

Cornell Cooperative Extension Lake Ontario Fruit Program Quarterly Report January - March 2024

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. For the second year in a row, we made final preparations our CCE Winter Fruit Conference on February 8-9. This again was a 1 ½ day conference, held at a new venue, DoubleTree by Hilton in Rochester. 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. We had six sessions total. Attendance was strong on the 8th (the full day of the conference, at right around 200 people, which included two DEC credit-eligible sessions. We were disappointed to have 60-75 for the second (1/2) day, but we believe part of it was because it was on a Friday. Feedback received via evaluations and face to face was overwhelmingly positive, and we have booked dates next year, on Feb 4-5, mid-week. Right after our conference, Craig and Mario also attended the International Fruit Tree Association's Annual Winter Conference in Yakima, WA. Excellent educational sessions, which included a workshop on technology, were extremely beneficial for us. Also of super value was the planning with others across the country for our continued SCRI (Precision Crop Load Management in Apple) upcoming field work. In addition, we started planning with the committee to host in Western NY next February. Craig also traveled to Wilkes-Barre, PA in March for the Annual Northeast Plant Growth Regulator Conference. Networking, updates on the latest research, and potential collaborations with industry were investigated. Janet attended the Annual Crop Consultant's meeting in March to learn of new crop protectants and network with other extension educators, researchers and industry. Unfortunately, the unusually warm winter (especially parts of February and March) has spurred an early spring for fruit, which has the entire industry concerned, especially in apples. We achieved budbreak in some varieties in early sites on March 17-18, a full month ahead of normal. The last time this happened was in 2012, when a very normal (several nights of sub-freezing temperatures) April produced major damage on apples, leading to only 50% of a normal crop statewide. As this is written, we've had three nights with sub-zero temperatures to produce some varied bud damage. More to follow in the next quarterly report.



Scott Henning (with microphone) of Lake Ontario Fruit, Inc. shares a funny moment with other apple packer panelists (I to r. Doug Ricketts of the NorthEast Juice Co-op, Brett Baker of United Fruit Sales, and Tim Mansfield of Sun Orchard Fruit Co.) at CCE-LOF's Western NY Fruit Conference at the Doubletree by Hilton in Rochester, NY on February 8th, 2024.

By the Numbers:

Team Publications:	Editions:	Articles:
Fruit Notes	3	18
Email Blasts	23	N/A



Selected Publications by LOF Team	Periodical	Author(s)
"2 nd Annual Western Ny Fruit Conference, "Meeting the Challenges Ahead" Feb 8-9, 2024	Fruit Notes, Vol. 24, Issue 1	Kahlke
"Spring Has Sprung in Late Winter Yet Again"	Fruit Notes, Vol. 24, Issue 3	<u>Kahlke</u> , Miranda Sazo, van Zoren, Robinson, Tee
"Pesticide Certifications and Trainings: Options for 2024."	Fruit Notes, Vol. 24, Issue 1	van Zoeren
"Updated Information on Pesticide Certifications and Trainings in 2024"	Fruit Notes, Vol. 24, Issue 2	van Zoeren
"New York Farm Labor Union Update, Part 1."	Fruit Notes, Vol. 24, Issue 1	Nelsen
"New York Farm Labor Union Update, Part 2."	Fruit Notes, Vol. 24, Issue 2	Nelsen
"New York Farm Labor Union Update, part 3."	Fruit Notes, Vol. 24, Issue 3	Nelsen
"This Early Spring Read, Highlight, and Study the New Fruit Quarterly Article Titled: Management of Honeycrisp Apple Trees for Maximum Sustained Yield and Minimal Bitter Pit"	Fruit Notes, Vol. 24, Issue 3	Miranda Sazo & Kahlke
"Why Environmental Stewardship Could Become an Important Tool for the Long-term Sustainability of the Lake Ontario Fruit Region"	Fruit Notes, Vol. 24, Issue 1	M. Miranda Sazo, D. Aller, and J. v. Zoeren

