



Cornell Cooperative Extension Lake Ontario Fruit Program Quarterly Report October - December 2024

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

*Monroe, Niagara, Orleans,
Oswego & Wayne*

Overview: As mid fall arrives, the peak of apple harvest in early October moves quickly to the end of harvest and into meeting season and project wrap-up as fall turns into winter. Despite some frost damage from the late April freeze, and some severely hail damaged fruit from several summer storms, harvest finished strong. The excellent harvest weather from September spilled over into October for the most part. October produced above normal temperatures and somewhat below normal rainfall. While there were a few rainy days, the above normal temperatures and sunny weather that predominated the growing season continued through most of harvest and most growers finished 10 to 14 days ahead of normal. When I asked several “old-timers” if they ever remember this happening before, one or two said once in the last 50 years. As far as fruit quality, the ample rains during most of the growing season followed by a drying out during most of harvest, produced large fruit size, excellent flavor/color, and we hope good storage potential. Although we pay less attention to daily weather patterns during the winter, we do keep a close eye to make sure that the trees start to acclimate and we hope for colder weather without sudden drops in temperature that could produce “winter injury” damage to trees. Although November had well above normal temperatures with a little drier conditions, December temperatures (and precipitation) were normal, therefore we're confident that fruit trees have reached their chilling requirements, and can be pruned safely.

November began with Janet, Bonnie, and Craig attending the Annual Great Lakes Fruit Workers Conference, held in Guelph, Ontario. Each specialist gave a presentation and enjoyed the field tour and networking with other conference attendees from across the Northeast. In early December, we held the first of two advisory committee meetings scheduled for the off-season. Grower and industry participation was strong, and it spurred many session ideas for our upcoming winter programs. The RFP for ARDP 2025 was released and all grants were submitted by the deadline of December 24. Bonnie, Janet, Mario, and Craig were cooperators or PIs in several proposals. Two LOF specialists attended the Fruit PWT meeting and the ARDP project reporting sessions before Christmas at Cornell AgriTech. LOF also “crashed” Orleans CCE’s Christmas luncheon on December 23. It was a great opportunity to close out the year as a team.



The gas chromatograph at K.M. Davies in Williamson, NY is used to test internal ethylene concentration (IEC) for CCE-LOF’s harvest maturity program. IEC is a maturity indicator for most apple varieties.

By the Numbers:

Team Publications:	Editions:	Articles:
Fruit Notes	2	15
Email Blasts	24	N/A
Fruit Facts	none	N/A
Harvest Maturity Reports	3	N/A
Crunchtime Maturity Bulletins, and other Club Variety harvest maturity reports	5	N/A



Selected Publications by LOF Team	Periodical	Author
<i>"Is Honeycrisp the New Red Delicious?"</i>	Fruit Notes, Vol. 24, Issue 4.	Nelsen
<i>Fall Herbicide Reminders</i>	Fruit Notes, Vol. 24, Issue 11.	Basedow & van Zoeren
<i>New York Farm Labor Union Update, Part 3</i>	Fruit Notes, Vol. 24, Issue 11.	Nelsen
<i>Is Honeycrisp the New Red Delicious?</i>	Fruit Notes, Vol. 24, Issue 12.	Nelsen
<i>Save the Date for Our 3rd Annual Western NY Fruit Conference! February 4-5, 2025</i>	Fruit Notes, Vol. 24, Issue 12.	Kahlke

Selected Presentations by LOF Team	Periodical/Meeting:	Presenter:
Presented <i>"Comparing Dispenser Type for Mating Disruption of Codling Moth and Oriental Fruit Moth in New York State"</i>	Great Lakes Fruit Workers meeting -Guelph, ON, Nov 20, and ARDP Reporting Session, Geneva, Dec 9	van Zoeren
<i>"Talking To Your Workers About Unions"</i>	Webinar, Oct 2	Nelsen, Stup, Viau
<i>"Highlights of the 2023 Crop Year Fruit Farm Business Summary"</i>	Great Lakes Fruit Workers meeting (Guelph, ON, Nov 19).	Nelsen
<i>"Acidity of Honeycrisp – Key to Eating Quality and Competitiveness of Northeastern Apple Growers?"</i>	Great Lakes Fruit Workers meeting (Guelph, ON, Nov 19).	Kahlke
Displayed Scion-Apple Root Systems as part of a pre-dinner activity	CCE-Monroe Annual Meeting on Oct 24	Miranda

