

MEETING THE IPM NEEDS OF VERMONT STAKEHOLDERS

- Program areas are closely integrated with multistate and Vermont **research** led by specialists at the University of Vermont.
- Current IPM information coupled with effective **outreach** deliver programs to help growers increase the adoption of IPM practices in a wide range of crops and settings..
- Strong **collaborative** relationships with state and regional stakeholders, commodity groups, in addition to state and regional agencies address critical IPM needs.

AGRICULTURE IS ESSENTIAL TO VERMONT

Vermont's working landscape is a critical economic asset and an important cornerstone of the state's tourism industry. The Vermont IPM program provides essential information to a diverse community of growers and other stakeholders to reduce pesticide use, reduce crop loss, decrease production costs, and reduce human and environmental risks.

Communities, Pesticide Education, Pest Diagnostic Facilities

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INTEGRATED PEST MANAGEMENT

THE VERMONT EXTENSION IMPLEMENTATION PROGRAM ADDRESSING STAKEHOLDER PRIORITIES AND NEEDS FOR 2017-2021

The Vermont Integrated Pest Management (IPM) Program addresses critical IPM needs identified by stakeholders as to encourage adoption of effective, affordable and environmentally-sound IPM practices while maintaining agricultural productivity and healthy communities. **This three year grant has funded salaries of 5 faculty, 5 technical staff, and 3 program administration personnel.**

 **188 educational events**

 **13,260 participants**

 **5,367 garden questions**

 **1,978 pests diagnosed**

"I was able to start making helpful gardening changes right away and have a plan for better prevention next season."

- Vermont Master Gardener



Grape management workshop

Program Areas

- Agronomy
- Apples & Grapes
- Greenhouse, High Tunnels & Nursery
- Communities
- Pest Diagnostic Facilities
- Pollinator Health

 **National Institute of Food and Agriculture**
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CULTIVATING HEALTHY COMMUNITIES

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COLLEGE OF AGRICULTURE AND LIFE SCIENCES



Field Day Presentation



Checking for pests on apples



Greenhouse IPM



Community education



Assessing plant sample



Pollinator observation

Agronomy

- Attendees of **Agronomy Field Days and Winter Conferences** learned to identify pests and environmental conditions, select varieties and certified seed, adjust fertility, implement crop rotation and cover crops, and test for mycotoxins. Changes in these behaviors reduced pest pressure, and reduced pesticide applications.
- Participants in the **Dry Bean Disease Survey** learned how to better identify pests and develop IPM strategies.
- Participants in the **Hop Power Hour** and the Hop goScout Survey learned how to scout, impact of irrigation, pruning and training benefits, and timing of harvest to minimize pest damage. Changes to these behaviors minimized rates and reduced pesticide applications.

Farmers reported fewer issues with bean diseases and increased access to markets as a result of **Seed Quality Testing** prior to planting.

Apples & Grapes

- Attendees of **Apple & Grape Extension, Outreach and Education** events learned improved IPM management of fire blight, apple scab, and trunk problems, pre-harvest vineyard management, IPM decision support systems, and managing native bees for pollination. Changes in these behaviors improved timing of pest management, decreased pesticide use, reduced use of broad-spectrum pesticides, and increased profitability. Changes in management practices were also made to protect bees.
- Participants in the **Orchard Scouting Network** became comfortable with scouting protocols for specific pests and used scouting in pest management decision making to reduce or delay pesticide applications. Changes in these behaviors had net economic benefit and reduced risks to applicators and the environment.

Greenhouse, High Tunnels & Nursery

- Attendees of **Tri-State IPM Workshops** learned new IPM techniques and increased knowledge of pest identification, biocontrol use, plant-mediated IPM, scouting, and nutrient management. Adopted IPM strategies for pest management have reduced chemical pesticide use.
- Participants in **IPM First** program learned IPM strategies to manage pests. Use of plant-mediated IPM systems, scouting, biocontrol use, cultural controls, and use of University diagnostic services reduced chemical pesticide use.

“Scouting allowed us to be more precise in our spray applications and reduce our pesticide use.”

- Vermont Apple Grower

Communities

- Students of the **Master Gardener Course** were introduced to Integrated Pest Management and how to apply to home gardens. Adoption of specific IPM practices reduced use of pesticides in home gardens.
- 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) used IPM practices to manage their pest problem as a result of diagnostic identification and information. IPM practices reduced pesticide use by home gardeners, saving an average of \$219 annually per client.

Pest Diagnostics

- Attendees of **Plant Diagnostic Clinic** events increased their knowledge of pests and diseases and IPM strategies. This knowledge has increased adoption of IPM practices.
- Clients of the **Plant Diagnostic Clinic** (commercial growers) used an IPM practice as a result of the diagnosis and recommendations. IPM practices reduced pesticide use by commercial growers, saving an average of \$392 annually per client.

“Without resources like this many farmers, including myself, would have a much harder time growing sustainable food, employing Vermont residents, and running sustainable businesses.”

- Plant Diagnostic Clinic Client

Pollinator Health

- Students of the Master Gardener **Pollinator Short Course** learned IPM practices that reduce use of pesticides to protect pollinators in the landscape.
- Participants in the Greenhouse, High Tunnels & Nursery **Pollinator Habitat Program** increased knowledge of pollinators and plants to attract them.
- Pesticide applicators taking the **Managing Pests While Protecting Pollinators Course** will adopt IPM practices to use pesticides more safely.
- The **Orchard Pollinator Survey** catalogued abundance and diversity in unmanaged and IPM orchards. This information will improve pesticide timing and choices to protect pollinators.

Pollinator Habitat Program enrolled participants all continue to maintain pollinator habitat planting systems after three years in the program.