



## University of Massachusetts Amherst: EIPM Summary 2013

The Extension IPM Advisory Panel convened for its third annual meeting on March 28<sup>th</sup>, 2013 to discuss outcomes and impacts of the project since 2010 and to plan projects for the 2013 growing season. In attendance were UMass Extension Fruit and Vegetable Educators, NRCS staff members, Red Tomato staff members, independent IPM field consultants, and growers.

### **Primary: IPM Implementation in Specialty Crops**

#### *Vegetable and Fruit Team IPM*

**13 Mentor** farms set goals for improved management of a variety of crops and pests that served as the focus of biweekly scouting by farm and Extension staff. Mentor Farms received assistance including free disease diagnostics, free soil and tissue testing, and traps for monitoring particular pests. Further impacts of our work on individual farms are described in the complete report.

- Over 50 samples were analyzed by the UMass Disease Diagnostic Lab.
- Over 30 soil and tissue samples were analyzed by the UMass Soil and Tissue Testing Lab.
- Extension personnel provided consultation to growers based on all lab results.
- Six Mentor Farms hosted on-farm field walks and twilight meetings for over 200 people.

**8 Partner** farms conducted a targeted research or demonstration project on a pest management issue relevant to their farm needs.

- Farm visits, treatment applications, and data collection was conducted by farmers and Extension staff as required by each project
- Results were shared with farmers and others through publications such as Vegetable Notes, Fruit Notes and Plant Disease Management Reports.
- Eight partner farm trials were conducted in the following research areas: flea beetle trap cropping, biocontrol in both beans and peppers, biological pesticides in brassica and cucurbit disease management, cranberry fruitworm research, advanced IPM in summer apple diseases, trapping for both brown marmorated stink bug (BMSB) and spotted wing drosophila (SWD). A full summary of each project is in the complete report.

**8 Cooperator** farms were locations where monitoring of particular pests was conducted by the farmer or other agricultural consultant and results were shared with Extension staff for publication in Extension newsletters, pest alerts and other IPM portals such as Facebook. Pests and diseases monitored included: brown marmorated stink bug, spotted wing drosophila, squash vine borer, European corn borer, corn ear worm, fall army worm, late blight of potato and tomato, cucurbit downy mildew.

#### **Monitoring and pest alert networks**

- As of 2013, 23 weather stations that were deployed by UMass Extension and 22 airport stations were all integrated into the NEWA network
- Monitoring was achieved through our biweekly visits to 13 mentor farms
- Emerging invasive pests (SWD and BMSB) were monitored at 15-20 sites in MA
- IPM Portal implemented as a website on UMass Extension website and as a Facebook page
- The New England Vegetable Management Guide was fully updated in 2013
- The Cranberry Chart Book Management Guide was revised in 2013
- 21 issues of the Vegetable Notes Newsletter were distributed to >1500 subscribers
- 23 issues of Healthy Fruit were distributed to >100 subscribers
- 12 issues of Berry Notes were distributed to >450 subscribers in print form and as a text alert
- 5 issues of the Cranberry Station Newsletter were distributed to 327 subscribers

Throughout the growing season, detailed timelines were kept for each mentor farm that chronicled the observations and the recommended actions made at each farm. These timelines were used to generate an evaluation template in which the outcome of recommended actions (e.g. cultural control, biocontrol, spray program improvement, scouting, etc.) was assessed during extensive post-season interviews with mentor growers. Data was obtained from 10 farms where a total of 310 recommended actions were documented.

Of the 310 recommended actions:

- 51% were taken/followed as recommended
- 28% were taken/followed with some modification
- 21% were not taken/followed

Over all actions that were taken/followed as recommended, growers rated 60% of them ‘very successful’, and 29% ‘moderately successful’ on a scale of :1= not successful, 2 = minimally successful, 3 = moderately successful and 4= very successful).

