

Project Title: Sustainable Fruit Production and Marketing

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Project Overview

Fruit farms and vineyards provide open space and scenic vistas that add significantly to the quality of life in Massachusetts. The lands surrounding agricultural production provide buffer zones for native species of plants and animals and corridors for their movement or expansion. To remain a vital part of the Massachusetts economy, both new and established growers must learn to produce crops sustainably and to adapt production systems to market opportunities. New varieties provide fruit farmers with opportunities for enhancing production, quality, sales and consumption. UMass Extension provides farmers with access to current research information on new and alternative species and varieties, advanced horticultural management techniques, marketing and business management strategies, pest-ecology, and pest-management procedures. Research on pest ecology and management informs approaches that optimize control, reduce chemical use and increase fruit quality. The knowledge and resources provided by Extension forge successful partnerships with Massachusetts's fruit producers that in turn foster a more secure, diverse and healthful food supply for the Commonwealth.

Situation & Priorities:

Integrated Pest Management - the small fruit program delivers current IPM information and training via publications (i.e., New England Small Fruit Pest Management Guide, Massachusetts Small Fruit Pesticide Applicator Study Manual), newsletters (e.g., Massachusetts Berry Notes, New England Grape Notes), twilight meetings, educational programs (e.g., New England Veg. and Fruit Conference), and other outputs.

Economically Viable Food Production - the small fruit program helps growers achieve more economically viable production practices by presenting research based information on new production practices, new crops or varieties, season extension practices, etc. via publications (i.e., New England Small Fruit Pest Management Guide, Massachusetts Small Fruit Pesticide Applicator Study Manual), newsletters (e.g., Massachusetts Berry Notes, New England Grape Notes), twilight meetings, educational programs (e.g., New England Veg. and Fruit Conference), and other outputs.

Environmentally Sustainable Food Production - the small fruit program delivers information and training in environmentally sustainable production practices (beyond IPM), with particular attention to organic practices, via publications (i.e., New England Small Fruit Pest Management Guide, Massachusetts Small Fruit Pesticide Applicator Study Manual), newsletters (e.g., Massachusetts Berry Notes, New England Grape Notes), twilight meetings, educational programs (e.g., New England Veg. and Fruit Conference), and other outputs.

Safe, Local Food - the small fruit program delivers information and training in food safety, including for Good Agricultural Practices (GAP) certification, via publications (i.e., New England Small Fruit Pest Management Guide, Massachusetts Small Fruit Pesticide Applicator Study Manual), newsletters (e.g., Massachusetts Berry Notes, New England Grape Notes), twilight meetings, educational programs (e.g., New England Veg. and Fruit Conference), and other outputs.

Stakeholder Input

The UMass Fruit Team has a long and valued research and education relationship with industry partners, the Massachusetts Fruit Growers' Association, the New England Vegetable and Berry Growers' Association, Massachusetts Farm Winery and Growers' Association, Massachusetts Cultivated Blueberry Growers' Association and other clients and growers. Ongoing communication via meetings, grower visits, etc....with these partners is a valuable feedback tool to help plan research and education needs. In addition, the team will seek formal input and feedback annually from stakeholders through a program-wide survey and more targeted input from a designated advisory group.

Evaluation Overview

A formal program-wide survey will be conducted in November to capture impacts of overall program initiatives and gain insights into new and emerging stakeholder needs. Individual evaluations are conducted for program meetings and initiatives to help verify impacts and effectiveness. In addition, we will rely on observations and communication with growers.

Activity Summary - 2015

- Advanced IPM/NE SARE Scab (1)
- Berry Notes Newsletter (12)
- Cold Hardy Wine Grape - Research and Demonstration (1)
- eXtension Apples - Community of Practice (CoP)
- Fact Sheets- key insect, disease, weed id and management recommendations for fruit crops (2)
- Fruit Notes (4)
- Grape Notes Newsletter (22)
- Healthy Fruit - Online Version (19)
- MA Farm Winery and Grower's Association - Summer Vineyard Meetings (13)
- MA Farm Winery and Grower's Association Annual Meeting (1)
- Mass Aggie Seminars (7)
- Mass Fruit Growers Annual Summer/Winter Meetings (2)
- Master Gardener Trainings (5)
- Tree Fruit Rootstock: Geneva/Modi organic apple rootstock planting
- Native Pollinator Conservation Training
- NE Small Fruit Pest Management Guide - Online Version (1)
- NE Tree Fruit Management Guide - Online Version (1)
- NE Tree Fruit Management Guide - Print Version (1)
- NE-1020 Multi-state Evaluation of Winegrape Cultivars and Clones (1)
- New England Vegetable and Berry Growers Annual Winter Meetings (3)
- New Pest Reporting Network (18)
- Phone and email consultations (565)
- Role of Pollinators and Plant Defenses For Infection Of Blueberry By Mummy Berry (1)
- Site visits (115)