		Sazo
Module 1 <i>“Intro to Produce Safety”</i> Module 5.2 <i>“Postharvest Ag Water”</i>	Produce Safety Alliance Grower Training Course, Penn Yan, Dec 18	Kahlke

Business Consultation

Specialist	Site Visit	~ Phone/Texts/Emails
Kahlke	2	260
Miranda Sazo	5	45
Nelsen	8	40
van Zoeren	1	30

Applied Research/Collaborations

Activity/Proposal/Grant	Person(s)	Funded (Y/N) or Unfunded/ Preliminary Research (UPR)
<i>“Further Development of Peel Sap Analysis for Managing Bitter Pit Risk in ‘Honeycrisp’</i>	Kahlke, Miranda Sazo, Tee	Yes-ARDP (Cheng, PI)
Managed and developed educational content for 2024 Extension Risk Management Education Competitive Grant Program titled <i>“Building Grant Literacy and Research Skills Among New York State Tree Fruit Growers”</i> . Program reports were filed on Jun 30, Sept 30, and Dec 31.	Nelsen	Yes-USDA-RME (Nelsen, PI)
<i>“Processing Systems Rootstock Trial”</i>	Kahlke, Miranda Sazo, Tee	Yes-ARDP & Keurig-Dr. Pepper (Robinson, PI)
<i>“Acidity of Honeycrisp – Key to Eating Quality and Competitiveness of Northeastern Apple Growers”</i>	Kahlke, Tee, Baker, Watkins, Dando	Yes-NESARE (Kahlke, PI)
<i>“Precision Orchard Management of Apple”</i>	Miranda Sazo, Kahlke, Tee, Lawrence, (Robinson PI)	Yes-SCRI & ARDP
<i>“Improved Color on ‘Premier’ Honeycrisp”</i>	Kahlke, Tee, Miranda Sazo, Lawrence	Yes-ARDP
<i>“Return Bloom on Fuji”</i>	Kahlke, Tee, Lawrence (Robinson PI)	Yes-ARDP
<i>“Optimizing Herbicide Strategies for Weed Control”</i>	van Zoeren & Tee	Yes-ARDP (Basedow, PI)

<i>"Mating Disruption"</i>	van Zoeren & Tee	Yes-ARDP (Rivera, PI)
<i>"Woolly Apple Aphid Biocontrol"</i>	van Zoeren & Tee	Yes-ARDP (Antolez, PI)

Selected Professional Development and Training

Activity	Team Member(s)	Comments:
ARDP Project Reporting on Dec 9	Kahlke, Miranda Sazo, van Zoeren	Heard PI presentations of projects we're involved in and others of interest.
Tree Fruit & Small Fruit PWT Advisory Meeting Dec 10	Kahlke, van Zoeren-organizer as well)	1 st meeting of its kind that invited growers & crop consultants for input, Geneva
Seso's "The Incoming Administration: What to Expect for Ag Business" webinar on Dec 17.	Nelsen	
2024 NERME Applicant Training webinar on Oct 3.	Nelsen	
AWDC Labor Road Show VIII on Dec 13 in Geneva, NY (all day, in-person) and two webinars on Dec 17 & 18.	Nelsen	
Seso's "New DHS Rule: Key H-2A Compliance Updates for Employers" webinar on Dec 17.	Nelsen	
"Cómo iniciar su negocio agrícola" via Small Farms (Oct; 4 lessons).	van Zoeren	via Small Farms (Oct; 4 lessons).
"Northeast Tree Fruit IPM Working Group" meeting (Zoom)	van Zoeren	Oct 22 and 23
"Great Lakes Fruit Workers" meeting, including a "Soil Health Working Group" meeting and a "Berry Breakfast" informal working group	van Zoeren	Nov 18-20; Guelph, Ontario, CA.
"Khan Lab Tour" to learn about and tour the facility where research is being done on apple genotyping	van Zoeren-organizer, Kahlke	Dec 10, Geneva



'Honeycrisp' are evaluated for bitter pit in Orleans County in December.

