



Cornell Cooperative Extension Lake Ontario Fruit Program Quarterly Report January - March 2026

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

**Monroe, Niagara, Orleans,
Oswego & Wayne**

Overview: The peak of winter brought on the bulk meeting season. After trying a 1-1/2 day conference format in a central location for the past three years, we decided to return to our old format, “LOF’s Winter Fruit Schools”. The increasing meeting expense costs was a primary reason for the change. The fruit schools consist of nearly identical programs in two locations on either side of Rochester. Feb 4th’s program was held at CCE-Niagara in Lockport, while Feb 5th’s program was held at Rootstock Cider and Sprits in Williamson. For talk topics, we incorporated suggestions from industry that we received year-round, as well as from the advisory committee meeting that we held in December. Attendance was down somewhat compared to our pre-COVID attendance. However, this seems to be the new norm with the plethora of online meetings available. Overall, evaluations were good, and suggestions for next year were noted.

Mario has done several pruning demonstrations across farms in our region, and was invited to give pruning demonstrations/talks in Canada and Michigan. In addition, he and Liz recorded several pruning videos in both English and Spanish. Janet and Liz planned the annual Special Permit Training scheduled for early April. Mario and Janet helped coordinate and presented at the 2026 Cornell Winter Fruit Webinars hosted by Anna Wallis. Janet also taught the NYS Certified Pesticide Applicator License Pre-Exam Training in two locations, in two languages, on several dates. Craig facilitated and presented at two food safety and a postharvest workshop, all in March.

As anyone who lives in upstate NY can attest, the late fall and winter were significantly colder than normal. In fact, November-February were colder than average. There were several weeks of temperatures that did not rise above freezing and snow cover in many areas that lasted for two months. Fortunately, there were no severe cold temperatures and thus winter injury in tree fruit is not expected. Weather swings in March, consisting of some warm days followed by colder ones (very up and down), along with field observations, led to the predicting of an early April “green tip” in apples, which is very close to the new norm.



Dr. Lailiang Cheng presents at the 2026 LOF Winter Fruit Schools at Rootstock Cider & Sprits in Williamson, NY on February 5th, 2026.



Team Publications:	Editions:	Articles:
Fruit Notes	1	4
Email Blasts	25	N/A
Fruit Facts	2	N/A

Selected Publications by LOF Team	Periodical	Author(s)
<i>“Intentional Delay of Dormant Pruning for 'Honeycrisp' & Other Important Biennial Cultivars (Fuji)”</i>	Fruit Notes, Vol. 26, Issue 1	Miranda Sazo & Robinson
<i>“Acidity of Honeycrisp – Key to Eating Quality and Competitiveness of Northeastern Apple Growers”</i>	New York Fruit Quarterly, Vol. 34, Number 1.	Kahlke, Baker, Henning, Tee
<i>“Evaluating Soil Health in Commercial Apple Orchards for Improved Production Outcomes”</i>	HortScience, accepted for publication.	Aller, Miranda Sazo, et al.

