

**Vermont IPM Report 2013**  
**Ann Hazelrigg, IPM Coordinator**

A new IPM website was developed highlighting our Vermont IPM programs <http://pss.uvm.edu/EIPM/>

**Pest Diagnostics**

Ann Hazelrigg

- The wet summer contributed to over 300 disease and insect samples from commercial growers in all sectors of VT agriculture. Samples included stripe rust of wheat (new disease for VT and NE), *Phytophthora* on Christmas trees, *Phytophthora* fruit rots, Swede midge, spotted wing drosophila and late blight.
- 10 presentations were given in 2013 for commercial Christmas tree growers, field and forage growers, vegetable and berry growers, landscapers, Master Gardeners and the general public on disease/pest issues.
- Two press releases were sent out statewide on impatiens downy mildew and contaminated compost
- Hot water seed treatment workshop (excellent IPM strategic for eliminating seed borne disease) was offered to vegetable and berry growers. **Evaluation and impacts include; 66.6% of the growers who attending reported none to minimal knowledge about hot water seed treatment before the workshop, with 100% reporting moderate or considerable knowledge after the workshop. 100% of the attendees said they had used hot water seed treatment minimally before the workshop and 100% said they would use in the future on some crops.**
- Plant diagnostic clinic clients (sent email, photos or samples) were surveyed in 2013/4.

**Evaluation and Impacts include;**

**91% responded the information provided by the PDC helped them use integrated pest management strategies (cultural practices and use of least toxic pesticides as a last resort) to manage your pest /disease problem.**

**84% responded the grower reduced the use of pesticides as a result of the information they received from the Plant Diagnostic Clinic.**

**Agronomic IPM**

Heather Darby and Sid Bosworth

- The UVM Cereal Grain Testing Lab tested Northeast growers' grain for DON contamination from FHB infection and found 78% were above the 1 ppm FDA allowable threshold for human consumption. We posted a FHB alert to 500 growers through the Northern Grain Growers Association newsletter and our website.
- Bi-weekly scouting was conducted on 2 new specialty crops in the region sunflowers and hops. Incidence and severity of several pests including banded sunflower moth, sunflower maggot, leafhopper, two spotted spider mites, and aphids on hops were recorded. Email and blogs were developed and sent to 360 hop and oilseed growers throughout the Northeast.
- Prevalence of leaf diseases on small grains is on the increase. In 2013, farmers were asked to report significant issues with leaf diseases. Through this project many diseases were identified

including a first report of stripe rust for NE. Informational materials were distributed to 500 growers through the Northern Grain Growers Association newsletter and our website.

- A field day held at Borderview Research Farm highlighted grain production and research. Leaf diseases and FHB issues were highlighted. Factsheets on stripe rust and info were distributed to 75 attendees.
- Leaf diseases of perennial grass hay crops were assessed during the summer and fall on two grass species/cultivar trials.
- A winter meeting in 2013 was held to highlight disease issues in corn, soybeans and grass hay crops. Leaf blights and molds as well as grass rust were the focus of the presentation. There were 82 attendees at the day- long workshop.

## Consumer IPM

Ann Hazelrigg and Heather Carrington

- Master Gardener Course – 160 students are currently enrolled in the 13 week Master Gardener course. Three lectures specifically dedicated to basic IPM topics have been provided: Plant Pathology & IPM and Soil Science and Composting and Entomology.
- Master Gardener Helpline – Between April and December of 2013, 159 plant disease and insect specimens were routed through the helpline for identification and IPM recommendations. During 2013, the Helpline volunteers assisted 1,029 callers with home horticulture questions, and answered 315 emails, using IPM as their guiding principle. Two advanced IPM trainings were provided for the Helpline volunteers and two new training webinars were provided and archived on the master gardener website for all volunteers.
- Master Gardener Outreach – In 2013, there were over 700 active EMG volunteers in Vermont who volunteer in a variety of vetted, science-based outreach programs all with a strong educational component based on IPM principles. Volunteers have reported 12,485 hours of education provided across the state. The value of these hours is \$276,418 (based on the Independent Sector valuation of a volunteer hour). These EMG volunteers are active in the state forming connections and linkages with schools, agricultural fairs, farmers markets, community gardens, prisons, libraries, hospitals, condo associations and garden centers. They educate Vermonters about garden and landscape pest identification and management using IPM strategies. The Senior/Key Person and MG Outreach Professional have provided three advanced IPM training webinars to continue to meet the needs of these stakeholder communities.
- Master Gardener website – This website serves as a site for consumers and gardeners to access current and emerging insect and disease information on a timely basis. This is an impactful forum used to deliver new IPM pest factsheets on problems important to consumers including spotted wing drosophila, impatiens downy mildew, late blight, etc. Both basic and advanced IPM topics are addressed.
- Development of new email template – In 2013, the EMG Helpline volunteers began fielding email questions sent to the state office with a new Master Gardener Helpline email account, set up this year. In addition, an online log template was established. A pilot utilizing this online log form as a means of accepting consumer questions for the Helpline will be completed in 2014.
- Master Gardener Blog – Ongoing
- **Evaluation of effectiveness/impacts – Based on the annual survey of students taking the Master Gardener course: 30% were introduced to IPM for the first time in this course, prior to the first lecture 52% reported that they were “unsure” whether they use any IPM practices in their gardens, after the Plant Pathology lecture 95% of students reported that they will utilize at least one IPM practice in their garden this year, 95% reported learning something new about plant pathology, 96% reported learning something new about soil**