Fruit Quality Management – Craig J. Kahlke

Educational Programs/Presentations

- Harvest Maturity Program (continued from 3rd quarter)
 - With Liz, sampled orchards and picked up grower and crop consultant samples on Mondays, and tested them in the maturity lab at Orleans County CCE
 - With Liz, tested Wayne County samples (growers and crop consultants collected) at K.M. Davies on Tuesdays.
 - Send data to industry reps on Tuesday evenings, had conference call on Wednesday mornings
 - Put out most maturity reports Wednesdays
 - 3 Harvest Maturity Reports were sent out in October
 - 2 Crunch Time Apple Growers Harvest Maturity Bulletin was sent out in October (for NY2 -RubyFrost™)
 - 2 Midwest Apple Improvement Association electronic maturity reports were sent out in October for MAIA-1 (Evercrisp™) and MAIA-L (Ludacrisp™)
 - 2 Regal 10-45 (Wild Twist™) electronic maturity reports were sent out in October
- Presentations
 - Presented a “lightning talk” entitled “Acidity of Honeycrisp – Key to Eating Quality and Competitiveness of Northeastern Apple Growers?” at the Annual Great Lakes Fruit Workers Conference in Guelph, Ontario on Nov 19
 - Presented 2 modules at a Produce Safety Alliance Grower Training Course in Penn Yan on Dec 18
 - Module 1 “Intro to Produce Safety”
 - Module 5.2 “Postharvest Ag Water”
- *Grant Submission(s), Re-Submission(s), Letter(s) of Support, Proposal Meeting(s):*
 - In November & November, held several planning Zooms and email communications with the rest of the team along with key Cornell faculty to prepare for our ARDP proposals submissions due Dec 24.
 - Was a cooperator on 4 submitted proposals.
- Winter Conference Planning – 3rd Annual Western NY Fruit Conference, Hosted by CCE-LOF
 - With the success of last year's conference just after it ended, we set a date for February 4th-5th, 2025, again at the DoubleTree by Hilton in Rochester, NY.
 - Main session ideas were generated from the advisory meeting on Dec. 6.
 - Planning continued with multiple Zoom and in-person meetings and email communications to divvy up sessions/topics, and speaker suggestions.
 - Sponsorship solicitation was sent out just after the holidays.

Publications

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 23 email blasts in the quarter

Applied Research

- ARDP Project *“Further Development of Peel Sap Analysis for Managing Bitter Pit Risk in ‘Honeycrisp’*(Cheng PI)
 - Traveled to Lake Ontario Fruit, Inc. on December 5 to help conduct bitter pit evaluations from research blocks with Liz.
- NESARE Project *“Acidity of Honeycrisp – Key to Eating Quality and Competitiveness of Northeastern Apple Growers”* (Kahlke PI)
 - Randomly pulled samples from storage (Lake Ontario Fruit, Inc.) for ~30 day postharvest (PH) acidity measurements at Orleans CCE on 10/17
 - Randomly pulled samples from storage (Lake Ontario Fruit, Inc.) for ~60 day PH acidity measurements at Orleans CCE on 11/13
 - Gathered the last of the apple samples from storage (Lake Ontario Fruit, Inc.) for ~90 day PH acidity measurements at Orleans CCE on 12/3 with Liz
 - separated six of the 28 samples for sensory analysis on campus
 - Took six total sets of samples representing 2 each of high, medium, and low acidity levels to Cornell campus for formal sensory analysis with Dondo lab.
 - Assisted lab and sample prep and performed taste test blind panel with other participants. Data to follow from Dondo lab in January.
- SCRI/ARDP Project *“Precision Orchard Management in Apple”* –
 - Return bloom on Fuji project
 - Transported all samples from Lake Ontario Fruit Inc.. to AgriTech on Dec. 16
 - Ran the samples on the Greefa line for size and color on Dec 17
 - Enhanced Color on ‘Premier’ Honeycrisp project
 - Transported all samples from Lake Ontario Fruit Inc.. to AgriTech on Dec. 16
 - Ran the samples on the Greefa line for size and color on Dec 17
- Keurig Dr/ Pepper/ARDP Project *“Processing Systems Rootstock Trial”*
 - Harvested all fruit from Breslawski plot on Oct 3, took representative samples of each scion/rootstock combination to storage at Lake Ontario Fruit, Inc.
 - Entered data and shared on Box with the rest of the project cooperators
 - Transported all samples from Lake Ontario Fruit Inc.. to AgriTech on Dec. 16
 - Ran the samples on the Greefa line for size and color on Dec 17