Selected Presentations by LOF Team	Periodical/Meeting:	Presenter:
Co-taught “NYS Certified Pesticide Applicator License Pre-Exam Training	NYS Certified Pesticide Applicator License Pre-Exam Training Mar 9 & 13, CCE-Orleans	van Zoeren, Stanyard, Bowman
Pre-pilot add-on to NYS Certified Pesticide Applicator License Pre-Exam Training (Spanish)	Pre-pilot add-on to NYS Certified Pesticide Applicator License Pre-Exam Training – for Spanish speaking employees, Mar 19, 25, 31 CCE-Wayne	van Zoeren, Bowman
Intro. to Food Safety, Postharvest Water, How to Write a Food Safety Plan	Good Agricultural Practices (GAPs) Food Safety Training, March 10, CCE-Wayne	Kahlke
Group Activity – Titration of Sanitizers	Postharvest Water Management, Sanitation, and Traceability Workshop, March 18, CCE-Orleans	Kahlke
Facilitator, Meeting Guidance, layout of Flash Drives	Harmonized GAP Plus+ Plan Writing Session, CCE-Wayne	Kahlke
Delivered a pruning presentation on modern pruning protocols to 60 Canadian fruit growers.	March 14, New Brunswick, Canada. Funded by The New Brunswick Department of Agriculture, Aquaculture, and Fisheries.	Miranda Sazo
<i>“Precision Orchard Management Technologies Update”</i>	Wayne County BOD (Committee 4, economic development) at their Mar 4 meeting.	Kahlke
<i>“Ways to Improve Color in your Fruit/ Research Updates”</i>	LOF’s Winter Fruit Schools, Feb 4 & 5	Kahlke
Presented an introductory session on pruning for high-density plantings to 60 Spanish-speaking employees and orchard	Fruit Ridge region of Michigan, March 28.	Miranda Sazo

managers in Michigan. The event was organized and funded by the Michigan Pomesters.		
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Business Consultation

Specialist	Site Visits	~ Phone/Texts/Emails
Kahlke	0	~ 130
Miranda Sazo	9	~75
van Zoeren	10	~140

Activity/Proposal/Grant	Person(s)	Funded (Y/N) or Unfunded/ Preliminary Research (UPR)
<i>"Modernization of Processing Orchards for Improved Production and Profitability"</i>	Miranda Sazo & Tee	Yes- Keurig Dr. Pepper & ARDP- pruning March 30
<i>"Delivering next-generation solutions for resilient Great Lakes fruit production"</i>	van Zoeren, Kahlke, Miranda Sazo	Proposal submission, led by Dr. Julianna Wilson (MSU) – USDA-SCRI-SAS
<i>Preparing U.S. pome fruit production for extreme temperatures in a changing climate – SCRI funds (Lee Kalcsits, WSU)</i>	Miranda Sazo, Feb 27 webinar	Yes- SCRI (Kalcsits, PI (WSU))
<i>Determining if beneficial fungi increase tree growth and reduce the need for fertilization and irrigation of newly planted apple trees</i>	Miranda Sazo, Mar 12 Spanish Webinar	Yes, NESARE (Miranda Sazo, Londo, and Basedow)



Lunch at LOF's 2026 Winter Fruit Schools in Williamson, NY on February 5th, 2026.

Selected Professional Development and Training

Activity	Team Member(s)	Comments:
2026 PACMAN SCRI Meeting	Miranda Sazo, Kahlke	Jan 12, Webinar
Response to ICE Activity	van Zoeren	Jan 21, Virtual
Manuscript review for “ <i>Great Lakes Entomologist</i> ”	van Zoeren	
USDA-SCRI SAS Proposal Writing/Grant Q&A	Kahlke, van Zoeren, Miranda Sazo	Feb 20, Zoom
PSA Executive/Steering Quarterly Meeting	Kahlke	Mar 23, Zoom



Green tissue is starting to emerge from early apple varieties in Niagara County on March 31, 2026. This timing when trees begin to leaf out is roughly “the new norm.”

Fruit Quality Management – Craig Kahlke

Educational Programs/Presentations

- CCE-LOF’s Winter Fruit Schools, Feb 4-5. Feb 4 – CCE-Wayne, Lockport. Feb 5 – Rootstock Cider & Spirits, Williamson.
 - After Dec 3 advisory meeting, emailed rest of team and coordinated the agenda and tasks.
 - Was the principal coordinator for the conference.
 - Did introductions at the start.
 - Introduced sponsors.
 - Gave a presentation “Ways to Improve Color in your Fruit/ Research Updates” on both days.
- Entered temperature data into the chilling unit-green tip model for apples, used in articles to stakeholders.
- GAPs Workshop, March 10 at CCE-Wayne in Newark.
 - Organized workshop. Invited and secured other presenters.
 - Gave 3 talks (see above presentations table on page 2).
 - Mailed certificates to all attendees.

