



**Cornell Cooperative Extension
Lake Ontario Fruit Program
Quarterly Report
January - March 2020**

*A partnership between
Cornell University and the
CCE Associations in these five
counties:*

*Monroe, Niagara, Orleans,
Oswego & Wayne*

Overview: The first quarter of 2020 is the peak of meeting season for the industry. In addition to programs such as the Empire Producers Expo and LOF Winter Fruit Schools, other meetings organized by the team included a Produce Safety Alliance Grower Training Course in Albion, a stakeholder meeting with Mott's (Keurig Dr. Pepper) and Fruit Farm Business Summary appointments. It was "business as usual" for the team for January and February, until news of the spread of the Coronavirus (COVID-19) pandemic hit NY. By March 13, it was apparent that there was going to be some disruptions in our educational programming. The shutdown of all non-essential businesses in NY on March 20 was the real game-changer. It soon became apparent that CCE and Cornell were going to have to rapidly undertake a switch to remote programming. Many Zoom meetings were held with CCE/Cornell and the regional teams to check-in and provide suggestions for the transition. While LOF wasn't as far ahead as some of the regional Ag teams in the use of video and podcast technology, we have the equipment and training and were ready for the challenge. We did a "final" paper mailing of our newsletter to those who preferred paper copies informing them of the switch to all electronic for the time-being. Many COVID-19 updates have gone out, with sharing of all sorts of resources pertaining to farms, employees, and to COVID-19 itself. As of this publication, a pruning video is being developed by Liz and Mario. Special Permit Training, under the direction of Dan Donahue, has been modified. As the growing season starts (green tip in some early apple varieties March 29-31), the team will be coming up with new ways to undertake remote programming.



Attendees of the LOF Winter Fruit School at the Finger Lakes Hotel in Farmington on February 5th, 2020.

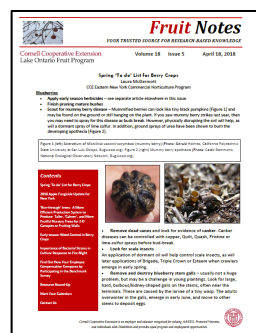
Education: After a 3 year hiatus, CCE educators welcomed a return to the ON Center in Downtown Syracuse for the Empire Producers Expo on January 14-16. Attendance at the Tree Fruit sessions which we organized ranged from 37-145. Over 10 years ago, we used to get 180-250 for our larger Tree Fruit sessions that garnered keynote speakers and DEC credits. Our team is exploring an option to not participate in the Expo in 2021, when it is scheduled to rotate east to the Albany area. As an alternative, we would have a multi-day Winter Fruit School in the Rochester area.

Our LOF Winter Fruit Schools were held February 3 at CCE-Niagara in Lockport and February 4 at the Finger Lakes Hotel in Farmington. The Finger Lakes Hotel was a new location, as we've run out of adequate facilities in Wayne County. We had 145 attendees (about average) in Lockport, and 118 in

Farmington. Although attendance was a bit lower in Farmington, we expect that to go up in future years, as word gets around that it is a great facility and conveniently located.

By The Numbers:

Team Publications:	Editions:	Articles:
Fruit Notes	5	17
Fruit Facts	2	6



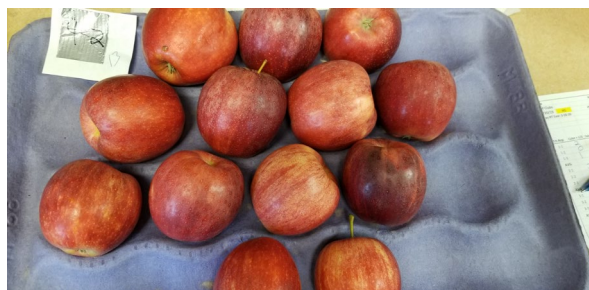
Selected Publications by LOF Team	Periodical	Author
<i>Breeding Fire Blight Resistant Apple Scions & Rootstocks: An Important Long-Term Priority in Apple IPM</i>	<i>Fruit Notes, Issue 1</i>	Van Zoeren
<i>Building the Workforce You Need: 2019 Western New York Master Class</i>	<i>Fruit Notes, Issue 2</i>	Miranda Sazo & Waters
<i>Resources for New York Farms for the New Overtime Regulations in 2020</i>	<i>Fruit Notes, Issue 3</i>	Wiltberger
<i>2020 is a Critical Year for Managing Honeycrisp – Don't Miss the Opportunity by Attending Pruning Meetings (on March 23 and 25) and the new "Spring Meeting" at the Pink Stage in WNY</i>	<i>Fruit Notes, Issue 4</i>	Miranda Sazo & van Zoeren
<i>Streptomycin Resistant Fire Blight in NY in 2019: Let's Keep Our Best Tools Sharp</i>	<i>Fruit Notes, Issue 4</i>	van Zoeren
<i>European Cherry Fruit Fly Update</i>	<i>Fruit Notes, Issue 4</i>	van Zoeren, Carroll, and Kelly
<i>Novel Coronavirus Prevention & Control for Farms from Cornell Agricultural Workforce Development</i>	<i>Fruit Notes, Special Edition, March 20</i>	Stup

