same 3 stakeholders received a follow-up online assessment surveys to track adopted IPM practices.

Grape Extension, Outreach, Education

2,367 page views of UVM Fruit: Grapes, June 2016-May 2017

http://www.uvm.edu/~fruit/?Page=grapes/gr_home.html&SM=gr_submenu.html

269 email addresses subscribed to vermontgrape@list.uvm.edu.

22 blog posts providing IPM guidance, promoting IPM tools, advertising IPM workshops/meetings.

1 blog post on Cornell's Network for Environmental Weather Applications for disease management.

23 one-on-one consultations.

2 American Society of Horticultural Science HortIM fact sheets

- 44% of participants changed use of IPM (increased scouting, NEWA weather models); most often to improve confidence in making pest management decisions and reduce use of broad spectrum pesticides.
- 20% changed Apple Replant Disease management practices.
- Brown Marmorated Stink Bug is not an issue in the region.

Apple IPM Guideline Assessment

100% of advisory stakeholders selected to participate responded to initial online assessment survey.

Grape Extension, Outreach, Education

NY & VT Winter Grape School, Lake George, NY, March 9, 2017

- 95% rating by participants for value of topic (Cold Climate Grapes Disease Management, Minimal Spray Program)
- 52% referenced IPM topics (disease identification, fungicide resistance management, spray timing) as important take-home messages
- 72% indicated they will make changes (the remaining 28% indicated 'maybe'); 55% referenced improved attention to disease management

Grape IPM Guideline Assessment

100% of advisory stakeholders selected to participate responded to initial online assessment survey

Greenhouse/IPM Accomplishments/Outputs

IPM First for Greenhouse Ornamentals

9 new operations enrolled. 3 specifically requested to join. 17 past operations continue to receive guidance.

Over 70 site visits at 22 different farms, reaching 37 growers in 11 of the 14 VT counties.

1 national conference presentation on marigolds to manage thrips in greenhouse ornamentals. 100 attendees.

5 presentations on naturally-occurring beneficials in plant-mediated IPM systems. >300 attendees.

2 trainings on natural enemy/pest identification for an IPM First site staff, Extension specialists.

1 workshop on habitat plant systems/aphid IPM in greenhouse/high tunnel. 40 attendees.

Participation on technical school advisory committee developing IPM curriculum for greenhouse production courses.

Tri-State Greenhouse IPM Workshops

Planning/presentations at 20th annual event held in ME, NH, VT. Cooperating regional specialists presented moisture management, disease drought practices, fungus gnat/moisture pest/shorefly/natural enemy identification, moisture meters, live specimen quality assurance identification. >160 attendees.

3 hand-outs on identification of naturally-occurring beneficials, using habitat plants in greenhouses.

Green Industry IPM ambassadors

10 sites received support (4 newly enrolled) to expand IPM adoption and serve as Green Industry ambassadors. >25 site visits.

1 demonstration on natural enemies/pests on habitat plantings. 6 students, 2 educators.

Customer education display produced about providing habitat for natural enemies/pests of landscape.

Regional IPM Workshops for Landscapers

1 conference on establishment of natural enemies on habitat plantings in the landscape.

3 presentations on habitat plantings for natural enemies at Tri-State Greenhouse IPM Workshops.

3 presentations on best management practices for nurseries reducing movement of invasive earthworms.

Development of Landscape IPM webpage

Website: <http://www.uvm.edu/~entlab/Landscape%20IPM/LandscapeIPM.html>

5,300 hits on greenhouse/high tunnel/landscape IPM webpages

Impacts

IPM First for Greenhouse Ornamentals

78% use plant-mediated IPM (an increase from 67% with minimal prior knowledge)

100% use biological controls (an increase from 56-78% with little prior knowledge)

89% now regularly scout for pests.

71% claim lack of knowledge about IPM implementation limits use; 43% lack of time, 29% lack of money.

One participating site reduced chemical pesticide use over 50% in one season by incorporating routine scouting and rotation of chemistries (had previously relied solely on prophylactic chemical applications).

3 Advanced Training Webinars offered to active Master Gardeners: Tomato IPM, Grubs in Turf, weed management.

Impacts

Master Gardener Course IPM Lectures

46% of 2017 MG Course students did not know what IPM was before the course; 98% intended to adopt a new IPM practice.

89% of 2016 MG Course students adopted an IPM practice as a result of the course.

Master Gardener Helpline

88% of 2016-2017 MG Helpline clients indicated the information they received helped them use IPM (cultural practices first, least toxic pesticides as a last resort) to manage their pest problem; 68% were able to reduce the use of pesticides.

92% of 2015 MG Helpline clients chose an IPM practice, 73% reduced their use of a pesticide as a result of diagnosis.

IPM for Pollinator Health

Master Gardener Pollinator short course

Orchard Pollinator Survey

Pollinator Habitat Program for Greenhouses/High Tunnels/Nursery settings

Plant Diagnostic Clinic Accomplishments/Outputs

Plant Diagnostic Clinic Samples

~500 disease, insect and weed samples diagnosed and with IPM information provided to commercial growers, Master Gardeners, general public who submitted disease/insect/weed samples.

~100 disease, insect and weed email pictures diagnosed with IPM information provided to commercial growers

Plant Diagnostic Clinic Extension Presentations/Workshops

IPM presentations at 15 meetings/workshops >500 attendees.

Across the Fence Extension Television programs-Six on IPM/pests/diseases.

Two radio public service announcements (PSA) on pest/disease issues

Plant Disease and IPM lecture at Master Gardener Course. 100 students.

Contribution to Newsletters/Publications

Bi-weekly VT Vegetable and Berry Newsletter column on current/emerging disease/insects/weeds and IPM. 750 New England growers.

Contribution of Vermont pest and disease info for the weekly UMASS Veg Notes

Four quarterly columns for on disease and pests for the Vermont Nursery and Landscape Association
Contributor to the New England Vegetable and Small Fruit IPM Guidelines

Impacts

Plant Diagnostic Clinic disease/insect/weed diagnostics

93% of PDC clients indicated their pest issue was identified.

92% of PDC clients chose an IPM practice; 73% reduced their use of a pesticide as a result of diagnosis.

Stakeholder groups

92% of targeted stakeholders indicated they had adopted an IPM practice as a result of diagnosis.

Grape researchers and growers had 'considerable' knowledge gain of grape pests from a NY/VT grape meeting; an increase from 'minimal' knowledge indicated before the meeting.

Plant Diagnostic Clinic Extension presentations/workshops

72% of field/forage pest specialists indicated increased IPM knowledge as a result of