- Postharvest Water Management, Sanitation, and Traceability Workshop, March 18 at CCE-Orleans in Albion
 - With Robert Hadad of CCE-CVP, secured a location.
 - Coordinated preparations with the meeting organizers from the Produce Safety Alliance (PSA).
 - Participated in planning Zoom on Feb 16.
 - Coordinated one breakout session, Titration of sanitizers.
- Harmonized GAP+ Workshop, March 20 at CCE-Wayne in Newark
 - With growers support, set up workshop with Robert Hadad of CCE-CVP.
 - Facilitated meeting, resources and did introductions and conclusions.
 - Mailed certificates to all attendees.
- 2026 Cornell Fruit Field Day set for July 30
 - Had first planning meeting Jan 13 a Cornell AgriTech with 4 other organizers
 - Began setting up sponsorships with Liz
 - Email correspondence as well.
 - Zoom meeting on Feb 24.

Publications

Fruit Notes

- Articles Written:
 - *"Acidity of Honeycrisp – Key to Eating Quality and Competitiveness of Northeastern Apple Growers"*
 - New York Fruit Quarterly, Volume 34, Number 1, pp.23-27. (Kahlke, Baker, Henning, Tee).
- Sorted through numerous announcements about workshops/conferences/meetings/surveys and along with the pertinent on-line registration links, and put them in the newsletter.

Email Blasts

- Sorted through numerous announcements about workshops/conferences/meetings/surveys and along with the pertinent on-line registration links, put them in the email blasts.
- Sent out 20 email blasts in the quarter.

Grants/Proposals

- Am a cooperator on a USDA-SCRI SAS (Strengthening Ag Systems) grant *"Delivering next-generation solutions for resilient Great Lakes fruit production"*, a multi-state effort with the PI from MSU, Dr. Julianna Wilson.
 - Zoom meeting on Feb 25.
 - Secured letters of support from growers and industry.
- Was a cooperator on the planned USDA-SCRI SAS grant on apple fruit and inflammation.
 - Secured letters of support from growers and industry.
 - After much debate, it was decided not to put in a proposal this time.
- Departed LOF team member Bonnie Nelsen left a USDA grant uncompleted *"Reducing Human and Legal Risks with Progressive Employee Discipline Systems on New York Fruit Farms"*.
 - Secured other PI's and cooperators.
 - Advised grant overseers of the new plans along with an extension into 2027.

Team and Other Duties

- Team Leader Administrative Duties
 - Approved invoices and vouchers as needed.
 - 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:
 - Team leader Zoom March 19.
 - Group and other email lists.
- Conducted Performance Review Dialogues with 2 specialists and 1 technician (Jan 13 & Feb 20).
 - Signed off and submitted through Workday after modifications were made.
- Organized and led team meeting on Feb 19 at CCE-Monroe.
- Touched base with other specialists and administrative personnel as needed (phone calls/Zoom)
 - Worked with admins Zayda Moyle & Abby Smith to set expectations and procedures.
 - This will be shared with the rest of the team at a team meeting in April, with Zayda & Abby attending.
- Submitted October-December 2025 quarterly report.
- Submitted NYFQ article *"Acidity of Honeycrisp – Key to Eating Quality and Competitiveness of Northeastern Apple Growers"* to Terence Robinson, editor.
- Attended the WNY AMG Mtg (Zoom) on Jan 16, gave team report.
- Had my Performance Dialogue with Peter on Jan 22.
- Attended Great Lakes Fruit Workers Planning Zoom on Feb 6.
- On Feb 13 & Mar 4, aided (Zoom) University of Guelph students working on strawberry robotics.
- 2nd LOF Advisory Meeting of the season, Feb 26 at Ogden Town Hall
 - Invited all committee members and stakeholders.
 - Presented a summary of my work in 2025
 - Solicited programming input for 2026.
 - Set up Rich Breslawski to chair (Committee Chair Mike Keller unavailable).
- Presented on *"Precision Orchard Management Technologies Update"* at Wayne County BOD (Committee 4, economic development) at their Mar 4 meeting.
- Attended the Niagara County Ag Forum and networked with attendees (poster & publications available) on Mar 13 at CCE-Niagara in Lockport.
- Attended Zoom on Processing Systems trial with Terence, Mario, and Keurig-Dr. Pepper employees on Mar 25.

