UMass Extension

Fruit Team

Orchards, vineyards, and fruit farms provide open space and vistas that enhance the rural character and quality of life in Massachusetts. Land that adjoins agriculture provides habitat for native species of plants and animals and corridors for their movement or expansion. To remain a vital part of the Massachusetts economy, however, both new and established farmers must learn to produce crops sustainably and adapt production systems to market opportunities. For example, new varieties provide fruit farmers with opportunities for enhanced production, quality, and increased sales.

UMass Extension provides farmers with access to current research information on new species and alternative varieties, advanced horticultural techniques, pest biology and management procedures, marketing and business strategies. Research on pest-ecology and management informs approaches reducing chemical use and increasing fruit quality. The combination of knowledge and resources provided by Extension forge successful partnerships with Massachusetts fruit producers, fostering a more secure, diverse and healthful food supply for the Commonwealth.

Fruit Team outputs and impacts (FY 2017)

- The UMass Extension Fruit Team hosted, organized and presented research at 67 meetings across the Northeast. At these events we shared vital information ranging from invasive insect management to time sensitive horticultural guidance to climate mitigation strategies and integration of cutting edge agricultural technologies.
- We conducted 28 on-farm research and demonstration projects, many at the UMass Orchard in Belchertown, and some at collaborating farms. Fruit Team projects addressed research needs such as apple thinning trials, apple rootstock performance evaluations, cold hardy grape cultivar evaluations and pollinator habitat conservation and many more.
- Fruit Team members produced and updated 73 publications. These publications included newsletters, production guides, Fact Sheets and articles. An ongoing library of works by team members continues to provide reference material and reliable resources to growers, service providers, gardeners, students, and educators in the field.
- Over 1,102 diagnostic consultations provided growers with information essential to mitigating pest damage and adapting to changing conditions. Phone calls, meetings, and email correspondence advised up-to-date protocols and pre-emptive pest and horticultural management tactics.
- Websites and social media expanded the team's reach to over 50,400 people who may have been unable to attend workshops and conferences. This, along with other research and timely outputs, contributes to socially and environmentally responsible, and profitable fruit production in Massachusetts.

Selected grants

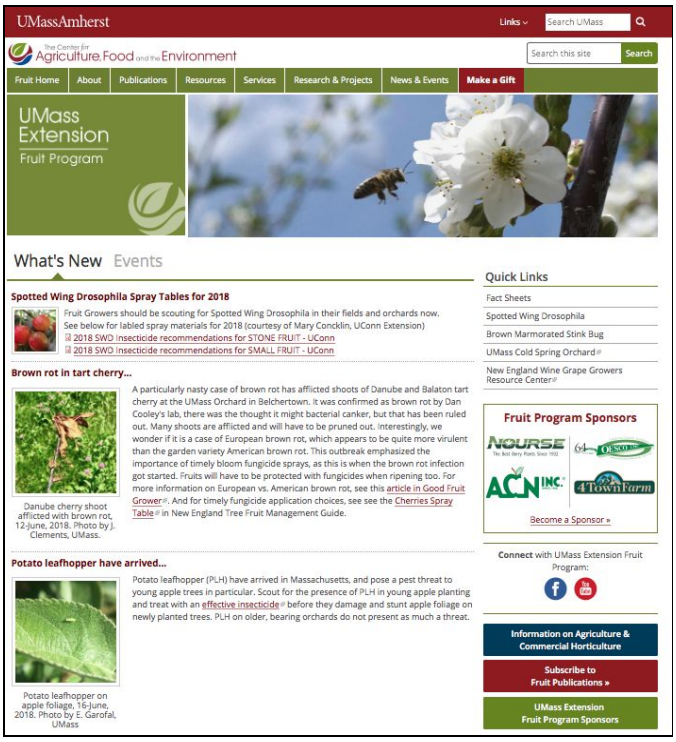
- Brown A., and W. Autio. UMass Amherst Student Farm Food Safety Improvement. $9,832.00.
- Clements, J. iPiPE Crop Pest Program for Northeast Apples. $54,420
- Petit, E., Evaluation of Wine Juice Quality Following Various Shoot and Cluster Thinning Regimes. UMass Center for Agriculture, Food and the Environment Summer Scholars Program. $5,000
- Sandler, H., K. Campbell-Nelson, A. Tuttle, S. Schloemann, K. Ghantous, M. Sylvia, M. Dicklow and D. Cooley, Multi-level Extension delivery to support IPM for Massachusetts vegetable and fruit growers. USDA-NIFA, Extension Implementation Program. $582,000

Selected publications

- Autio, W., J. Krupa, J. Clements and W. Cowgill. 2017. Performance of Honeycrisp Apple Trees on Several Budagovsky, Cornell-Geneva, and Pillnitz Rootstocks – an update on the Massachusetts planting of the 2010 NC-140 Apple Rootstock Trial. Fruit Notes Vol. 82, No. 2.
- Greene, D., A. Crovetti, and J. Pienaar. 2016. Development of 6-benzyladenine as a chemical thinner. HortScience 51: 1448-1451.
- Zeng, Q., D. R. Cooley, E. W. Garofalo, et al. 2017. Comparative genomics of Spiraeoideae-infecting Erwinia amylovora strains revealed higher genetic diversity and suggested an origin of global dispersal. Molecular Plant Pathology. (Accepted)

Selected collaborative projects

- USDA – Refining an Attracticidal Sphere Management System for Spotted Wing Drosophila (SWD) in Small Fruit Production (Schloemann, Tuttle, and Garofalo)
- Massachusetts Fruit Growers' Association – Swing Arm Trellis Demonstration for Blackberry and Black Raspberry Production in New England (Schloemann)
- USDA Hatch – NC-140 Apple/Peach Rootstock Regional Research Project (Autio, Clements)
- Connecticut Agricultural Experiment Station/Northeast SARE – Organic Management of Blossom (Fire) Blight in Apples (Cooley)
- Adama USA – Influence of Metamitron on Fruit Set of McIntosh Apples (Greene)



Fruit Team members

- Faculty – Wesley Autio, Daniel Cooley, Duane Greene, Jaime Pinero, Elsa Petit
- Extension Educators – Sonia Schloemann and Jon Clements
- Extension/Research Support Staff – Elizabeth Garofalo
- UMass Cold Spring Orchard Staff – Shawn McIntire and Kristen Hanley