- Soil Health Assessment Training (6)
- Spring Tree Fruit Twilight Meeting Series (7)
- UMass Cold Spring Orchard Blog - Jmcextman.blogspot.com (1)
- UMass Fruit Advisor Website (1)
- Vegetable/Fruit IPM Facebook Page (1)
- Vegetable/Fruit IPM On-Farm Meetings (3)

Total educational contacts

	Adult Contacts
In Person	3248
Indirect Contacts (Print, Web, etc...)	4496

Narrative Summary and Impact

Through its programming, the Sustainable Fruit Production and Marketing team addressed four main issue areas in FY2015. They were:

- Integrated Pest Management,
- Economically Viable Food Production,
- Environmentally Sustainable Food Production
- Safe, Local Food

In advancing these priorities, the team conducted programming in **Research & Demonstration**, and **Outreach & Education**.

Research & Demonstration activities included projects at the UMass Cold Spring Orchard Research and Education Center as well as at cooperating grower farms. Thirty-two projects were carried out at the UMass Cold Spring Orchard. These ranged from *Evaluating the Use Of Plant Growth Regulators For Crop Load Management, Growth Control, and Stop-Drop* to *Using Decision Aid Systems For Managing Apple Scab*; from *Evaluating Apple And Peach NC-140 Rootstocks* to looking at *Floral Scent Mimicry And The Transmission 1 Of A Pollinator-Vectored Plant Pathogen*. Another five projects were conducted at a combined 25 cooperating grower sites. These were focused on:

- *Statewide Monitoring Of The Invasive Pests Spotted Wing Drosophila (SWD) And Brown Marmorated Stink Bug (BMSB)*,
- *NEWA Weather Data And Disease/Insect Modeling For Growers, Multi-level Extension Delivery to Support IPM for Diversified Massachusetts Farms*,
- *Manipulating Host- and Mate-finding Behavior of Plum Curculio: Development of a Multi-Life Stage Management Strategy for a Key Fruit Pest*; and
- *Sustainable Disease Management in Northeastern Apples using Risk Forecasts and Cultural Controls*.

Outreach & Education activities included hosting and maintaining websites, producing publications (print and online), publishing articles in professional and trade publications, organizing and conducting

day-long and multi-day conferences, delivering educational presentations and trainings, and one-on-one consultations with growers (by email, phone and in person).

Research & Demonstration projects resulted in the publication of 17 journal articles/proceedings, 53 newsletter articles and were the subject of numerous field day presentations and on-farm tours. For **Outreach & Education** Fruit Team members contributed significantly to organizing 11 conferences or symposia reaching over 800 people, and delivered 25 papers at major professional conferences and meetings to over 1,600. The fruit program had primary responsibility for 3 websites and was key contributors to 8 additional sites or blogs. Members also delivered 25 practical presentations at twilight meetings and workshops to an audience of over 1,900. *The New England Small Fruit Pest Management Guide* (circulation 1,000) and *The New England Tree Fruit Management Guide* (circulation 250) were organized, edited and produced by the UMass Fruit Team in collaboration with colleagues around New England. Four newsletters, *Fruit Notes* (4 issues; circulation 333), *Healthy Fruit* (19 issues; circulation 100), *Berry Notes* (12 issues; circulation 464), and *Grape Notes* (22 issues; circulation 272) were produced. Finally, 810 individual consultations were made either by phone, email or in person.

Collaborating Organizations:

- **Massachusetts Cultivated Blueberry Growers Association**
- **Massachusetts Department of Agricultural Resources**
- **Massachusetts Farm Winery & Growers Association**
- **Massachusetts Fruit Growers' Association**
- **Massachusetts Horticultural Society**
- **New England Vegetable & Berry Growers Association**
- **Western MA Master Gardener**