Professional Development

- Attended the Produce Safety Alliance Quarterly Executive & Steering Committee Mtg (Zoom) on Mar 23.
- Attended the PWT Advisory Meeting Planning Zoom on Jan 5.
- Attended the 2026 PACMAN SCRI Zoom on Jan 12, organized the questions from attendees.
- Attended a planning Zoom with the company Cryo-Bio on Jan 21.

Stakeholder Contacts

- Assisted stakeholders via texts (~35), phone (~40), and email (~55).



Another view at the 2026 LOF Winter Fruit Schools at Rootstock Cider & Spirits in Williamson, NY on February 5th, 2026.

Horticulture – Mario Miranda Sazo

Educational Programs/Presentations

2026 PACMAN nationwide zoom webinar, “What has PACMAN delivered for U.S. apple growers? Key advances in precision crop load management” – January 12

- It was a large extension effort with colleagues from the SCRI PACMAN team and the Virtual Orchard Meetup Group.
- Over the past several years, the USDA-SCRI PACMAN (Precision Apple Crop Load Management) project has brought together scientists, extension educators, growers, and ag-technology partners to address one of the most challenging aspects of apple production: managing crop load precisely to achieve consistent yields, good fruit size, high quality, and strong return bloom.
- U.S. growers were invited to participate in a nationwide PACMAN webinar featuring nationally renowned scientists.
- After more than five years of scientific research and ground-truth evaluations, the latest PACMAN results were presented.
- The webinar also highlighted new research directions and provided opportunities for collaboration.
- Eleven new videos (347 views) were posted by Liz Tee in our CCE YouTube Channel this Q1.

Cornell Webinar:

- Gave a SARE-MYCO presentation in the Spanish language hosted by Anna Wallis on March 12.

Two educational talks during the 2026 Winter Fruit Schools held in Niagara and Wayne, February – Feb. 4-5

Mainly discussed early topic ideas with Terence. My role in planning the remaining talks was more limited this year due to travel to Chile in the weeks leading up the winter fruit schools. Craig coordinated directly with Lailiang and agreed to deliver one of the talks himself.

Talks included the following:

- Opportunities for improving orchard profitability now and in the future (Terence Robinson, Cornell)
- Issues with fruit color development and mitigation strategies (Lailiang Cheng, Cornell)

Presentations Given – Conference Presenter/Organizer:

- Presented Hort-review at the LOF Advisory on February 26

Other Presentations Given – Invited Presentation:

- Delivered a pruning presentation on modern pruning protocols to 60 fruit growers in New Brunswick, Canada, on Saturday March 14 (9am-noon). The presentation was followed by lunch and a hands-on pruning workshop at a host farm from 1:30-5pm. The event was organized and funded by the New Brunswick Department of Agriculture, Aquaculture, and Fisheries.
- Presented an introductory session on pruning for high-density plantings to 60 Spanish-speaking employees and orchard managers in the Fruit Ridge region of Michigan on Saturday March 28 (8:30am-10am). The indoor session was followed by a hands-on pruning demonstration from 10:30am-1:30pm. The workshop concluded with lunch alongside several Michigan growers who sent their employees to the training. The event was organized and funded by the Michigan Pomesters.

Publications***CCE LOF Fruit Notes newsletter: Wrote/modified/summarized/requested articles including:***

- “Intentional delay of dormant pruning for ‘Honeycrisp’ & other important biennial cultivars (‘Fuji’)” (M. Miranda Sazo and T. Robinson), page 3, Vol. 26, Issue 1.

