

Connecticut IPM Program Report, January 2017
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Annual reports, fact sheets, and other information are available on the UConn IPM website (www.ipm.uconn.edu). The Connecticut IPM Program 2016 Annual Report will be available on the UConn IPM website in February 2017.

Funding

- The Connecticut IPM Program is funded in part by USDA (NIFA CPPM EIP and APHIS), CT Department of Energy and Environmental Protection (DEEP), CT Department of Agriculture/USDA Specialty Crop Block Grant Program, USDA SARE, and the University of Connecticut.

Team members

- **UConn:** The 9-member IPM Program team includes Donna Ellis (IPM Program Coordinator), Joan Allen, Candace Bartholomew, Jude Boucher, Alejandro Chiriboga, Mary Concklin, Ana Legrand, Leanne Pundt, and Victoria Wallace in the Department of Extension and the Department of Plant Science & Landscape Architecture.
Partners/collaborators: State and Federal agricultural and environmental/non-governmental agencies and organizations; State, New England, and Northeastern fruit, greenhouse, grounds keepers, nursery, turf, landscape, and vegetable associations; industry suppliers/dealers; regional universities; educators; schools and municipalities; individual growers, farmers, and producers; Master Gardeners; and the general public.

Issue

- IPM integrates the application of multiple tactics in a variety of settings through the selection of appropriate tools and the education of members of the Connecticut agricultural industry and Connecticut citizens to provide sustainable, science-based approaches for the management of plant pests (insects, mites, diseases, wildlife, and weeds, including invasive plants). The IPM Program incorporates all possible pest management strategies through knowledgeable decision making, utilizing the most efficient landscape and on-farm resources, and integrating cultural and biological controls. Program objectives include maintaining the economic viability of agricultural and green industry businesses, enhancing and conserving environmental quality and natural resources, educating participants on the effective use of biological control agents, and educating pesticide users about the safe use and handling of pesticide products.

Accomplishments

- IPM Program team members conducted intensive onsite educational training for fruit and vegetable producers, garden center owners, greenhouse growers, nursery producers and retailers, and turf and landscape professionals. Growers and green industry professionals received information on the current status of and recommendations for important plant pests and training via pest messages, email alerts, webinars, newsletters, articles in national trade journals, management guides, websites, social media, consultations and counseling via phone, site visits to their operations, workshops, conferences, exhibits, and short courses.

- **Evaluations:** IPM programs were evaluated by the following methods: pre- and/or post-program surveys and evaluations, needs assessment surveys, focus groups, key informant interviews, testimonials, and unsolicited comments.

Results

Outcomes

- Growers and green industry professionals experienced an increase in knowledge and skills through participation in hands-on, full-season IPM training programs and other IPM educational outreach.
- Growers and producers who participated in the onsite IPM field training programs learned to identify both important crop pests and many beneficial natural enemies. They learned to implement preventative pest control practices; use scouting, monitoring, and action thresholds to assess the population level and risk of crop damage; and increased their knowledge about selective pesticides and resistance management. The program provided them with the self-confidence to effectively manage pests at their own business in future years.
- Growers and others attending conferences not only rated the conferences highly, but stated that they would adopt new practices. Most attendees also stated they enhanced their pest control decision-making and their knowledge of environmental and crop quality for their business. Participants who attended some of the conferences mentioned dozens of new practices they had adopted due to attending the previous year's programs, while others reported a demonstrated increase in understanding of the conference topics presented.
- More greenhouse growers are using biological control agents (biological fungicides and biological control agents) and also using habitat and banker plants to encourage natural enemies. This significantly helps reduce impacts of pesticides on non-target organisms, both in the greenhouse and in outdoor production when plants are in the garden. Plant quality and health were also reported to increase.
- Targeted pest control strategies based on accurate diagnosis reduce unnecessary use of chemical pesticides. Prompt diagnosis or identification can limit the spread of a problem when IPM practices are implemented early.
- 90 businesses, which include berry farms, garden centers, greenhouses, landscape companies, nurseries, orchards, schools, vegetable farms, and vineyards adopted IPM practices and acquired relevant information on and increased awareness of existing and emerging pests to improve production, crop quality, profitability, and aesthetics. A total of 651 IPM site visits were made during the reporting period.
- 17,765 participants directly received IPM training by participating in/attending 132 IPM programs and increased their knowledge and awareness of managing plant pests (insects, mites, diseases, wildlife, and weeds, including invasive plants), resulting in improved decision-making regarding pest management options.
- 18 programs, workshops, conferences, and courses were held, with 1,533 individuals receiving training about pests, pest management and decision making, and safe pesticide use and handling. A total of 492 pesticide applicators received state of CT recertification credits, 71 students completed the Ornamental and Turf Short Course, and 31% of those who took the state certification exam successfully passed to become state certified. An additional 175 Master Gardeners received pesticide safety education.

