2018 Annual Report

Cornell Cooperative Extension

Lake Ontario Fruit Program



The Lake Ontario Fruit Program partners with Cornell Cooperative Extension of Wayne, Orleans, Niagara, Monroe, and Oswego Counties, Cornell University Cooperative Extension and faculty to provide educational programs for the commercial fruit industry, using research-based information to help the tree fruit and berry industries in New York compete in the world market and provide safe, high-quality produce for consumers.

Objectives:

- Maintain competitiveness and profitability of New York Fruit farms in a global market.
- Evaluate new technology for potential increases in efficiency through applied research.
- Assist in the adoption and implementation of appropriate technologies.
- Reduce financial, legal, labor, environmental, and health risks.
- Improve production and delivery of high quality fruit to consumers.







Team News:





Mark Wiltberger discusses economics of high density plantings at VanDeWalle Fruit Farms at the LOF Summer Tour on July 12.

Effective April 1, Mark Wiltberger was hired for the Business Management Specialist position vacated 13 months prior by Matt Wells. Mark comes to us with agricultural experience as a grape grower and wine producer in the Finger Lakes region. Mark has a background in information systems and geography. In his new role in 2018, Mark conducted business consultations with growers, led sessions on tours, published business educational materials, conducted field research on the economics of hail netting, and led the NextGen Young Fruit Growers Study Tour to Adams County, Pennsylvania.

Education

Each specialist's role comprises four main areas of focus: Education, Research, Consultation, and Professional Development. In the following report, highlights for the year are reported from each area of focus. Education is the primary mission of the team. The team holds several meetings per year and produces three publications that provide timely information for tree fruit producers.

581 fruit growers from across the state participated in the Tree Fruit, Food Safety, and Hard Cider Sessions at the Producers EXPO, January 16-18. Tess, Mario, and Craig chaired eight sessions and 23 presentations over three days. Fruit farmers learned the latest information and best practices on orchard systems, pest management, quality fruit production, climate change mitigation, and cider production.



Dr. David Granatstein of Washington State University presents on "Orchard Weed Management" at LOF Winter Fruit School in Newark on February 6.



Mary Jo Dudley of the Cornell Farmworker Program talks to Spanish-speaking orchard workers about developing successful work skills in the Our Lady of Guadalupe Church in Marion on March 16.

Over 250 grower and other industry personnel attended the LOF Winter Fruit Schools, February 5-6. The annual fruit schools were held in Wayne and Niagara counties, each with a full day of educational presentations on fruit production. Cornell Researchers, LOF educators, industry experts and an invited "keynote" speaker from Washington (David Granatstein) gave 12 presentations on various aspects of fruit production. 2.75 DEC credits were available to growers who attended the meeting.

Spanish-Speaking Winter Fruit Schools, March 16-17. Mario and other CCE and Cornell speakers presented at the Spanish-Speaking Winter Fruit Schools. A total of 100 people attended the two locations in Orleans and Wayne Counties. The program provided an in-depth and current look at orchard horticulture, pests and hard cider, as well as a review of skills for success and management.

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Thinning Meeting, May 24. The team, along with Cornell researchers, discussed the appropriate approach to thinning the season's crop along with pest and disease management to over 95 growers, crop consultants, and other industry personnel.



Worker Protection Standard Training & DEC Special Permit Training, April 4 (Wayne

NextGen Young Fruit Growers Study Tour, August

2-4. Twenty-four young growers from LOF went on a three-day tour of Adams County, Pennsylvania. The diverse fruit-growing industry of the region allowed the group to visit orchards, a fruit processing facility, a major packing operation, a large destination farm market, a hard cider operation, a farm-to-table restaurant, and the Penn State research station. The trip provided an opportunity for young growers to network, socialize, create business and personal relationships, and share their experiences as the next generation of fruit growers.

> Summer Fruit Tour, July 12, featuring Wayne *County.* The team covered eight topics/ talks visiting three different farms discussing many aspects of apple production including on-farm nurseries, sudden apple decline, economics of high density plantings, and hail netting. Approximately 170 people visited 3 different farms, where presentations covered many aspects.





NextGen LOF Young Fruit Growers Jacob Wafler, of Wafler Orchards and Nursery, Wolcott, NY, and Andrew Reid, of KC Bailey Fruit Farm, Williamson, NY, talk pruning strategy with Blake Slaybaugh of Mt. Ridge Farms, Biglerville, PA, and the Young Growers Alliance.











Research

Applied Research is the foundation of team's knowledge and expertise. Each specialist has one to three research projects that they are leading to find solutions to today's farm problems. These research projects also generate a significant portion of the team's program funding.