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:
 - Monthly Team Leader Zooms™ on Oct. 17 & Dec 19, gave team updates.
 - Group and other email lists
- Organized and led team meetings (Zoom) on Oct 29 & Dec. 19.
- Submitted July-September 2024 quarterly report.
- Attended WNY AMG on Oct. 18 (Zoom). Gave team update.
- IFTA Meetings (Zoom) on Nov 11, Nov 22, and Dec 19
- Completed CCE Annual Program Reporting by late November.

- Collaborated with other LOF specialists to divide up workload.
- Signed off on all LOF program reporting.

Professional Development

- Attended the Great Lakes Fruit Workers Meeting on Nov. 18-20 in Guelph, Ontario.
- Attended ARDP Project Reporting at AgriTech on Dec 9
 - Heard PI presentations of projects I'm involved in and others of interest
- Attended Fruit PWT Advisory Meeting in Geneva on Dec 10

Stakeholder Contacts

- Assisted ~ 60 stakeholders via texts, ~ 50 via phone, and ~150 via email.
- Farm/Industry visits: 2 (1 Monroe, 1 Niagara).

Horticulture – Mario Miranda Sazo

(on leave between November 5 – December 15, 2024)

Educational Programs/Presentations

Proposal(s) submitted, re-submitted

- Submitted SCRI pre-proposal titled "*REALTech: Resilient Apple Production through Labor-aware Crop Load Management powered by Technology Implementation and Advancement*". Main PI is Yu Jiang, Cornell AgriTech. *It is a collaboration between WSU, MSU, Cornell, and PSU.*
- Proposal was submitted on Nov. 8.

Applied Research Projects/Collaborations

SCRI PCLM project (T. Robinson)

- Helped Brian Lawrence to conduct variable rate spraying trials at Cornell Agritech.

New SCRI Temperature extremes long-term project (Lee Kalcsits)

- This project was just started this year on Sept. 1
- We had several zooms in preparation for a nationwide survey to be conducted during the winter months of 2024-25.

Statewide 'Honeycrisp' bitter pit project -ARDP funds (L. Cheng)

- Bitter pit evaluation after cold storage
 - BP evaluations were conducted after cold storage by Craig and Liz in mid-December.

Pre-harvest collection of Gala fruitlets to predict long term fruit storability potential with peel sap in WNY - Without ARDP funds (only a small amount of funds to cover fruit analysis provided by L. Cheng)

- This is a new project, and the new data will be used to justify peel sap work on Gala with ARDP support in 2025 and next years.
- The long-term Honeycrisp research project and extension activities were finished this year.

Paired soil sampling ‘comparison’ of several ‘Honeycrisp’ blocks in WNY – Supported with funds provided by Deborah Aller and supported by JvZ and Daniel)

- This year I was not able to help with soil sampling.
- Liz and Janet supported the field work led by Debbie this Q4.
- Janet helped to collect soil survey responses from grower cooperators.
- Research results will be presented by Debbie at the WNY conference in Rochester and at the IFTA annual conference next winter.

Long-term defoliation research study – Unfunded (led by L. Cheng, Kaspar Kuhen ‘new M.S. graduate student via EDP’, and Mario Miranda Sazo)

- Brian Lawrence and Kaspar Kuhn ran fruit samples on the Greefa line in Geneva this Q4.