Presentations by LOF Team	Periodical/Meeting:	Presenter:
<i>Spotted Wing Drosophila Update</i>	LOF Winter Fruit Schools, Feb 3-4	van Zoeren
<i>Apple Scab Update</i>	LOF Winter Fruit Schools, Feb 3-4	van Zoeren
<i>How Much Does it Cost to Grow a Bushel of Apples?</i>	LOF Winter Fruit Schools, Feb 3-4	Wiltberger
<i>Introducing the Plant Tissue Sap Analysis and Practical Implications for Quality Evaluation of Honeycrisp</i>	LOF Winter Fruit Schools, Feb 3-4	Miranda Sazo & Henning
<i>Harvest Maturity & PGR Use of Honeycrisp</i>	LOF Winter Fruit Schools, Feb 3-4	Kahlke
<i>How Does APH Crop Insurance for Apples Work?</i>	LOF Winter Fruit Schools, Feb 3-4	Wiltberger
<i>Creating the Box: A Two-Dimensional (2D) Canopy for Apples</i>	2020 Mid-Atlantic Fruit and Vegetable Convention, Hershey, Pennsylvania, January 29, 2020.	Miranda-Sazo

Applied Pruning Techniques—Long Pruning versus Short Pruning for High Density Apple Plantings. Special session in the Spanish language.	2020 Mid-Atlantic Fruit and Vegetable Convention, Hershey, Pennsylvania, January 29, 2020.	Miranda Sazo
---	--	--------------

Research:

Activity/Proposal/Grant	Person(s)	Funded (Y/N) or Unfunded/ Preliminary Research (UPR)
Brown Marmorated Stink Bug in US Specialty Crops	Agnello, van Zoeren, Tee, et al.	Yes-SCRI
Biological Control of the Brown Marmorated Stink Bug in New York State	Jentsch, van Zoeren, Tee, et al.	Yes
A Comprehensive Variety & Acreage Survey for New York	Kahlke, Tee, Wiltberger, Miranda Sazo	Yes-ARDP
Cornell University Crop Insurance and Risk Management and Education Program	Ifft, Wiltberger	Yes-USDA-RMA
Labor Readiness: Pathways for Farmworkers to Start Up and Advanced Beginners to Scale Up New Farm Business	Rangarajan & Miranda Sazo	Yes- USDA-NIFA
Cooperative Pest Management Surveys	van Zoeren, Tee et al.	Yes- NYSDAM
Managing Nutrient Balance for Effective Mitigation of Bitter Pit in ‘Honeycrisp’	Cheng & Miranda Sazo	Yes- ARDP
ReTain-NAA-Harvista Trials	Kahlke & Tee	Yes- Valent
Pathogenicity of New York State Fire Blight Bacterial Strains and Development of a Cultivar Set and Cider Apple Varieties for Fire Blight Resistance Breeding	Khan, Tee, Kahlke, et. al	Yes-NYFVI
Refinement and Implementation of Newly-Developed Technologies to Significantly Reduce Producer Losses to Bitter Pit in the Honeycrisp C.V. Apple	Donahue, Kahlke, Basedow, Tee, et. al	Yes-NYFVI
Testing the role of latent viruses in the decline of apple trees on G.935	Fuchs, Miranda Sazo, et. al	Yes-ARDP
Precision Orchard Management	Robinson, Miranda Sazo, Kahlke, Tee, et. al	Yes-ARDP
Improved On-farm Nursery Management	Robinson, Miranda Sazo, et. al	Yes-ARDP
Determine the nutrient requirement of ‘Honeycrisp’ trees on five rootstocks	Cheng, Miranda Sazo, et. al	Yes-ARDP



Gala apples evaluated at 7 days Room Temperature after 6 months in Controlled Atmosphere storage, as part of the Retain-Harvista trials looking at Plant Growth Regulator spray rates and timings and effects on fruit quality.

Business Consultation:

Specialist	Site Visit	Phone/Texts/Emails
Kahlke	3	50+
Miranda Sazo	12	100
Van Zoeren	14	32
Wiltberger	16	62



Mark Wiltberger gives a presentation at the LOF Winter Fruit School in Lockport of February 3.