Selected Presentations by LOF Team	Periodical/Meeting:	Presenter:
"Cleaning and Sanitizing Food Contact Surfaces in Apple Harvesting & Storage"	Northeast Center for the Advancement of Food Safety Annual Conference, Jan 22-24, Portland, ME.	Kahlke
"Harvest Maturity of High Value Varieties for CA Storage"	Western NY Fruit Conference, Feb 8, DoubleTree by Hilton Rochester, NY	Kahlke
"Technology and Innovation in Agriculture: Advancements in Precision Orchard Management Technologies"	Niagara County Agribusiness Outreach Forum, Mar 15, CCE-Niagara, Lockport, NY	Kahlke
"Technology and Innovation in Agriculture: Advancements in Precision Orchard Management Technologies"	2024 Farm Products Inspection Annual Update, Mar 20, Geneva, NY	Kahlke

"Using IPM To Control Orchard Pests and Diseases"	New Jersey Ag Convention, Atlantic City, NJ, Feb 6	van Zoeren
"Formulating your IPM Toolbox"	CaroVail Grower Meeting (20 total attendees, Lyons NY, Mar 12).	van Zoeren
"Specialty Farms: Orchards"	Soil and Water Conservation District Annual Meeting, Syracuse NY, Mar 15.	van Zoeren
Co-taught "NYS Certified Pesticide Applicator License Pre-Exam Training"	Orleans CCE, Mar 14 and 18.	van Zoeren, Stanyard
Co-teaching "Farm Business Planning Workshop/Webinar series" with Elizabeth Higgins (program leader).	December 13, 2023-February 21, 2024, virtual.	Nelsen, Higgins
Presented session entitled "Labor Updates"	WNY Fruit Conference, Feb 8-9, 2024, Rochester, NY.	Nelsen
Chaired a session entitled "Grower and Processor Panel Discussion".	WNY Fruit Conference, Feb 8-9, 2024, Rochester, NY.	Nelsen
Presented a short Hort-review at the LOF advisory conducted on March 8.	LOF Advisory Meeting, Ogden, NY, March 8.	Miranda Sazo
"Useful Tips for Short Pruning of Modern Apple Orchards	2024 MidAtlantic Fruit and Vegetable Convention. Hershey, Pennsylvania, January 31, 2024.	Miranda Sazo

Business Consultation

Specialist	Site Visits	~ Phone/Texts/Emails
Kahlke	1	~ 180
Miranda Sazo	15	~100
Nelsen	12	~50
van Zoeren	2	~95



An apple orchard near Yakima, WA at the IFTA Annual Winter Conference on February 13th, 2024.

Research

Activity/Proposal/Grant	Person(s)	Funded (Y/N) or Unfunded/ Preliminary Research (UPR)
Precision Orchard Management	Miranda Sazo, Kahlke, Tee	Yes-SCRI & ARDP
Determining if beneficial fungi increase tree growth and reduce the need for fertilization and irrigation of newly planted apple trees	Basedow, Londo, and Miranda Sazo	Yes-NESARE

2023 Crop Year Fruit Farm Business Summary (FFBS)	Nelsen	Yes – Cornell Grant
Building Grant Literacy and Research		
Skills Among New York State Tree Fruit	Nelsen	Yes – NERME
Growers		

Selected Professional Development and Training

Activity	Team Member(s)	Comments:
Attended "Would Consumers Accept CRISPR Fruit Crops if the Benefit has Health Implications? An Application to Cranberry Products" (virtual, Feb 1),	van Zoeren	Feb 1 (Virtual) -to learn how consumers weigh CRISPR technology, health benefits, price, and pesticide use when deciding which product to purchase.
Attended NE Crop Consultant Meeting	van Zoeren	Fairport, NY Mar 6-7/
Annual Northeast Plant Growth Regulator Conference	Kahlke	March 12-13 in Wilkes-Barre, PA
Annual IFTA Winter Conference	Kahlke, Miranda Sazo	Feb 11-15 in Yakima, WA
H-2A Audit Preparedness in 2024 Webinar, hosted by Seso Labor, Inc.	Nelsen	March 7 in Sodus, NY
Stone Fruit Rootstocks and Disease Management	Nelsen, van Zoeren	March 19 (Virtual)





Green tip in early apple varieties is seen in Niagara County on March $18^{\rm th}$, about 4 weeks before the historical average.

