



Cornell Cooperative Extension Lake Ontario Fruit Program Quarterly Report April - June 2018



Overview: With a very cool early spring, the LOF territory in WNY had one of the latest starts to the growing season in over 35 years for tree fruit. April high temperatures were about 10F below normal. There was adequate moisture during the early season; in some cases, many orchards were too wet and cold, therefore planting was delayed. The blessing in disguise was that once spring started, there were no frosts/freezes and most pome and stone fruit set excellent crops. Berries set fruit nicely as well, although June-bearing strawberries suffered at times from lack of rain leading to small fruit size in some cases. May high temps were about 5 degrees warmer than normal. June temps were near normal, although large fluctuations in temperatures took place in May and June. For part of the region, May precipitation was adequate, and for others, about an inch below normal. June precipitation was well below normal for nearly every weather station in Western NY. As this report is being written, we are starting to enter a drought. The range of the 18 of 20 weather stations with below normal rainfall was 51-94% (April 1-July 18) of the average for this time period.

Team News: For the first time since 2016, we enter the field season with a full team! Mario, Mark, Tess, Liz, and Craig have a full slate of funded projects and routine monitoring this season.

Education: The team has been busy, with the planning of four summer events, the most in many years! The first meeting was the PGR (Plant Growth Regulator) Tour on June 29, the first of its kind in our region. Mario organized the program that featured the excellent work of Dr. Poliana Francescato, who gave lectures and showed her research plots at the NYSAES in Geneva. Dr. Duane Greene, a world-renowned plant physiologist from MA, was also in attendance. Following the tour, Poli was honored at a luncheon and presented with a plaque for her excellent research and commitment to the NY tree fruit industry. Planning also took place for the annual LOF Summer Tour (featuring Wayne County, July 12), the LOF NextGen Young Fruit Farmer Study Tour 2018 (slated for Adams County PA, August 2-4), and the Western NY Hard Cider Tour (featuring Wayne County, August 6).



Participants at the inaugural PGR (Plant Growth Regulator) Tour examine research trials conducted by Dr. Poliana Francescato at the NYSAES in Geneva on June 29.



Participants at the Spanish-speaking Special Permit Training listen to Libby Eiholzer at CCE-Wayne in Newark on April 4.

By The Numbers:

Educational Meetings/Training Programs:	Attendance	Notes:
Special Permit Training	300	
FSMA/GAPs Grower Training Course	28	
WNY Thinning Meetings	97	
WNY Pruning Meeting	10	
PGR Tour	64	See page 1



Education:

Publications:	Editions:	Articles:
Fruit Notes	4	19
Fruit Fax	17	35+



Selected Publications by LOF Team	Periodical	Author
<i>Tips for Pollinator Protection</i>	<i>Fruit Notes</i>	Grasswitz
<i>Insect & Disease Update</i>	<i>Fruit Notes</i>	Grasswitz
<i>“Run-through” Trees: A More Efficient Production System to Produce Taller, ‘Calmer’, and More Fruitful Nursery Trees for 2-D Canopies or Fruiting Walls</i>	<i>Fruit Notes</i>	Miranda Sazo
<i>Nitrogen: A Key Element for Fruit Production</i>	<i>Fruit Notes</i>	Miranda Sazo & Cheng

<i>Effect of tree type and rootstock on the long-term performance of 'Gala', 'Fuji' and 'Honeycrisp' apple trees in a Tall Spindle production system under New York State climatic conditions: I. Long-term horticultural and fruit quality performance</i>	Scientia Horticulturae	Miranda Sazo et al.
<i>Strawberry Harvest and Storage/Shipping Considerations</i>	<i>Fruit Notes</i>	Kahlke