Selected Professional Development and Training:

Activity	Team Member(s)	Comments:
CCE Regional Ag Team - Team Leader Monthly Zoom Calls	Kahlke	Jan 27, Mar 9
CCE Regional Ag Team - Team Leader Zoom COVID-19 Check-In	Kahlke	Mar 13, 18, 24, 31
CCE Regional Ag Team COVID-19 Educational Programming	Kahlke	Mar 17, 26
Produce Safety Alliance Educators Monthly Zooms	Kahlke	Jan 17, Mar 16
WNY Enrollment Discussion, Zoom	Kahlke	Mar 20
Tree Fruit & Small Fruit PWT, Zoom	Kahlke, Miranda Sazo, van Zoeren, Wiltberger	Mar 16
WNY Combined AMG (all teams), Zoom	Kahlke	Jan 17
PWT Co-Chair Check-In, Zoom	Kahlke	Jan 11
Mott's (Dr. Pepper Keurig) Stakeholder Meeting, Williamson	Kahlke, Miranda Sazo, van Zoeren, Wiltberger	Mar 6
New ED Orientation with Regional Ag Teams, Niagara County	Kahlke	Feb 14
Annual NE PGR Meeting, Wilkes-Barre, PA	Kahlke	Mar 10-11
2020 Reality Winter Meeting, Geneva, NY. Featured research being done at Reality Research, as well as through	van Zoeren & Wiltberger	Feb 18

Cornell University; information covered included organic fungicide trials, effects of fungicides on fruit finish, stink bug damage, and fire blight control options.		
NE Crop Consultants Meeting, Fairport, NY. Short talks by chemical reps telling about new products and what to expect in the next few years	van Zoeren	Mar 4-5
2020 IFTA Annual conference in Grand Rapids, MI.	Miranda Sazo	Feb. 9-13
Online Webinar Ohio State Extension: "Online Teaching: Critical Strategies for Engagement"	Wiltberger	Mar 19

Fruit Quality Management – Craig J. Kahlke

Educational Programs/Presentations:

- Empire Producers Expo (Syracuse, January 14-16, 2020)
 - Did final advertising for the 2020 Empire Producers Expo in Syracuse in our *Fruit Notes* newsletter with the rest of the team.
 - Chaired 2 Tree Fruit Sessions. Introduced speakers, MC'd.
 - Submitted DEC and CCA credits for all Fruit Sessions.
- LOF Winter Fruit Schools (Lockport & Farmington, February 4-5, 2020)
 - Coordinated the final development of the full programs for both locations along with the rest of the team.
 - Did final advertising in *Fruit Notes* newsletter.
 - Introduced team and speakers (half day)
 - Introduced sponsors
- Organized and conducted the Produce Safety Alliance Grower Training Course in Albion on January 9.
 - Invited certified trainers
 - Submitted program to the PSA
 - Submitted program to DEC for CEUs
 - Did Introduction & Course Expectations
 - Taught Module 1: Introduction to Produce Safety
 - Taught Module 5.1: Agricultural Water - Production
 - Submitted final course roster to the PSA

Publications:

Fruit Notes

- Edited 3 newsletters in the quarter.
- Sorted through numerous announcements about workshops/conferences/meetings/surveys and along with the pertinent on-line registration links, put them in the newsletter.

Applied Research Projects:

- ARDP – “A Comprehensive Variety & Acreage Survey for NY” (Kahlke, \$4,587) – Worked with New York Apple Association (NYAA) for them to hire temporary workers to conduct the survey via phone. Worked with CCE Admin to set up a subcontract for NYAA.
- ARDP – “Precision Orchard Management for Hard Cider Orchards” (Robinson, \$91,891). Spoke with a reporter about the success with the Pollen Tube Growth Model at a Gala orchard in Niagara County. The story was featured in the Good Fruit Grower, Volume 71, No. 6.
- Valent– Retain-Harvista trials, (3rd year) testing different timings and combinations on Gala and Honeycrisp to increase fruit quality. Performed postharvest evaluations of the last lot of Gala fruit that was in a long-term Controlled Atmosphere room. Analyzed color, firmness, brix, and external/internal defects.

Grant Submissions, Re-Submissions, Letters of Support, Proposal Meetings

USDA-SCRI Grant Proposal “*Precision Crop Load Management for Apples*” (Robinson, PI \$4,500,000)

- Consulted with Robinson, Miranda Sazo, and other Extension Cooperators nationwide via Zoom and email and in-face meetings to prepare for full proposal submission.
- Worked with Cornell Admin to set up the budget.
- Edited the proposal that was submitted in early March by Robinson.

ADRDP Grant Proposal “*Improving Fruit Quality to Mitigate the Effects of Climate Change through the Use of Reflective Fabric in Western NY*”(Kahlke, PI \$19,988)

- Worked with several growers and LOF staff (Wiltberger & Miranda Sazo) to develop a proposal. Wrote the proposal, received feedback and editing from the team, and submitted on January 31. As of this writing, we are still awaiting funding notice. COVID-19 is causing the delay.