CCE LOF Fruit Facts:

- We welcomed growers to the 2026 Fruit Facts, and the first recommendations were sent on March 23.

Peer-reviewed publication(s)

- “Evaluating Soil Health in Commercial Apple Orchards for Improved Production Outcomes” by Deborah Aller, Joseph P. Amsili, Michael Basedow, Mario R. Miranda Sazo, Janet E. van Zoeren, Dan Donahue, Gregory M. Peck, Harold M. van Es
- This manuscript was submitted to *HortScience* journal on February 23 and accepted for publication with minor revisions on March 16 of this Q1

CCE LOF YouTube Videos – Other social media efforts and collaborations

- Eleven new PACMAN videos (347 views total) were posted by Liz Tee on our CCE YouTube channel by the end of January. This new educational content highlighted recent findings on precision crop load management from multiple scientists.
- A SPARC video of the February 27 webinar, titled ‘*The Impacts of Weather on Pome Fruit Quality and Storability: Lessons from 2025*’ is currently being prepared by OMAFRA (Canada). Once finalized, we plan to post it on our CCE YouTube channel next quarter.

CCE LOF announcements (email blasts):

- Two visual pruning guides (in both English and Spanish languages), along with a ‘Honeycrisp’ pruning article translated into Spanish, were via email blast by Craig during Q1.

Applied Research Projects/Collaborations

On-farm Rootstock/Training Systems (Motts/Robinson and LOF team)

- The Breslawski and Verbridge trials were pruned on Monday, March 30
- Pruning time data/plot was taken at both sites this year.
- Held a Zoom meeting with Motts on March 25.
- We are now planning a summer tour event with Motts growers at the Verbridge site in Wayne on Wednesday, August 5.

Preparing U.S. pome fruit production for extreme temperatures in a changing climate – SCRI funds (Lee Kalcsits, WSU)

- A significant amount of planning, preparation, and coordination was required with several colleagues on this project and a few external collaborators.
- This quarter, we partnered with the International Virtual Orchard Meetup group to host a stand-alone webinar on February 27, which helped lead into the 2026 SCRI SPARC Heat School held in Wenatchee, WA, on March 11.
 - The February 27 webinar, titled ‘*The Impacts of Weather on Pome Fruit Quality and Storability: Lessons from 2025*’, featured grower panelists from multiple regions (WA, OR, MI, PA, NY, BC, and Ontario). Representing NY, we invited Scott Henning, CEO of the Lake Ontario Fruit Packinghouse Company (Orleans County), who shared insights from the packinghouse and linked them to field conditions observed during the 2025 season.
 - The 2026 USDA-SCRI SPARC Heat Fruit School was held in Wenatchee, WA, on March 11, 2026, with a virtual (Zoom) option available for growers nationwide. As part of this program, Scott Henning also participated in a panel discussion on sunburn issues and mitigation strategies. His travel expenses (airfare, lodging, and meals) were covered through the SCRI grant.

- I also attended several Zooms for a SPARC extension manuscript (ongoing)

Determining if beneficial fungi increase tree growth and reduce the need for fertilization and irrigation of newly planted apple trees – NE SARE project (M. Basedow, J. Londo, and M. Miranda Sazo)

- Gave a SARE Spanish webinar about the results of the project on March 12.

SCRI PCLM (SCRI's funds, Robinson)

- Please refer to the nationwide PACMAN webinar held on January 12 and the eleven CCE LOF YouTube videos (347 views) posted by Liz Tee during Q1.

Grants/Proposals

- Am a cooperator on a USDA-SCRI SAS (Strengthening Ag Systems) grant *"Delivering next-generation solutions for resilient Great Lakes fruit production"*, a multi-state effort with the PI from MSU, Dr. Julianna Wilson.
 - Attended a Zoom meeting on Feb 25.