Fruit Quality Management - Craig Kahlke

Educational Programs/Presentations

- Western NY Fruit Conference Cornell Tree Fruit Conference Feb 8-9, Henrietta
 - Coordinated all planning (these are also Team Meetings) meetings on Jan 19 & Feb 2 and set agendas.
 - Was the principal coordinator for the meeting
 - Started meeting, gave a talk, handled sponsors, chaired 2 sessions
 - Introduced sponsors
 - o Gave a presentation on "Harvest Maturity of High Value Varieties for CA Storage"
- Gave a presentation "Technology and Innovation in Agriculture: Advancements in Precision Orchard Management Technologies" at the Niagara County Agribusiness Forum March 15, Lockport, NY.
- Gave a presentation "Technology and Innovation in Agriculture: Advancements in Precision Orchard Management Technologies" at the 2024 Farm Products Inspection Annual Update, March 20, Geneva, NY
- Gave team update at Western NY AMG meeting on Jan 19.
- Gave team update at monthly Team Leader Meeting (Zoom) on Jan 18 and Mar 21
- Set the agenda and presented programming plans for the 2024 growing season at our advisory committee meeting on Mar 8 in Ogden, NY.
- Entered temperature data into the chilling unit-green tip model for apples, used in articles to stakeholders.

Grant Submission(s), Re-Submission(s,) Letter(s) of Support, Proposal Meeting(s):

• Made plans to submit a USDA NESARE Partnership Grant evaluating the use of acidity measurements in 'Honeycrisp' apples as a measure of fruit quality and consumer acceptance. Secured Dr. Chris Watkins as a project consultant, to help with experimental design and edits of the proposal. Secured a partner in Lake Ontario Fruit, Inc., with COO Scott Henning. Submitted an email to OSP with my intent to submit a proposal by the deadline of April 9.

Publications

Fruit Notes

- Articles Written: Fruit Notes newsletters
 - 2nd Annual WNY Fruit Conference "Meeting the Challenges Ahead" February 8-9,2024 (Vol 24, Issue 1).
 - Spring Has Sprung in Late Winter Yet Again" (Vol 24, Issue 3).
- 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 21 email blasts in the quarter.

Applied Research

- USDA-SCRI Funded Project "Precision Orchard Management in Apple"
 - o Participated in Advisory Meeting on Mar 4.

Team and Other Duties

- Team Leader Administrative Duties
 - o Approved invoices and vouchers as needed.
 - Reviewed budget and monthly financials.
 - o Approved timesheets/vacation/sick leave hours for team members as needed.
 - O Disseminated pertinent info to rest of team as needed from:
 - Team Leader Zoom[™] calls on Jan 18, Mar 21.
 - Group and other email lists.
 - o Conducted Performance Review Dialogues with 3 specialists and 1 technician.
 - Signed off and submitted through Workday after modifications were made.
- Organized and led team (Zoom™) meetings on Jan 19, Feb 1, Feb 22, Mar 19, and Mar 27.
- Submitted October-December 2023 quarterly report.
- Submitted 2023 Annual Report.
- Attended the WNY AMG Mtg (Zoom) on Jan 19, gave team report.
- Had my Performance Dialogue with Peter on Feb 6.

Professional Development

- Attended the Produce Safety Alliance Quarterly Executive & Steering Committee Mtg (Zoom) on Mar 18.
- Attended IFTA Annual Winter Conference on Feb 11-15 in Yakima, WA.
- Attended Annual Northeast Plant Growth Regulator Conference in Wilkes-Barre, PA on Mar 12-13

Stakeholder Contacts

- Assisted stakeholders via texts (~43), phone (~105), and email (~35).
- Farm Visits -1 (Orleans).