Other Team Duties:

- Team Leader Administrative Duties
 - Approved invoices and vouchers as needed
 - Attended WNY AMG Meeting Via Zoom on January 17
 - Reviewed budget and monthly financials
 - Approved timesheets/vacation/sick leave hours for team members as needed.
 - Disseminated pertinent info to rest of team as needed from:
 - Monthly Team Leader Zoom calls
 - COVID-19 Zoom calls
 - Group and other email lists
- Organized monthly team meetings and weekly conference calls.

Professional Development:

- Attended (Zoom) the Produce Safety Alliance Monthly Educators calls on January 17 & March 16. The March 16 meeting was especially important, as temporary online Grower Training Courses were discussed.
- Attended the new ED Orientation training in Niagara County on February 14. Learned how we can connect better with new ED's in our partner counties. Arranged a tour of Bittner-Singer farm in Newfane.
- Attended numerous Zooms related to COVID-19 on March 13, 17, 18, 24, 26, and 31. Shared updates and resources that could aid programming with our other specialists and stakeholders.
- Attended the annual Northeast PGR Meeting in Wilkes-Barre, PA on March 10-11. For more details, see Quarterly Highlight for Fruit Quality Management below.

Stakeholder Contacts:

- Assisted 50+ growers via texts, phone, and email.

Quarterly Highlight for Fruit Quality Management – Craig Kahlke

Annual Northeast Plant Growth Regulator (PGR) Meeting in Wilkes-Barre, PA – March 10 & 11

Background: This annual meeting brings together top PGR researchers across the US & Canada. These experts present data on the latest trials that always include new product uses and new product testing. The meeting has 1.5 days of presentations, with a group lunch and dinner, along with a social hour and plenty of time for networking.

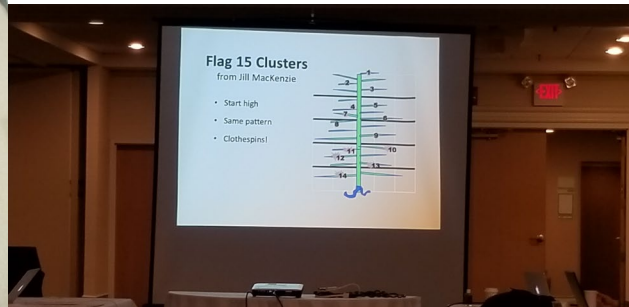
Target Audience: University and private industry researchers, extension educators, and crop consultants.

LOFT Response: My attendance of this meeting the past several years has let to multi-year funding of my PGR trials by Valent USA™. I have now done 3 years of research looking at PGR rates and timings on Honeycrisp, Gala, and Fuji. Fruit are treated near harvest with the PGR's, and harvested for 3 sequential weeks. Harvest maturity is performed, in which internal ethylene concentration, firmness, brix, and starch pattern index are measured. Following a storage period, fruit are evaluated for color, external defects, firmness, brix, and internal defects. Data is sent to Valent to analyze and help them to determine best practices. I have also presented my research at this conference.

Predicted Outcomes: Best rates and timings for Valent's PGR harvest management products that hopefully give growers more flexibility in harvest timing while maintaining or increasing fruit quality.



Honeycrisp fruit prepared for postharvest evaluation



Precision Crop Load Management explained at the NE PGR meeting in Wilkes-Barre, PA on March 10.

Cultural Practices – Mario Miranda Sazo

Educational Programs/Presentations/Publications:

Fruit Notes: Wrote/modified/summarized/requested articles including: *“Building the Workforce You Need: 2019 Western NY Master Class”* (N. Waters and M. Miranda Sazo) and *“2020 is a Critical Year for Managing Honeycrisp – Don’t Miss the Opportunity by Attending Pruning Meetings (on March 23 and 25) and the new “Spring Meeting” at the Pink Stage in WNY”* (M. Miranda Sazo and J. van Zoeren).

Fruit Facts: The first horticultural/IPM notes were sent on March 20.

Submitted Reports, Press Releases, Abstracts, and Extension Articles

- Submitted one ISHS abstract on Jan. 31.

Grant Submissions, Re-Submissions:

- Collaborated with Cheng, Fuchs, Robinson, and Kahlke for the submission of eight ARDP proposals (2020-2021), titled *“Managing Nutrient Balance for Effective Mitigation of Bitter Pit in ‘Honeycrisp’”*, *“Determine the nutrient requirement of ‘Honeycrisp’ trees on five rootstocks”* (PI: L. Cheng); *“Testing the role of latent viruses in the decline of apple trees on G.935”* (PI: M. Fuchs); *“Improved On-Farm Nursery Management”*, *“Precision Orchard Management”*, and *“Orchard Management Systems and Rootstocks for Improved Yield and Fruit Quality”* (PI: T. Robinson), and *“Improving Fruit Quality to Mitigate the Effects of Climate Change through the Use of Reflective Fabric in Western NY”* (PI: C. Kahlke).
- Collaborated with Robinson for the submission of one Specialty Crop Research Initiative proposal titled *“Precision Crop Load Management for Apples”*.