Team and Other Duties

- Attended LOF team meetings and conference calls as needed
- Conducted annual performance review
- Attended in-person/Zoom meetings as needed for the planning of:
 - A Motts summer tour stop at the Verbridge site on August 5
 - 2026 Geneva field day
 - 2026 PACMAN nationwide webinar
 - SAS-MSU project discussion (submitted)
 - SAS-PSU project discussion (not submitted)
 - Collaboration with a new lab for peel sap analysis – January 6
- Met with Kristen DeMarree, Cheng, Robinson, and Jiang for a variable rate nutrient management discussion- February 13
- Met with Robinson, Cheng, and Jiang to discuss funding opportunities through the Cornell Future of American Agriculture Initiative – March 4
- Met with M. Basedow via Zooms for the planning of SARE-Myco webinars in March
- Met with grower Bill Adams and the rest of the LOF team in Wayne – January 8
- Reported fleet mileage as needed during this quarter, changed oil, etc.
- Authored and submitted one article to LOF newsletter editor
- Submitted Sept-Dec. 2025 quarterly report
- Reviewed and submitted data for annual federal reporting
- Liaised mainly with Robinson and Kalcsits for two SCRI webinars (January 12 and February 27 and one intensive fruit school on March 11).

Professional Development

- PWT advisory meeting planning- January 5

Stakeholder Contacts

- Assisted 15 growers/farm employees, via 15-20 emails, 20 phone communications, 30-40 texts (pics, videos, voice messages, etc.) – 1 visit in Niagara, 3 visits in Orleans, and 6 in Wayne.

Integrated Pest Management – Janet van Zoeren

Educational Programs/Presentations

- Co-taught “NYS Certified Pesticide Applicator License Pre-Exam Training” with Mike Stanyard and Josh Bowman (18 attendees, Orleans Co office, Mar 9 and 13).
- Pre-pilot add-on to NYS Certified Pesticide Applicator License Pre-Exam Training – for Spanish speaking employees, with Josh Bowman (2 attendees, Wayne Co, Mar 19, 25 and 31).
- Co-taught “NYS Certified Pesticide Applicator License Pre-Exam Training” with Josh Bowman (14 attendees, Wayne Co office, Mar 24 and 26).

Publications

Fruit Facts Issues Written:

- 2 Issues

LOF Announcements (email blasts):

- Sent 5 in Q1.

Grants/Proposals

- Am a cooperator on a USDA-SCRI SAS (Strengthening Ag Systems) grant “*Delivering next-generation solutions for resilient Great Lakes fruit production*”, a multi-state effort with the PI from MSU, Dr. Julianna Wilson.
 - Attended Zoom meeting on Feb 25.
 - Contributed ideas for the grant to PI and co-PI’s.

Team and Other Duties

- Served as Fruit Program Working Team Co-chair.
- Served on Great Lakes Fruit Workers meeting planning committee.
- Organized and coordinated Winter Fruit School pest management talks (Feb 4 and 5), as well as facilitating a panel discussion on pink-timing insecticides.
- Organized and coordinated fit test clinic (Wayne county; to be held in April).

- Helped organize and run Winter Webinar series (Jan 29 – Mar 12).
- Attended team meetings.
- Attended advisory committee meeting on Feb 26.

Professional Development

- Attended “Response to ICE Activity” Virtual Training (Jan 21).
- Manuscript review for Great Lakes Entomologist

Other Area-Wide Education and Advocating

- Advisory role and pruning demonstrations at the BOCES teaching farm in Spencerport, Monroe county (Feb 2).

Stakeholder Contacts

- Made 10 site visits to assist growers (2 Niagara, Orleans, 8 Wayne; 2 new contacts).
- Assisted stakeholders via texts, phone, and email (139).



Craig presenting at the LOF Winter Fruit Schools February 5, 2026 at Rootstock Cider & Spirits in Williamson.