Selected Presentations by LOF Team	Periodical/Meeting:	Author/Presenter:
<i>Impact of New Invasive Species on IPM in the Lake Ontario Fruit Region</i>	Presentation for visiting Australian entomologists Rotary Club of Orleans County, Albion	Grasswitz
<i>Digital Agriculture (DA): How Can Cornell and CCE Partner to Transform Agriculture in the Next 50-100 years?</i> <i>Panel Discussion to (1) Explore the Basics of DA, (2) Identify Areas of Opportunity to NYS Producers, and (3) Identify Areas of Opportunity for Extension Involvement/ Education in DA</i>	CCE Executive Leadership Conference, Cornell University	Miranda Sazo & Hautaniemi organizers/moderators
<i>“Production Economics and Business Management Issues and Current Projects in the Lake Ontario Fruit Program and the Importance of Wayne County in the Apple Industry”</i>	Wayne County CCE Association Board of Directors	Mark Wiltberger

Research:

Selected Activity/Proposal/Grant	Person(s)	Funded (Y/N) or Unfunded/ Preliminary Research (UPR)
Crop Load and Harvest Management for Hard Cider Orchards	Peck, Kahlke, Tee, Miranda Sazo	Y – ARDP
RMA Targeted States Grant	Bruce, Ifft, Higgins, Welch,	Yes-USDA

	Wiltberger, et al.	
Effect of hail netting on fruit quality and pest and disease management in high value apple cultivars in Western New York	Kahlke, Grasswitz, Wiltberger, Tee	Yes-ARDP
Evaluating a practical, simple, and cost effective hail netting system for high value apple cultivars in Western NY	Miranda Sazo, Tee	Yes-ARDP
Survey of Apple Tree Decline in NY	Grasswitz & Donahue	Yes-ARDP
Prediction and prevention of ambrosia beetle infestations in NY apple orchards	Agnello & Grasswitz	Yes- Cornell Federal Capacity Fund - Pending
Labor readiness: Pathways for farmworkers to start up and advanced beginners to scale up new farm business	Rangarajan & Miranda Sazo	Yes- USDA-NIFA
Testing the Role of Latent Viruses in the Decline of Apple Trees on G.935 in a Commercial Apple Nursery	Fuchs & Miranda Sazo	Yes-ARDP
Managing Nutrient Balance for Effective Mitigation of Bitter Pit	Cheng & Miranda Sazo	Yes- ARDP
Implementing the Pollen Tube Growth Model on NEWA and Validating the Model in NY Orchards	Peck, Miranda Sazo, Kahlke, et. al.	Yes- ARDP
Cornell University Crop Insurance and Risk Management and Education Program	Wiltberger (Ifft, PI)	Yes-USDA-RMA

Business Consultation:

Specialist	Site Visit	Phone/Texts/Emails
Grasswitz	6	31
Kahlke	3	87
Miranda Sazo	50	125
Wiltberger	15	41

Quarterly Highlight for Business Management – Mark Wiltberger

Background & LOF Response: Due to damaging hailstorms in recent years, fruit growers throughout the Lake Ontario region started taking a hard look at the use of hail netting to protect their crops against heavy losses. In conjunction with growers who are trying hail netting on portions of their farms, the Lake Ontario Fruit Team is conducting a studies to determine the effects of hail netting. Each member of the team is examining it via their specialty lens – horticultural effects, fruit quality effects, IPM effects, and economic effects. The two-year project is beginning in earnest now that growers have been putting up the netting in their orchards in May and June for the first time.

As part of the team, I am looking for production quantity and quality differences between netted / non-netted orchard blocks. I am also talking to the growers from a business perspective to find out how they think about hail netting and how they make a decision to try a new technology. Deciding to use hail netting is a complicated thing. It will affect not just making an investment in a technology, such as a purchase of a wind machine for cold weather event protection – which will just sit there until it is needed. If you are a grower, it means anticipating and experimenting with a different way to grow your product. It will change your labor needs, and adapting your orchard operations to work with the hail netting. So together we're looking at the numbers – how much more cost, how many more hours, etc.– but we're also looking at how growers think about hail netting – to see whether they are happy with their decision to adopt a new technology that is going to change how they operate on their farm.



Ted Furber of Cherry Lawn Orchards in Sodus Point, New York, works with his crew for the first-time installation of hail netting on his farm. **Photo credit: Mark Wiltberger, CCE, LOFP.**