Other Presentations Given – Invited Presentation:

- *“Creating the Box: A Two-Dimensional (2D) Canopy for Apples”*. 2020 Mid-Atlantic Fruit and Vegetable Convention, Hershey, Pennsylvania, January 30, 2020.
- *“Applied Pruning Techniques—Long Pruning versus Short Pruning for High Density Apple Plantings”*. Special session in the Spanish language presented at the 2020 Mid-Atlantic Fruit and Vegetable Convention, Hershey, Pennsylvania, January 29, 2020.
- *“Understanding the Basic Principles of Blossom/Fruitlet Thinning and the Reasons and Benefits of Early Crop Load Management—What/Why/How Can You Help?”* Special session in the Spanish language presented at the 2020 Mid-Atlantic Fruit and Vegetable Convention, Hershey, Pennsylvania, January 29, 2020.

“Creating opportunities by grafting and managing the new cultivar to one-leader (single spindle tree), two-leader (bi-axis), or three-leaders (tri-axis)”. This new talk summarized some of the new developments in grafting, discussed how grafting and training of the new cultivar can be used to transition to an apple fruiting wall system, gave practical tips to avoid pitfalls, explained why a two-dimensional canopy via grafting is a smarter choice for

future technologies, and introduced new training rules for grafted high value cultivars (Ambrosia, Evercrisp, NY-1, NY-2, Fuji, Gala). The grafting to Honeycrisp was not recommended due to challenging issues with bitter pit and fruit quality. 2020 Eastern NY Fruit and Vegetable Conference, Albany, NY, February 26, 2020

YouTube Videos – Other social media efforts

- Recorded a Honeycrisp pruning video with T. Robinson and L. Tee in Wayne on Thursday March 26.

Applied Research Projects:

On-farm Rootstock/Training Systems

- Kast (Red Delicious), VanAcker (Honeycrisp), and Peters (Idared) trials will be pruned in April.

On-farm Nursery Project (ARDP/Robinson and Miranda Sazo)

- Hired Sergio Rosario and bench grafted 200 trees of Fuji on G.41 on March 30
- Trees were stored at KM Davis for planting at the Furber site in April
- Secured bed maker with Burnap Farms

Honeycrisp project with Lake Ontario Fruit Inc., (Cheng/Orleans fruit growers)

- Peels were squeezed for SAP analysis in January
- A few data results were presented by Scott Henning at the 2020 CCE LOF fruit schools
- Final ARDP report was submitted in February

Honeycrisp/Ca Drench Project with Kast Farms (Cheng & Miranda Sazo & Helena Company)

- Peels were squeezed for SAP analysis in January
- BP evaluation was conducted at Cornell Orchards in Jan.
- Final report will be submitted in April

Testing the use of Apogee and Manganese for Bitter Pit Control on Honeycrisp (ARDP/Cheng and Miranda Sazo - in collaboration with Robinson in 2019)

- Peels were squeezed for SAP analysis in January
- Final ARDP report was submitted in February

Orchard Netting/Reflective Fabric Project (ARDP/Miranda Sazo)

- Fruit quality data summarized and analyzed by Yosef in December
- 2018 and 2019 yield data compiled and analyzed by Simon
- All data (yield/fruit quality) put together by Simon in January
- Summary/final report and/or article is still pending for the two-years project

Ph.D. coursework

- Attended two lectures (T and Th) for a spring semester class titled “Fruit Crop Physiology” – (PLHRT 4500)

- Read assigned papers
- Submitted written questions to invited speakers, term paper topic, paper outline, and annotated bibliography with Zotero
- Classes were suspended due to covid-19 situation until April 7 (online instruction)

Ph.D. related course/research work in Ithaca (Cheng)

- Fruit quality and color of Honeycrisp fruit were evaluated at AgriTech in Jan.
- Moved potted trees from greenhouse to experimental orchard from March 12 to March 18 (got help from Cornell Orchards and CUAES's crews)
- Conducted tree destruction evaluation with Simon at the purple greenhouse in Ithaca from March 12 to March 17

USDA-NIFA project titled *"Labor readiness: Pathways for farmworkers to start up and advanced beginners to scale up new farm business"*

- Nicole and I co-authored and submitted one article to Fruit Notes newsletter in Jan.

Other Team Duties:

- Attended LOF team meetings, zoom calls as needed
- Finished and submitted performance review with Craig
- Submitted two newsletter articles to LOF editor
- Helped coordinate and conduct 2020 NY Expo
- Coordinated the *Fruit Facts* work with Janet and sent first publication on March 20
- Helped coordinate and conduct 2020 CCE LOF Fruit Schools
- Helped coordinate and conduct Cornell/Motts meeting in March 6
- Reported fleet mileage as needed during Q1
- Submitted Q4 (Sept.- Dec. 2019)

Professional Development:

- Attended 2020 NY Expo (tree fruit sessions) – Jan. 14-15
- Attended 2020 CCE LOF Winter Fruit Schools – Feb. 3-4
- Attended 2020 IFTA Annual conference – Feb. 9-13
- Attended two lectures for a Ph.D. program during 2020 Spring semester

Stakeholder Contacts:

Conducted 12 farm visits about pruning for several cultivars (medium/high density blocks and top-worked trees trained to one or two-axis). Discussed the benefits of new planting systems and higher tree populations. Helped growers to prune multileader trees. Invited Janet to join some of the visits and together visited seven growers in Wayne, Orleans, and Niagara Counties.