Team and Other Duties

- Attended Zoom meetings as needed for the planning of:
 - CCE LOF program activities as needed.
 - CALS seed grant for new AI applications led by Debbie Aller
 - SCRI POM project
 - SCRI SPARC project
 - SCRI RealTech pre-proposal
 - DATA initiative
 - IFTA annual conference and tour in Feb. 2025
 - 2025 orchard virtual meetups
- Reported fleet mileage as needed during this quarter, changed oil, tires, etc.
- Took medical leave from Nov. 5 to Dec. 16. (workload was reduced until early January 2025).
- Submitted Q₃ (April-June 2024, quarterly report)
- Attended CCE-Monroe Annual Meeting on Oct 24 and displayed scion-apple root systems
- Continued working closely with Basedow, Londo, Jiang, Aller, Calixto, Obregon, van Zoeren for SH initiative and other DA projects.
- Communicated and strategically worked with Debbie Aller of the Cornell Soil Health project
- Started talking with Emily Lavelly (MSU) for a new SCRI preproposal idea with Debbie, Cornell soil scientist.
- Started talking with Joseph Amsili (Cornell, soil scientist) for a Cornell In-Depth School about Honeycrisp to be conducted in March of 2025.

Stakeholder Contacts

- Assisted 5 growers/farm employees (3 Wayne and 2 Orleans). 10-15 emails, 20 phone communications, 10 texts (pics, videos, voice messages, etc.).

Lake Ontario Fruit Team – Bonalyn (Bonnie) Nelsen

(on leave between October 7-25, 2024)

Educational Programs/Presentations

- Organized and presented “*Talking To Your Workers About Unions,*” a webinar with Rich Stup and Josh Viau on October 2, 2024.
- Presented “*Highlights of the 2023 Crop Year Fruit Farm Business Summary*” at the 2024 Great Lakes Fruit Workers conference at the University of Guelph, Guelph, Ontario, Canada, on November 19-21, 2024.
- Presented “*Caring for Fruit Trees in the Home Garden*” to Master Gardeners at Wayne County CCE on November 21, 2024.

Publications

- “Is Honeycrisp the New Red Delicious?”, a marketing-related article published in Fruit Notes (vol.24, Issue 4).
- “2025 Adverse Effect Wage Rates Announced,” published in Fruit Notes and an email blast.

Applied Research Projects/Collaborations/Grants

- Planned 2025 ARDP grant proposal entitled “A Study of Orchard Leasing Practices in New York State.” Completed project planning (Dr. Brad Rickert of Dyson will be co-PI), concept and budget development, and filing a PI eligibility form. The grant proposal was submitted on December 24, 2024.
- Planned 2025 NERME grant proposal entitled “Managing Legal and Human Risk Using Performance Management Systems on New York Fruit Farms.” Completed project planning (Dr. Brad Rickert of Dyson will be co-PI), concept and budget development, and filing PI eligibility and NOI forms with CALS. The grant proposal was submitted on November 12, 2024.
- Managed and developed educational content for 2024 Extension Risk Management Education Competitive Grant Program titled “Building Grant Literacy and Research Skills Among New York State Tree Fruit Growers”. Program reports were filed on June 30, 2024, September 30, 2024, and December 31, 2024.

Team and Other Duties

- Attended team meetings (Zoom) on Oct 19 & Dec 19.
- Attended LOFP Advisory Committee meeting in Gates, NY on Dec 6.
- IFTA Meeting (Zoom) on Nov 11, Nov 22, and Dec 19.
- Represented LOFP at CCE-Orleans Annual ‘Open House’ on Dec 3.
- Attended a half-day meeting at Motts to plan profitability analysis for Cornell-Motts rootstock trial on Dec 12.

Professional Development

- Attended Seso's "H-2A Audit Preparedness in 2025" webinar on Nov 7.
- Attended Seso's "The Incoming Administration: What to Expect for Ag Business" webinar on Dec 17.
- Attended 2024 NERME Applicant Training webinar on Oct 3.
- Attended AWDC Labor Road Show VIII on Dec 13 in Geneva, NY (all day, in-person) and two webinars on Dec 17 & 18.
- Attended Seso's "New DHS Rule: Key H-2A Compliance Updates for Employers" webinar on Dec 17.
- Attended NY FARMNET webinar on Tax Awareness for Farmers held on Dec 5.