The Use of Plant Growth Regulators (PGRs) to Suppress Bitter Pit on Honeycrisp (ARDP/Miranda Sazo & Cheng): PGR sprays are being evaluated for their potential in reducing this costly calcium-related disorder. Fruit and leaf sampling is being used to measure mineral content. Fruit at harvest and 30 days post harvest are analyzed for bitter pit incidence.





Sudden Apple Decline Research & Extension: In the summer of 2016, a number of growers in the Lake Ontario Fruit Region reported cases of what has subsequently become known as Sudden (or Rapid) Apple Decline (SAD/RAD), in which affected trees exhibit yellowing leaves and stunted growth, followed by progressively worsening decline and eventual death (left). The syndrome had also been observed in other areas, including Pennsylvania, Ontario and North Carolina. Tess Grasswitz and Dan Donahue of the Eastern New York Commercial Horticulture Team received funding from ARDP to investigate this issue with the overall goal of identifying the underlying cause(s). So far, no consistent commonalities have been identified that could help determine the underlying cause(s) of SAD (including various insect pests, pathogens, weather-related factors and/or agrochemical use). The situation is further complicated by the fact that the severity of SAD in the Lake Ontario study sites actually declined in the summer of 2018—despite the return of drought conditions. Although this 'decline of the decline' is good news for growers, without a sound knowledge of the underlying cause(s), producers remain vulnerable to future recurrences of the same problem. This complex problem illustrates-yet again-the importance of correct identification of the cause in any question of pest or disease management.

Effect of Hail Netting on Fruit Quality and Pest and Disease Management in High Value Apple Cultivars in Western New York: The entire LOF team has received funding from ARDP to investigate the potential of hail netting. Craig is evaluating maturity and sunburn incidence. Tess is looking at spray coverage through the netting and pest/disease incidence. Mark is performing an economic analysis. Mario is looking at horticultural aspects such as shoot growth and return bloom (on a separately-funded ARDP project). The treatments included hail netting alone, hail netting with reflective ground fabric, reflective ground fabric alone, and none of the above. Due to no hail, cloudy weather/cool temps at harvest, and relatively low pest/disease pressure, in 2018, the team is applying for an extension to run the trials again in 2019.



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Business Consultation

The team fielded more than 900 phone, email and text requests from stakeholders many of which resulted in on-site visits to address the questions or issues facing growers. Calls ranged from pest identification, disease diagnosis, pruning techniques and harvest maturity decisions to costs of production.





Professional Development

To ensure that the team is improving their knowledge, skills and industry awareness they attend professional and industry meetings throughout the year.

Creating Videos with Impact Workshop: In March, Craig, Mario, Tess, and Liz attended this tailor-made opportunity to help lay the foundation for LOFT communicating more effectively with the younger generation of stakeholders by learning to make, edit, and share effective videos. Jenn Thomas-Murphy of Cornell was our instructor. This was followed up by a **CCE Video Training** given by Jenn & RJ Anderson in May to all of the Regional Ag Teams in WNY. The team is adding video to their media toolbox to reach growers with extension research and education. A video produced by a Cornell University media team highlights the Hard Cider research the team is involved in at: http://www.cornell.edu/video/research-benefits-hard-cider-industry



Great Lakes Fruit Workers Conference (GLFWC) November 7-9: All 4 specialists attended the annual GLFWC, held in Ithaca this year. LOFT participated in organizing the meeting, along with Art Agnello of Cornell AgriTech. An afternoon of research and extension talks on day one were followed by a morning of talks on day 2. The afternoon consisted of a field tour of Cornell Orchards and Black Diamond Farms. A banquet dinner featuring local foods rounded out the second evening. Planning for the 2019 meeting finished the conference early on the 3rd day.



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Team Publications:



"Fruit Notes"

Newsletter (~16 issues per year, email or mail.)



The team publishes timely information throughout the growing season for growers and industry members that enroll in the program via the county associations. *Fruit Notes* is a comprehensive newsletter covering time-relevant information on various fruit growing topics. *Fruit Facts* is a weekly email report covering the day-to-day activities that are important at that moment in the growing season. The *Harvest Maturity Report* covers fruit ripening indicators for over 20 apple and pear varieties. This report helps growers make good harvest decisions to ensure optimal fruit quality.

"Fruit Facts"

Time sensitive pest & horticultural reminders by fax or email for tree fruit and berry production.

Building Strong and Vibrant New York Communities

Diversity and Inclusion are a part of Cornell University's heritage. We are a recognized employer and educator valuing AA/EEO, Protected Veterans, and Individuals with Disabilities.



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