- 764 plant pest samples were diagnosed, and management recommendations were provided to IPM Program participants and other stakeholders.
- The Connecticut Invasive Plant Working Group (CIPWG), a consortium of individuals, members of environmental organizations, the green industry, and affiliates of municipal and state agencies whose mission is to promote awareness of invasive plants and their non-invasive alternatives, maintains an informative website at www.cipwg.uconn.edu (Donna Ellis serves as CIPWG Co-Chair). CIPWG's news and events list serve has approximately 800 members from Connecticut and other states in the region. The eighth biennial CIPWG invasive plant symposium was convened on October 11, 2016 in Storrs, CT, with 490 people attending.
- More than 300 invasive plant-related activities, including presentations, hands-on management, staffing exhibits, and development and dissemination of materials occurred during local, statewide, and regional events. These activities provided a minimum of 10,800 hours of invasive plant training and other educational outreach to 39,400 Connecticut citizens, agency and municipal staff, and other groups.

Impacts

- Program participants benefit from intensive onsite IPM training, which includes the inspection, monitoring, and diagnosis of ornamental and food crops for plant pests and natural enemies, monitoring reports with management recommendations, and overall discussion on plant health care.
- Many of the local businesses that we work with are beginning farmers, and the program prepares them for life on the farm. Some have no previous experience with farming or even gardening and would surely fail at their new venture if not provided with the training that we offer. We start by teaching them about farm equipment, including how to maintain it, provide them with the manuals that include instructions on how to grow everything from apples to zucchini, and teach them how to protect their crops from pests and market them to the public.
- More experienced growers learn better options for crop production and pest management, which help them keep their businesses profitable and sustainable. They learn to operate within the limits of a highly regulated occupation and gain the self confidence that comes with knowing that they are operating their businesses efficiently and successfully.
- The green industry, which is the largest agricultural commodity in the state, drives Connecticut's economy. Green industry businesses provide jobs and income for many Connecticut residents. IPM training programs equip these business owners and their staff with the skills they need to operate and maintain successful companies.
- The use of biological control agents in greenhouses, nurseries, other production areas, and in landscapes can help reduce pesticide use.
- CT is a key leader in School IPM programming, and UConn Extension is a valuable resource for school grounds managers in CT and the Northeast. Training programs on alternatives to traditional pesticides (including minimum risk 25(b) products) provide relevant information and improve dialogue with turfgrass and landscape professionals, legislators, commissions, and state constituents regarding pesticide-free school grounds and athletic fields.
- Weather stations on school grounds and farms provide management options for growers, school grounds managers, and municipal staff. The use of Athletic Field and Landscape Assessments improves record-keeping data necessary for required IPM plans and pest management decision-making.

- Choosing the correct management practices as soon as possible after a problem is noted and having it correctly diagnosed or identified can minimize losses by preventing or minimizing the spread or population increase of pests.
- The impacts of reduced use of chemical pesticides may reduce negative impacts on the environment, biodiversity, and non-target beneficial organisms. Reducing pesticide use may also minimize applicator exposure to hazardous products. A reduction in chemical use can save growers money.
- Pesticides are important tools in integrated insect, weed, plant disease, and wildlife management. Pesticide Safety Education Program (PSEP) efforts provide for the judicious, proper use of pesticides as IPM tools; thus, benefiting everyone directly or indirectly.
- The PSEP goal is to protect people, property, the food supply, and the environment from both pests and pesticide exposure by ensuring the initial and continued competence of pesticide applicators. This involves working with professional applicators who make applications of pesticides for a variety of purposes.
- Invasive plant educational outreach delivers practical and sustainable solutions for invasive plant management and actions needed to promote native species, support pollinators, and improve wildlife habitat.

Comments from IPM Program participants

“They give all the help one needs to be a successful grower in CT. I have learned more in a few hours working with their field specialists than I did in several college classes. Thank you, UCONN extension, you are appreciated more than words can express!”

- Bruce Gresczyk, Gresczyk Farms, New Hartford, CT (UConn Extension Facebook page, 2016)

“Hard to believe another season has come to an end! Thank you for the time you put into this Jude [Vegetable IPM Pest Message/Reports from the Farm]. I rely on the information you provide here, and it has prevented a lot of crop loss. As a new vegetable farmer with only four years of commercial experience, outside of the book I purchased at your office [NE Vegetable Management Guide], this has been the most useful tool I have ever had!!”

- George McCoy, Holmeslea Gardens, Woodstock, CT (Comment to Jude Boucher, 2016)

“Kudos to you for a great biocontrol conference this year! I was so happy to see how far we have come and how involved people are and ready to be in biocontrol!”

- Carol S. Glenister, IPM Laboratories, Inc. (Comment to Leanne Pundt on Biological Control Conference, June 2016)

“Speakers were excellent. Good enthusiasm.” “First time (attending) – outstanding.” “Very organized. Timely.”

- Comments from Connecticut Invasive Plant Working Group (CIPWG) Invasive Plant Symposium attendees, October 2016

“The topics were very appropriate for the general gardener and the information was very helpful; I look forward to putting it into practice! Great handouts. Thank you for a great day!”

“This was an awesome conference!” “Thanks for all the hard work organizing this conference.”

- Comments from UConn Garden Conference attendees, March 2016