Vermont IPM Extension Implementation Program
2021-2022 Annual NEERA Report

IPM Implementation in Agronomic Crops - Heather Darby

Field Days & Winter Conferences
- 5 part series Virtual Field Day Fridays virtual webinars (127 attendees) [https://go.uvm.edu/j3lio](https://go.uvm.edu/j3lio)

Seed Quality Testing
- 270 samples in 2021 analyzed for disease, mycotoxins, germination (small grains, dry beans, corn, hemp)
- Farmers requested mycotoxin testing expanded to include aflatoxin. 7 samples in 2020, 23 samples in 2021.

**IMPACTS:**
- 40% increase in seed quality submissions to the lab since 2014
- 4 farmers reported fewer issues with bean diseases as a result of testing seed for seedborne diseases prior to planting
- 3 farmers reported increased access to markets by providing quality information.
- All samples analyzed for aflatoxin have been below the acceptable limit.

IPM Implementation in Specialty Crops: Apples and Grapes - Terry Bradshaw

Extension Outreach Education
- 160 subscribed to vtapplegrower@list.uvm.edu listserv; 292 subscribed to VTgrape@list.uvm.edu listserv
- 116 UVM Fruit blog posts promoting IPM tools, Network for Environmental & Weather Applications (NEWA), advertising IPM meetings [http://go.uvm.edu/ogreu](http://go.uvm.edu/ogreu)
- 138 grower consultations
- 16 new videos on redesigned UVM Fruit YouTube [https://www.youtube.com/user/UVMOrchard](https://www.youtube.com/user/UVMOrchard)
- Presentations (attendees)
  - Apple disease identification & management. UVM Master Gardener Summer program (8)
  - Training on apple production. UVM Master Gardener Summer program (10)
  - New England Cider Apple Project: Early results. Northeast IPM Research Update Conference (18)
- Media
  - 3 Across the Fence Television Segments, WCAX TV (2021 VT Apple Season, 2020 VT Apple Season, COVID Farm Market Safety)
  - Season Check-In. VT Viewpoint radio program, WDEV-FM
  - Ciderology VT Hard Pressed. VT Public Television feature film

IPM Implementation in Specialty Crops: Ornamentals/vegetables in greenhouses/high tunnels and nursery settings - Margaret Skinner

IPM First
• Provided ongoing support for network of over 40 growers through on site or virtual meetings or email.
• 150 consultations

**IPM Implementation in Communities - Ann Hazelrigg**

**Master Gardener Course**
• Delivered through web platform 2021 (197 students)
  **IMPACTS:**
  o 91% moderate/considerable knowledge about use of IPM after course
  o 89-99% moderately/very likely to adopt IPM gardening practices (disease-resistant plants, identify pests, improve timing, cultural practices, use pesticides as a last resort, choose least toxic pesticides, reduce use of pesticides)
  o “I am much more conscious of the role that each of us must play in creating habitats for our local flora and fauna to thrive.”
  o “I gained a lot from this course that I will take into my home and community gardening.”
• 2020 course follow-up
  **IMPACTS:**
  o 84% always/regularly currently use IPM practices in their garden
  o 45% have reduced use of pesticides
  o “Combine several different strategies (mechanical, ecological) in order to avoid pesticide use.”
  o “Encourage and assist neighboring gardeners in the community plot to identify pests and diseases. Suggest non-toxic/organic products and practices for control.”

**Master Gardener Helpline**
• 900 questions answered through ASK EXTENSION portal
• 128 phone calls, 812 emails
  **IMPACTS:**
  o 36% clients said diagnostic ID helped to manage their pest problem with IPM
  o 24% clients were able to reduce pesticides as a result of the IPM information
  o $250 average per client estimated cost savings by reducing pesticide use
  o “I got answers that addressed my specific concerns in a timely way that allowed me to move forward with the understanding I needed for success.”
  o “Helped me to make the problem somewhat better without any pesticides at all.”

**Master Gardener Advanced Training**
• 2021 Summer Pest & Disease Updates (75 attendees)
  **IMPACTS:**
  o 100% will improve use of IPM practices when trying to manage pests
  o 67% will reduce use of pesticides
  o “I learned a lot from the pest management session that has already helped me to mitigate damage from pests.”
  o “Learned about the ‘decision tree’ when it comes to IPM”
  o “In-person sessions served to reinforce (course) foundation and allow to fill some of the gaps in understanding.”

**IPM for Pollinator Health**
Greenhouse/High Tunnel/Nursery Pollinator Habitat Program

- 18 sites (10 in 2020, 8 in 2021) established pollinator habitat plantings, 1 new site trained

IMPACTS:
  - 100% provided education to customers about their importance
  - Brochure: Native Solitary Bees and How to Support Them [https://go.uvm.edu/2gnc7](https://go.uvm.edu/2gnc7)
  - 4750 pollinator habitat brochures distributed to retail businesses, outreach events (Bringing In Un-Bee-lievable Beneficials, Native Solitary Bees and How to Support Them)
  - 2 articles American Floral Endowment Thrips & Botrytis Newsletter
  - 5 articles VT Nursery & Landscape Assoc. magazine, The Dirt: [https://go.uvm.edu/85xai](https://go.uvm.edu/85xai)

- Presentations
  - Supporting wild pollinators on diversified vegetable farms. VT Veg & Berry Growers Assoc., UVM Extension
  - 2 lectures for Master Gardener Pollinator Short Course

IPM Implementation in Pest Diagnostic Facilities – Ann Hazelrigg

Plant Diagnostic Clinic Disease/Insect/Weed Diagnostics

- 125 Commercial samples diagnosed, IPM information provided.
- 125 email pictures diagnosed, IPM information provided

IMPACTS:
  - 71% commercial clients said diagnostic ID helped to manage their pest problem with IPM
  - 21% commercial clients were able to reduce pesticides as a result of the IPM information
  - $233 average per client estimated cost savings by reducing pesticide use
  - “Maybe we didn’t reduce (pesticides) but we at least knew what to spray, when (as a result of the IPM recommendation)”
  - “Yes, with positive ID of certain plant diseases, I have switched to cultivars with bred resistance, avoiding sprays and crop loss.”

Extension Outreach Education

- Presentations (attendees)
  - Master Gardener
  - Plant Disease lecture. Farmer Training
  - Gypsy Moth training video [https://youtu.be/TPK8hvsjEuo](https://youtu.be/TPK8hvsjEuo)
  - AX Fellows Disease Scouting Training (10)
  - Saffron Twilight Meeting (25)

IPM Education for Pesticide Applicators - Ann Hazelrigg and Sarah Kingsley Richards

Pesticide Applicator Education

- 3 lectures for Master Gardener Pollinator Short Course
- VT Pesticide Education: Managing Pests While Protecting Pollinators (1 credit) online training for commercial growers (4 attendees)
**IMPACTS:**
- 67% moderately/very likely to adopt at least one new IPM practice
- 67% moderately/very likely to apply and use pesticides more safely
- “The student walks away feeling encouraged to spring into action and more mindfully and effectively manage pests while creating abundant pollinator habitat and protection.”

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