Attendees pause for a group picture at the Annual Northeast Plant Growth Regulator Meeting in Wilkes-Barre, PA on March 13.

Horticulture - Mario Miranda Sazo

Educational Programs/Presentations

Educational session during the 2nd Annual WNY Fruit Conference in Rochester – Feb. 8-9

Planned/organized/ and delivered one horticultural session on Feb. 8. Topics included the following:

- Pruning and thinning guided by vision systems (T. Robinson)
- Grower panel (Mark Hermenet and Kristen DeMarree, both growers from Wayne) to discuss new trends on orchard mechanization and the early stages of adoption of digital technologies.

Participated in the last panel discussion organized by LOF titled 'Putting it all together" on February 9.

- Discussion was led by Cornell faculty T. Robinson (entire LOF team provided final thoughts/closing remarks)
- Invited panelists were Scott Henning (packer/grower consultant), Jim Eve (consultant), and Kristen DeMarree (grower)
- There was significant participation and good grower discussion at this last conference session.

Cornell statewide frost protection webinar (only for the planning phase this Q1)

 As discussed with LOF team and then in close collaboration with Mike Basedow, started the planning with two Cornell faculties (Greg Peck and Jason Londo) for this educational effort to help growers get ready for the early spring.

Drone-demo at Cornell Agritech, Geneva - March 28

• Planned/organized/and conducted an educational and demo activity that featured the drone company Outfield from England. Outfield's company founders demonstrated the system and shared the experience of US growers using Outfield last year. Two additional Cornell faculties were also invited to talk (Y. Jiang and T. Robinson) at this Cornell Agritech event (24 participants).

Proposal(s) submitted, re-submitted

- Resubmitted (4th attempt) one SCRI USDA-NIFA proposal titled 'Enhancing resilience of U.S. pome fruit production to extreme temperatures in a changing climate' with main PI Kalcsits (WSU), several other faculties from WSU, MSU, U. of Minnesota, U. of Maine, and four extension colleagues for the resubmission
- Joined a WSU research and extension team and submitted a second SCRI USDA-NIFA proposal titled 'Integrated Horticultural and Robotic Solutions for Labor Intensive Orchard Operations' with main PI Karkee (WSU), and 28 more collaborators from WSU, Oregon State U., Carnegie Mellon, MSU, and Stanford University.

Presentations Given – Conference Presenter/Organizer:

• Presented a short Hort-review at the LOF advisory conducted on March 8.

Other Presentations Given - Invited Presentation:

• "Useful tips for short pruning of modern apple orchards". 2024 MidAtlantic Fruit and Vegetable Convention. Hershey, Pennsylvania, January 31, 2024.

Publications

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

- "Spring has sprung in late winter yet again" (C. Kahlke, M. Miranda Sazo, J.v. Zoeren, T. Robinson, and E. Tee), page 1, Vol. 24, Issue 3.
- "This early spring read, highlight, and study the new fruit quarterly article titled: Management of Honeycrisp apple trees for maximum sustained yield and minimal bitter pit" (M. Miranda Sazo and C. Kahlke). Pages 1-2, Vol. 24, Issue 3.
- "Why environmental stewardship could become an important tool for the long-term sustainability of the Lake Ontario fruit region" (M. Miranda Sazo, D. Aller, and J. v. Zoeren). Pages 7-9, Vol. 24, Issue 1.

CCE LOF Fruit Facts:

- As a result of a record early spring, silver tip field evaluations were sent to growers for the first issue of the Fruit Facts on March 7.
- This early start significantly increased the amount of field work to timely document and inform the development of green tip tissue (GT for several cultivars, inland versus lake sites) and progression of tree bud phenology.
- FFs systematically documented/assessed/ and included a significant amount of tree bud phenology with labelled pictures mainly produced by E. Tee.
- There was also an important effort to evaluate cold damage of relatively dormant buds by forcing them indoor at room temperature when a sudden drop of temperatures occurred the night of March 22.