Stakeholder Contacts

- Emails, Text, and Phone Calls: 42
- On-farm grower/stakeholder visits:
 - 5 Wayne
 - 3 Orleans

Integrated Pest Management – Janet van Zoeren

Educational Programs/Presentations

- Presented "Comparing dispenser type for mating disruption of codling moth and oriental fruit moth in New York state" at the Great Lakes Fruit Workers meeting (49 attendees, Guelph Ontario CA, Nov 20).
- Presented "Comparing dispenser type for mating disruption of codling moth and oriental fruit moth in New York state" at the ARDP reporting meeting (Geneva NY, Dec 9).

Publications

Fruit Notes Articles Written:

- Basedow, M and J Van Zoeren. *Fall Herbicide Reminders*. Fruit Notes, Volume 24, Issue 11. P 8-9.

Applied Research Projects/Collaborations

- ARDP funded Project "*Optimizing Herbicide Strategies for Weed Control*" (PI-Mike Basedow)
 - Weed assessment – Grass systemic project (Wayne county – Oct 8)
 - Weed assessment – Stinger project (Orleans county – Oct 16)
 - Weed assessment – Old stinger project (Orleans county – Oct 30)
 - Measure trunks – Trunk guard project (Orleans county – Oct 30)
 - Spray herbicide – Stinger project (Orleans county – Nov 9)
 - Weed assessment – Stinger project (Orleans county – Nov 25)

- ARDP funded Project “*Mating Disruption*” (PI-Rivera)
 - Weekly trap monitoring (Wayne and Orleans counties – October)
- ARDP funded Project “*Woolly Apple Aphid Biocontrol*” (PI-Antolez)
 - Weekly scouting and collecting aphids (Wayne and Niagara counties – October)

Team and Other Duties

- Served as Fruit Program Working Team Co-chair; helped lead fall PWT meeting (Oct 18)
- Attended team meetings.
- Fruit Notes editor (1 issue)
- Helped organize LOF Winter Conference pest management sessions.
- Helped organize 2024 IFTA meeting.
- Attended CCE-Wayne Annual meeting on Nov 8

Professional Development

- Attended “Cómo iniciar su negocio agrícola” via Small Farms (Oct; 4 lessons).
- Attended “Northeast Tree Fruit IPM Working Group” meeting (Oct 22 and 23; via Zoom).
- Attended “Great Lakes Fruit Workers” meeting, including a “Soil Health Working Group” meeting and a “berry breakfast” informal working group meeting (Nov 18-20; Guelph, Ontario, CA).
- Helped to organize and attended “PWT Advisory Committee” meeting to discuss grower and consultant priorities for faculty and extension professionals (Dec 10; Geneva NY).
- Helped to organize and attended “Khan lab tour” to learn about and tour the facility where research is being done on apple genotyping (Dec 10; Geneva NY).

Stakeholder Contacts

- Made 1 site visit to assist growers (1 Orleans; 1 new contact).
- Assisted stakeholders via texts, phone, and email (29).

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

- Letter of support for Hana Feulner (Khan lab) for a USDA NIFA Predoctoral Fellowship
- Letter of support for USDA SCRI proposal “Adapting US Apple Production to Climate Change: A Resilient Approach to IPM for Improved Socio-Economic Outcomes” (Rivera PI)
- Letter of support for NE SARE proposal “Advancing Apple Scab Breeding and Management: Apple Host Differential Set Establishment and Pathogen Characterization in the Northeastern US” (Khan PI)

Other Area-Wide Education and Advocating

- Weekly insect trapline and orchard scouting (Oct).
- Collaborated with the Motts facility to help identify internal lepidoptera species complex in incoming processing fruit (Oct-Nov).
- Panelist for “Extension Outreach Town Hall” (virtual, Nov 26).
- Guest lecture on “Tree fruit Basics” for high school Intro to Horticulture class at Bishop Kearney high school (Monroe County, Dec 3).



'Fuji' apples awaiting firmness testing with an FTA penetrometer, which measures fruit pressures in lbs./in² at the maturity testing lab at Orleans County Cornell Cooperative Extension.