science, **41% of survey respondents reported that they will have a soil test done this year, 38% reported that they will compost this year, and 67% do not use any pesticides in their gardens.**

### **Specialty Crops-Greenhouse IPM**

Margaret Skinner and Cheryl Frank

- 10 commercial greenhouse operations received one-on-one education on pest and natural enemy identification, scouting, sanitation, pesticide rotation, development or refinement of biological control programs, use of plant-mediated IPM systems, and strategies for reduction of costs associated with implementing IPM and biological control.
- New IPM practices were adopted by participants; use of sticky cards, trap plants for early pest detection, routine scouting, banker plants for natural enemies, sanitation and rouging of infested plants and refinement of biological control and pesticide programs.
- The number of applications of chemical pesticides made by participating growers was reduced at all locations. Growers relied more on biological control or spot sprays.
- All growers participating in the program used some form of biological control. Growers at 3 operations switched from a conventional chemical pesticide-based program to relying primarily on biological control.
- Over 160 growers, Extension specialists and state Agriculture personnel were reached at 3 greenhouse IPM workshops. **Evaluation results; 91% of the attendees learned new IPM techniques they intend to use in the coming year; 71% said they made new contacts; 67% used biocontrol last year; 40% used plant-mediated IPM systems (trap or indicator plants, banker or guardian plants, etc.)**
- The UVM Greenhouse IPM website was expanded to include new IPM information requested by growers. The site had over 400 hits since August 2013.
- 10 handouts focused on encouraging IPM implementation were produced and distributed to workshop attendees.

### **Specialty Crops-Landscape IPM**

Margaret Skinner

A survey questionnaire was developed to collect key information on the major pests and diseases and how to increase IPM adoption. Types of landscape operations, acres, types of pesticides used will be surveyed. The survey has been circulated at several state and regional educational events (VT, NH, ME), and is available on the web. Survey results will be compiled in 2014.

### **Specialty Crops-Apple IPM Program (standard apple IPM and organic apple IPM):**

Lorraine Berkett and Terence Bradshaw

- 10 issues of the Apple IPM Alert were written and disseminated over the past year to over 100 growers who subscribed to the Apple IPM email listserve, and archived on the Apple IPM website where they had an additional 448 visits.
- Apple workshop organized in collaboration with the Vermont Tree Fruit Growers Association which was attended by 65 growers.
- Updated and maintained Apple IPM website which had 992 new visits

- Organic Apple IPM observations were distributed in 10 organic apple newsletter issues to over 100 organic stakeholders during the past year and archived on the Organic Apple IPM website where they had an additional 313 visits.
- Updated and maintained the Organic Apple IPM website which had 215 new visits and incorporated IPM information into a newly developed Practical Guide for Organic Apple Production which had 1084 new visits by stakeholders.
- Organic and IPM Apple Demonstration Orchards were maintained and used as a resource for educational purposes.
- Provided 64 one-on-one consultations regarding growers' apple IPM questions by phone, email, or in-person.
- **Evaluation and Impacts; Recent survey of growers revealed 88% would adopt reduced-risk IPM strategies as a result of the Apple IPM Program.**

#### **Specialty Crops-Cold Climate Grape IPM Program:**

Lorraine Berkett and Terence Bradshaw

- 9 issues of the Grape IPM Update were written and disseminated during the reporting period to over 200 growers who subscribed to the Grape IPM email listserve, and archived on the Cold Climate Winegrape IPM website where they had 571 additional visits. 36 additional posts made to mailing list on IPM and production-related topics.
- Updated and maintained the Grape IPM website pages which had 284 new visits.
- Provided 35 one-on-one consultations regarding grape growers' IPM questions by phone, email, or in-person.
- **Evaluation and Impacts; Recent survey (2012) of growers revealed 87% would adopt a new IPM practice as a result of the Grape IPM Program.**