Approx. 50 texts and 25 emails with growers/industry. 25 phone calls.

Quarterly Highlight for Cultural Practices – Mario Miranda Sazo

Precision Crop Load Management for Honeycrisp

This quarter our team planned and delivered a coordinated effort to update growers about new developments for Honeycrisp crop load management, nutrition, fruit quality, economics, storage, and much more. The Honeycrisp mini-school started by emphasizing the importance of precision pruning due to the poor bloom most of the WNY orchards had in 2019. For many farms that have planted a lot of Honeycrisp, that was a large financial setback. Bloom is likely to be excessive in 2020, which will lead to poor bloom in 2021. Thus, 2020 is a critical year for managing Honeycrisp.

The title used by Professor Terence Robinson, who kicked off the Honeycrisp educational section of the fruit school, was *“A Multi-Pronged Strategy for Managing Honeycrisp in 2020”*. Professor Robinson covered aspects related to precision pruning and bloom thinning to manage biennial bearing of Honeycrisp. Many other Cornell speakers (L. Cheng, C. Watkins, K. Cox and A. Wallis) and three CCE LOF team members (C. Kahlke, M. Wiltberger, and M. Miranda Sazo) rounded out the program with excellent talks.



Integrated Pest Management – Janet van Zoeren

Educational Programs/Presentations:

Winter Fruit Schools:

- “SWD Update” (presented in Niagara and Ontario Counties)
- “Apple Scab” (presented in Niagara and Ontario Counties)

BF223: Introduction to Tree Fruit Production, Cornell Small Farms Program:

- Guest lectured on “Most Common Orchard Pests” (impact reached 14 people across 8 states)

Stone Fruit IPM Webinar:

- Organized and moderated webinar (together with Mike Basedow)

Publications:

Fruit Notes

Articles Written:

- *Pesticide Trainings offered in March – Special Permit Training and Pre-Exam Coaching* (co-authored with Dan Donahue)
- *2020 is a critical year for managing Honeycrisp* (co-authored with Mario Miranda Sazo)
- *Streptomycin resistant fire blight in NY in 2019: let’s keep our best tools sharp* (co-authored with Kerik Cox and Anna Wallis)
- *European Cherry Fruit Fly update* (co-authored with Juliet Carroll and Margaret Kelly)
- *Statewide Herbicide Resistance Screening to Start in 2020: Help Us to Help You!* (co-authored with Lynn Sosnoskie, Bryan Brown and Toni DiTommaso)

Fruit Facts Articles Written:

- 3 issues

Other Team Duties:

- Attended team meetings
- Assisted with the planning and organizing of the 2020 LOFP Winter Fruit Schools
- Helped with editing and formatting Fruit Notes
- Attended “Listening session” at Motts facility

Committee & Board Meetings

- Attended Fruit Program Working Team meeting. *Through Zoom.*

Other Area-wide Education and Advocating

- Helping with organization and implementation of new online format of “Special Permit Training”
- Attended APHIS conference calls regarding European Cherry Fruit Fly legislation and quarantine zone
- Contacts with DropCopter™ and Blue White Robotics™ regarding growers/industry collaborations

- Participated as a panelist in the “Penfield High School Green Careers” panel, organized by Monroe County 4-H (impact reached 50 Monroe County high school students and teachers)
- Presented a talk on “*Stink bugs: Odorous or Onerous*”, at “Science Uncorked” in Geneva, NY (impact reached 20 people)

Professional Development:

- 2020 Reality Winter Meeting. Geneva, NY (Feb 18, 2020). Featured research being done at Reality Research, as well as through Cornell University; information covered included organic fungicide trials, effects of fungicides on fruit finish, stink bug damage, and fire blight control options.
- NE Crop Consultants Meeting. Fairport, NY (Mar 4-5 2020). Short talks by chemical reps telling about new products and what to expect in the next few years.
- Weed IPM Webinar Series (Jan 24, Jan 31, Feb 7, Feb 14, and Feb 21). *Attended through Zoom.*
- DEC 30 hour commercial pesticide technician course ONLINE (in process)

Stakeholder Contacts:

- On farm visits – 14 (2 Orleans Co., 9 Wayne Co., 1 Monroe Co., 2 in Niagara Co.)
- Conversations via text, phone calls or email – 26

Consultant Contacts:

- Conversations – 2

Faculty Collaborations/Consultations:

- Conversations – 4

Quarterly Highlight for Fruit Pest Management

Time to Focus on Meeting People and Getting to Know the Industry

Background:

Coming in to this position, which I started in October of 2019, I have an educational background in Entomology, and have work experience understanding apple diseases and weed management. In many ways, this prepared me for my job as pest management specialist. However, the most important aspect of a job in extension, in many ways, is developing a personal relationship and earning the trust of the growers, as well as making connections with scouts and consultants, industry representatives, and faculty, who will help provide me with informational resources.

