Vermont's Extension IPM program addresses diverse stakeholder needs

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United States Department of Agriculture
National Institute of Food and Agriculture

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

Integrated Pest Management

The Vermont IPM program addresses essential IPM needs as identified by stakeholders in the state as well as advances the goals of the National IPM Roadmap to build sustainable pest management systems that reduce the potential risks to human health and the environment.

To meet the IPM needs of Vermont stakeholders:

➢ Program areas are closely integrated with a **research** base and are well matched with the expertise at the University of Vermont.
➢ **Education** and information delivery methods are diverse and include workshops, training sessions, fact sheets, newsletters, blogs, websites, webinars, television programs, video clips, demonstrations, and one-to-one education.
➢ Each program area involves **collaborative** efforts both within the state and region to optimize resources and expertise and to develop effective IPM programs.

Vermont is a very rural state

Agriculture is crucial to the vitality of its rural communities. The Vermont IPM program provides a critical foundation that addresses the important local, state and National IPM goals of agricultural profitability and sustainability while reducing the health and environmental risks associated with agricultural production.

~ 111 educational events

~ 5,725 participants

~ 2,375 garden questions

~ 1,413 plant samples

For all program events, Master Gardener Helpline questions, and Plant Diagnostic Clinic samples over three years of the Vermont IPM program, 2014-2017.

"I learned to plan in advance on how I will watch for disease, what to look for, how to test and minimize risk."
- Vermont Grain Grower

Agronomy
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Communities & Pest Diagnostic Facilities
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https://www.uvm.edu/extension/pdc

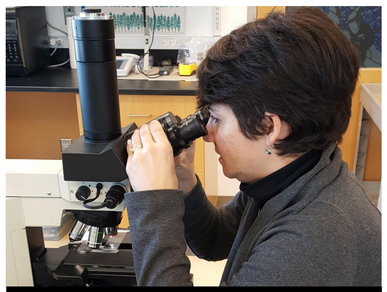

Pests on hops


Checking for pests on apples


Plant-mediated IPM in greenhouse


Ladybug on landscape plant


Community outreach


Assessing plant sample in clinic

Agronomy

- Attendees of **Agronomy Field Days and Winter Conferences** have learned new information to improve scouting and pest identification skills and strategies to reduce weed, insect, and disease pressure. Changes in these behaviors have improved crop quality and farm economics.
- Winter and spring wheat, dry beans, and hops fields in Vermont, Massachusetts and New York were scouted for the **Grain Disease Survey**. Pathogens were identified with the help of the Plant Diagnostic Clinic. Scouted farms have minimized pesticide applications or adopted new pest control strategies.
- Farms were identified for **Loose Smut Seed Lot Testing** and sent for testing using the embryo count method. Only one of four contaminated seed lots tested positive, indicating better testing methods are needed.

The **Grain Disease Survey** has increased the number of arthropod pests and diseases that the farmers can now identify.

Apples & Grapes

- Attendees **of Apple Extension, Outreach and Education** events have learned new information to improve management of apple scab and major apple pests. Changes in these behaviors have improved confidence in making pest management decisions and reduces the use of broad spectrum pesticides.
- Attendees of **Grape Extension, Outreach and Education** events have learned pathogen lifecycle information, improving management of major grape diseases.
- Participants in **the Apple IPM Guideline Assessment** increased adoption of IPM practices by 4% and participants in the **Grape IPM Guideline Assessment** increased adoption of IPM practices by 45% through this self-assessment process.

"Your spray reminder/updates are critical to my success. Your insight and reminders are so helpful."
- Vermont Apple Grower

Greenhouse

- Attendees **of IPM First for Greenhouse Ornamentals** events have learned new information to increase use of plant-mediated IPM systems, biological control agents and improved insect identification, decreasing chemical pesticide use.
- Greenhouse operations enrolled in **IPM First for Greenhouse Ornamentals** have increased use of plant-mediated IPM systems and biological control agents and now regularly scout for pests. Changes in these behaviors have reduced use of pesticides and increased crop quality.
- Attendees of **Tri-State Greenhouse IPM Workshops** have learned new information that has increased use of plant-mediated IPM systems and biological control agents, improved insect identification and scouting, and improved diagnosis of nutrition deficiencies. Changes in these behaviors have decreased chemical pesticide use and led to more effective use of fertilizers.

Landscape

- Attendees **of Green Industry IPM Ambassador** events have learned new information to establish habitat plantings for natural enemies in the landscape and best management practices to reduce the movement of invasive earthworms in nurseries.
- Operations enrolled as **Green Industry IPM Ambassadors** have expanded IPM adoption and serve as Green Industry IPM Ambassadors. Changes in these behaviors have reduced pest outbreaks because problems were detected early.
- Attendees of **Regional IPM Workshops for Landscapers** have learned new information to use biological control agents (predatory midges, predatory mites) in landscapes and understand the threat of exotic invasives and management strategies.

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

Communities

- Students of the **Master Gardener Course IPM Lectures** were introduced to the concept of Integrated Pest Management and were able to adopt specific home garden practices to better incorporate IPM.
- Students of the **Master Gardener Advanced Training Webinars** learned new information about specific home garden IPM practices for managing white grubs in lawns, weeds in turf, and tomato late blight. This knowledge has been passed on to Master Gardener Helpline clients and the general public to reduce the use of pesticides in home gardens.
- Clients of the **Master Gardener Helpline** (home gardeners) have learned information that helped them to choose IPM practices to manage their pest problems. These changes in behavior have reduced the use of pesticides in home gardens.

"The Master Gardener Helpline provided answers, solutions and reassurance for many garden issues."
- Vermont Home Grower

Pest Diagnostics

- Attendees **of Plant Diagnostic Clinic** events have learned new information about current and emerging pests, general IPM practices, and crop-specific (grape, vegetable, berry, field/forage) IPM practices. This knowledge has led to adoption of IPM practices that have reduced pesticide use.
- Clients of the **Plant Diagnostic Clinic** (commercial growers) have learned new information through sample identification that increased knowledge of their pests and IPM management options. Increased knowledge has resulted in adoption of IPM practices and use of less pesticides by commercial growers.

Use of the Plant Diagnostic Clinic by Targeted Stakeholder Groups (apple growers, grape growers, landscapers) has increased, resulting in adoption of IPM practices in these crops.

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