Extension Articles/Editorials/Press Releases:

• One extension article was submitted to the Fruit Quarterly magazine titled "Management of 'Honeycrisp' apple trees for maximum sustained yield and minimal bitter pit" this Q1(to be printed in the spring issue of 2024).

Peer-reviewed publication(s)

• Shuay-Tsyr, H.; Gonzalez Nieto, L.; Rickard, B.; Reig, G.; Lordan, J.; Lawrence, B.; Fazio, G.; Hoying, S.; Fargione, M.; Miranda Sazo, M.; Robinson, T.L. 2024. Effects of cultivar, planting density and rootstock on long-term economic performance of apple orchards in the Northeastern U.S. (Journal: *Scientia Horticulturae*, Accepted for publication on March 30 and available online since early April 2024).

Applied Research Projects/Collaborations

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

Trees will be pruned in early spring of Q2.

Hyperspectral or similar field research for early fireblight detection with a Wayne grower collaborator (unfunded)

- This quarter we had two meetings (January 4 and March 28) to discuss a research request for early
 detection of fireblight with the use of a digital technology. The original request and a justification for this
 need was initiated by grower Kristen DeMarree from Wayne. Kristen proposed this idea after she attended
 a meeting we had with the Cornell Engine team plus CCE Wayne and Wayne County officials in November
 2023.
- The Q1 meetings were attended by Cornell faculties Y. Jiang and K. Cox and two LOF members (Janet and Mario). Kristen agreed to collaborate for a proof-of-concept on-farm trial to be led by Y. Jiang. An additional experiment with K. Cox was discussed to be conducted at Cornell Agritech.

Statewide effort to manage crop load, nutrient status, and bitter pit of Honeycrisp (ARDP/Robinson)

• Partial results of this effort will be summarized for an extension article in the fruit quarterly magazine to be led by T. Robinson and L. Cheng.

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

- CALS analytical lab was closed this Q1.
- We are currently trying to find another lab in the country that can run the analytical method for the Cornell
 peel sap and nitrogen colorimetric analysis (ongoing and urgent effort to be solved at some point during
 Q2)

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)

- A Zoom meeting was organized by PI Mike Basedow with team members and grower advisors to discuss the progress made in 2023 – January 26
- Team members submitted one short article to the LOF newsletter editor (soil science-related article) this Q1.
- o A bilingual fruit school on soils is being planned to be conducted in the LOF region in June 2024

Long-term defoliation research study – Unfunded (led by L. Cheng, Kaspar Kuhen 'new M.S. graduate student, and Mario)

- Tissue sampling was conducted on March 5 to measure tree nutrient status (spur N and carbohydrate levels) as affected or not by the August defoliation treatments conducted last year.
- Return bloom evaluations and spur leaf area, fruit set per cluster, fruit size, and final yield will be evaluated this 2024 season.

SCRI PCLM (SCRI's funds, Robinson)

- One digital ag-tech pruning talk was included in one of the educational sessions of the 2nd Annual WNY Fruit Conference in Rochester Feb. 8
- Kahlke and Miranda Sazo travelled to Washington State and attended an intensive IFTA precision orchard technologies workshop on Feb. 11
- DATA zoom discussion with Outfield, Robinson, and Jiang prior to a trip to USA by Outfield Feb. 29
- The above discussion generated a drone demo activity with Outfield on March 28

Ph.D. Related Course/Research Work in Ithaca (Cheng)

- Presented a 12 mins SIPS Grad Review talk plus 5 mins Q&A at the Ithaca campus on Jan. 18, 2024.
- The title of the presentation was 'Fruit Peel Sap Analysis for Diagnosis of 'Honeycrisp' Fruit Nutrient Status and Early Prediction of Bitter Pit Risk'.
- Wrote one large peel sap research manuscript (unfinished).