### **IPM meetings and workshops implemented in 2013:**

<b>Date</b>	<b>Name of Program</b>	<b>Farm</b>	<b>Location</b>	<b># of Attendees</b>
4/16/13	Fruit Twilight Meeting	Big Apple Farm	Wrentham, MA	45
4/17/13	Fruit Twilight Meeting	Outlook Farm	Westhampton, MA	30
4/24/13	Building Healthy Soils Workshop	UMass Crops Research & Ed Farm	S. Deerfield, MA	42
4/25/14	Building Healthy Soils Workshop	Bristol County Ag. High School	Dighton, MA	38
5/14/13	Tree Fruit Twilight Meeting	Cold Spring Orchard	Belchertown, MA	35
5/16/13	Mass-RI Tree Fruit Twilight Meeting	Old Stone Orchard	Little Compton, RI	50
5/22/13	Beginning Farmer Network Meeting: IPM & Late Blight	Buckle Farm	Dighton, MA	40
6/3/13	Organic Crop Production Twilight Meeting	Waltham Fields Community Farm	Waltham, MA	40
6/21/13	Cranberry Cultivation Workshop	UMass Cranberry Station	East Wareham, MA	19
7/10/13	Mass. Fruit Growers' Assoc. Annual Meeting	Honey Pot Hill Orchards	Stow, MA	100
7/18/13	Sprayer Calibration Workshop	Cold Spring Orchard	Belchertown, MA	15
7/31/13	Field Walk: Integrated Pest Management	The Bars Farm	Deerfield, MA	25
8/14/13	Field Walk: Integrated Pest Management	Powisset Farm	Dover, MA	50
9/18/13	Twilight: Winter Production, IPM, and Marketing	Tangerini Farm	Millis, MA	30

### **Extension IPM Survey**

The goal of this survey, sent to the UMass Extension fruit and vegetable email listserves in January 2014, was to evaluate stakeholders’ current knowledge and use of IPM practices and the efficacy of UMass

Extension Vegetable and Fruit IPM programs. With over 260 surveys completed (15% of all subscribers to newsletters), respondents indicate that UMass Extension has influenced grower knowledge and use of IPM in the following ways:

- 68% report moderate or considerable knowledge of on-farm pest monitoring and 89% report use of pest scouting to make decisions about pest management
- >80% report using cultural practices to improve crop health and prevent pest outbreaks often or always
- 40 to 53% report using fewer pesticides or reduced-risk pesticides in their crops.

### **Secondary Emphasis Area: IPM Coordination within Conservation Partnerships**

#### *Vegetable and Fruit IPM*

We work with MA Natural Resource Conservation Service to enhance use of NRCS programs to support IPM and other conservation practices. Five educational workshops were held with NRCS staff this year, two of them co-sponsored with NRCS. We assisted three growers in documenting their IPM practices for an EQIP 595 IPM contract; for one of these, this helped them to receive a 'high level IPM' 595 contract.

### **Secondary Emphasis Area: IPM Training and Implementation in Housing: Bedbug IPM**

Nine bed bug training programs were held this year. These training sessions have been shown to be effective in increasing knowledge in bedbug management. Last year, training sessions for personal care providers were evaluated by conducting pre- and post-tests. The results show that participants increased their knowledge of bedbug management from a mean of 45% (range from 0 to 100%) to 85% (range from 60% to 100%). The following training sessions were held (*# of attendees in parentheses*): :

- Bed bugs: biology and management. Amherst landlords, Amherst. 10/25/12 (19)
- Bed bugs: biology and management. Hampden County landlords. Springfield. 5/3/12 (16 attendees: 600 units.)
- Introduction to bed bugs. Franklin County Home Care. Greenfield. 6/29/12(15)
- Bed bug for tenants. Westfield Housing Authority. 1/8/13 (*English, Spanish, Russian*) (46)
- Bed bug for housing staff. Westfield Housing Authority. 1/8/13 (9)
- Bed bugs for seniors. Holyoke Council on Aging. Holyoke. 5/23/13. (20)

### **Secondary Emphasis Area: IPM in Public Health: Tick Disease Assessment and Public Education**

In 2013, the UMass Extension Tick-Borne Disease Diagnostics Clinic identified 913 tick samples and assessed them for the presence of *Borrelia burgdorferi*, the pathogen responsible for Lyme disease. This was a 43% increase in tick submissions over the same period the previous year. The Lab conducted a survey of the impact on clientele practices and their level of satisfaction with the service in winter 2013. We contacted 238 clients and 109 (45.8%) responded. The results show that 98% find the information given to them by the Tick Lab important (17%) to very important (81%). All respondents would recommend the service to friends. At least half the people use this information in making a medical decision. The following training sessions were held.

- Ticks and tick-borne diseases. Residex Pest Management. Norwood. 3/1/12
- Ticks and tick-borne diseases for vegetation control workers. Orange. 3/27/12
- Ticks and tick-borne diseases. Quinsigamond Community College. Marlborough. 6/29/12
- Ticks and tick-borne diseases. New England Pest Management Assoc. Springfield. 11/1/12
- Ticks and tick-borne diseases. New England Pest Management Assoc. Marlborough. 3/8/13
- Ticks & tick-borne diseases in New England. MA Agriculture Club. Marlborough. 4/11/13
- Ticks & tick-borne diseases in New England. Goshen Land Trust. Goshen. 5/23/13