Need/Opportunity:

Over the slower winter period, while I do not yet have any research trials in place or too many grower consultations or newsletter articles to write, I have had the opportunity to meet with many growers, consultants, Geneva faculty, and other industry representatives.

LOF Response:

Over the past three months, I have met with 14 growers on-farm-- mainly visits I initiated to get to know as many growers as possible. These were in four of our five participating counties – I was scheduled to visit growers in Oswego county the week we after the COVID-19 outbreak so that visit has been put on hold. Additionally, I've spoken with many other growers through phone calls and emails, predominantly initiated by the growers with questions about pesticide certification processes or early spring pest/pesticide queries. I now have a solid foundation of grower contacts to rely on going into the busy season, and hopefully have many myself approachable and will become a reliable source of information.

Production Economics & Business Management – Mark Wiltberger

Educational Programs/Presentations:

“How Much Does It Cost to Grow a Bushel of Apples?: Analysis of the 2018 Fruit Farm Business Summary”, 2020 Winter Fruit School, February 3 & 4, 2020.

“How Does Actual Production History (APH) Crop Insurance for Apples Work?”, 2020 Winter Fruit School, February 3 & 4, 2020.

“The Economic Impact of No Bloom or Light Bloom of Honeycrisp on Farm Revenue”, 2020 Winter Fruit School, February 3 & 4, 2020.

Conference Session Organizer:

2020 Empire State Producers Expo – Tree Fruit - Business Session: *“Investing in Your Future: Orchard Planning for the Long Term”*. January 14, 2020.

Speakers:

Matt Wells, NY Apple Sales Inc, *“How to Plan Your Orchard Investments in a Rapidly Changing Marketplace”*.

Christopher Anderson, Farm Credit East, *“Succession Strategies: Bearing Long-term Fruit for Your Business”*.

Publications:

Fruit Notes – Author:

“Resources for New York Farms for the New Overtime Regulations in 2020”, Fruit Notes, Vol 20, Issue 3, February 19, 2020.

“Supervising Farm Employees: Farm Labor Management Master Class in Western NY: Join Us March 16th & 17th in Orleans County”, Fruit Notes, Vol 20, Issue 3, February 19, 2020.

“LOF 2019 Fruit Farm Business Summary – A Financial Picture of your Fruit Farm Business for Decision-Making”, Fruit Notes Special Edition March 25, 2020.

Publications – Announcements:

Compilation of Resources and Announcements for Businesses for COVID-19 Crisis in Fruit Notes Special Edition, March 20, 2020, and Fruit Notes, Special Edition, March 25, 2020.

Other COVID-19-related announcements in emails to enrollees.

Other relevant business announcements in Fruit Notes issues.

Projects and Meetings:

2018 Fruit Farm Business Summary

Wrote Individual Farm Reports for six participants in 2018 Fruit Farm Business Summary. Met with each farm and reviewed farm results. Individual Farm Reports analyzed the business performance of the farm with key financial metrics, and compared the performance of the farm against the benchmark. Growers expressed high satisfaction with the business analysis and the insight it provided on farm profitability.

2019 Fruit Farm Business Summary

Made appointments with twelve growers and met with ten growers for 2019 Fruit Farm Business Summary in February and March. Met in-person until COVID-19 crisis and then created pdf forms for collecting Fruit Farm Business Summary data and met via Zoom or telephone call. Additional meetings are set for beginning of April. See Quarterly Highlight below.

2020 Empire State Producers Expo: Worked with LOF Team to organize Tree Fruit track at Expo and organize the Business Management session. Invited speakers. January 14-16.

2020 Winter Fruit School: Worked with LOF Team to organize 2020 Winter Fruit School. Presented three talks listed in presentation section. February 3 & 4.

Motts/Process Apple Grower Project: Worked with Terence Robinson, Lake Ontario Fruit Team, Process Apple Growers, and Motts/Keurig Dr. Pepper personnel on the cost and return on investment of new orchard systems for process apples. Meeting March 6.

Robotics and Automation Project: February 13 meeting and farm tour, met with growers and BW Robotics to assist in possible grower collaboration with implementation of on-farm robotics.

Reality Research Meeting: February 18, attended Reality Research meeting conducted by Scott and Brad Palmer.

COVID-19 Response:

Wayne County CCE COVID-19 Meeting: Monday March 16, joined Wayne County Staff meeting for response to COVID-19.

Numerous other online meetings for information and response to COVID-19 crisis. 2nd half of March. Compiled information to distribute by special Fruit Notes editions and direct emails to enrollees.

Fruit PWT Meeting: Attended March 16.

LOF Team meetings: Attended Monthly and weekly team organizational meetings.

Performance Review: Conducted Performance Review and Performance Dialogue with Supervisor Craig Kahlke.

Funded Projects:

Co-Director on Project: *"Reducing Risk in Fruit and Veg Production through Improved On-Boarding of New Farm Employees"*, USDA. \$29,631. Elizabeth Higgins, Director.

USDA-RMA. *"Cornell University Crop Insurance and Risk Management and Education Program"* Jennifer Ifft, PI. Presented on Crop Insurance at two Winter Fruit Schools, *"How Does Actual Production History (APH) Crop*

Insurance for Apples Work?", and posted three presentations online to fulfill final deliverables for \$8,000 share of grant.

Other Team Duties:

- **Fruit PWT Meeting:** Attended March 16.
- **LOF Team meetings:** Attended Monthly and Weekly team organizational meetings.

Professional Development:

Online Webinar Ohio State Extension: "Online Teaching: Critical Strategies for Engagement" March 19, 2020

Stakeholder Contacts:

Telephone calls: 47

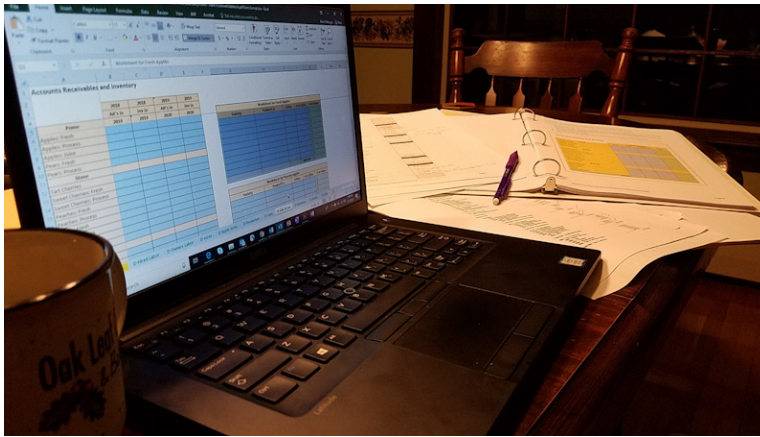
In-person Farm Visits: 15; 10 visits in Orleans County, 3 visits in Wayne County, and 2 visits in Niagara County.

Zoom/Conference Call Virtual Farm Visits: 7; 4 virtual visits in Orleans County, and 3 virtual visits in Wayne County.

Emails: 10

Quarterly Highlight for Production Economics & Business Management

Adapting the 2019 Fruit Farm Business Summary Interviews During the COVID-19 Crisis



Need/Opportunity: The Fruit Farm Business Summary Individual Farm reports are essential tools for growers to understand the profitability of their business and make strategic business decisions. March is the primary month to conduct the majority of interviews for the Summary. Growers have started to take care of their accounting for tax filing and their financial statements for their lenders, but the growing season has not yet started to pull them away to orchard operations. Traditionally, Fruit Farm Business Summary interviews consisted of a four-hour meeting with the grower in their farm office to go through their financial records and enter them into the Summary dataset.

With the onset of the Coronavirus (COVID-19) crisis in mid-March, these in-person meetings by necessity came to a sudden halt. All businesses – and Cornell Cooperative Extension – needed to figure out quickly how to conduct business in these new circumstances.

LOF Response: I evaluated how interviews could be conducted remotely, by Zoom videoconference. Immediately the scheduled interviews were conducted by Zoom when there was an adequate broadband connection at the farm. I shared the spreadsheet on my screen with the grower and we filled in the financial numbers together. When the broadband connection was not sufficient, as is the case in some rural locations in Western New York, we turned on the cell phone speakers and went through the spreadsheets together on our own computers. At times, I played the part of technical troubleshooter to solve problems of broadband connections and scanner set-ups. We also used the video feature of the messaging app WhatsApp to troubleshoot computer problems. I also created simple fillable pdf forms for growers to submit data by scanning and emailing the documents.

Before we conducted the online meetings, some growers had apprehension that we would not be able to accomplish the meeting goal of collecting the data. Some of this anxiety was related to past frustrations with technology in their rural locations. They were pleasantly surprised that the meetings went smoothly. With the uncertainty of the markets and labor supply in the wake of the COVID-19 crisis, the Fruit Farm Business Summary Individual Farm analysis is more critical than ever for growers to guide their businesses. In the age of apps and internet, we can find workarounds to most technological obstacles to accomplish the goal of evaluating farm performance and increase farm profitability.