Team and Other Duties

- Attended LOF team meetings and conference calls as needed
- Conducted performance review
- Attended zoom meetings as needed for the planning of:
 - o 2024 WNY Fruit Conference in Rochester
 - Cornell soil health and DATA initiatives
 - o 4th virtual orchard meetup summer series planned for June 6, 13, 20, and 27
 - o Early planning of 2025 IFTA annual conference to be held in Rochester.
 - Search/discussions with a reputable third-party analytical lab to outsource the Cornell peel sap analysis
- Met with M. Basedow via zooms for the planning of a statewide frost protection webinar
- Helped Janet's Spanish educational pesticide safety training March 18
- Planned/coordinated/delivered one ag-tech session this quarter
- Reported fleet mileage as needed during this quarter, changed oil, etc.
- Got new fleet vehicle on March 25
- Authored and submitted two articles to LOF newsletter editor
- Submitted Sept-Dec. 2023 quarterly report
- Submitted 2023 success story and reviewed data for annual federal reporting
- Took vacation time for a two week period in Chile
- PWT Soil Health meeting at Cornell Agritech March 27

Professional Development

- Attended 2024 annual WNY fruit conference in Rochester Feb. 8-9
- Attended 2024 IFTA workshop and annual conference in Yakima, WA Feb. 11-14

Stakeholder Contacts

Assisted 15 growers/farm employees, via 15-20 emails, 20 phone communications, 30-40 texts (pics, videos, voice messages, etc.) – 2 visits in Niagara, 2 in Orleans, and 5 in Wayne

Integrated Pest Management - Janet van Zoeren

Educational Programs/Presentations

- Using IPM To Control Orchard Pests and Diseases" at the New Jersey Ag Convention (30 total attendees, Atlantic City NJ, Feb 6).
- "Formulating your IPM Toolbox" at the CaroVail Grower Meeting (20 total attendees, Lyons NY, Mar 12).
- "Specialty Farms: Orchards" at the Soil and Water Conservation District Annual Meeting (50 total attendees, Syracuse NY, Mar 15).
- Co-taught "NYS Certified Pesticide Applicator License Pre-Exam Training" with Mike Stanyard (21 attendees, Orleans Co office, Mar 14 and 18).

Publications

Fruit Facts Articles Written:

4 issues

Fruit Notes Articles Written:

- Miranda Sazo, M, Aller, D and J van Zoeren. Why Environmental Stewardship Could Become an Important Tool for the Long-Term Sustainability of the Lake Ontario Fruit Region. Fruit Notes, Volume 24, Issue 1. P
- van Zoeren, J. Pesticide Certifications and Trainings: Options for 2024. Fruit Notes, Volume 24, Issue 1. P
- van Zoeren, J. Updated Information on Pesticide Certifications and Trainings in 2024. Fruit Notes, Volume 24, Issue 2. P 4.
- Kahlke, C, Miranda Sazo, M, van Zoeren, J, Robinson, T. and L. Tee. *Spring Has Sprung in Late Winter Yet Again.* Fruit Notes, Volume 24, Issue 3. P 1.

Team and Other Duties

- Helped organize LOF Winter Conference pest management sessions and general conference logistics.
- Helped organize webinar series for statewide fruit growers
 - o Mating Disruption, Feb 16, 74 attendees
 - o Soil Health, Feb 26, 61 attendees
 - o Berry Weed Management, March 6, 42 attendees
 - o Stone Fruit Updates, March 19, 39 attendees
- Helped organize Northeast Tree Fruit IPM working group webinar series
 - o Climate Change impacts in New England, Jan 30, 25 attendees
 - Mating Disruption in the Northeast, March 5, 15 attendees
- Served as Fruit Program Working Team Co-chair.
- Attended team meetings and advisory committee meeting.

Professional Development

- Attended "NE Berry" conversations led by Laura McDermott and Anya Osatuke (March; 1 total).
- Attended "Would Consumers Accept CRISPR Fruit Crops if the Benefit has Health Implications? An Application to Cranberry Products" (virtual, Feb 1), to learn how consumers weigh CRISPR technology, health benefits, price, and pesticide use when deciding which product to purchase.
- Attended "NE Crop Consultants" meeting (Fairport, March 6-7), to learn which new pesticide products are available or will be coming soon.

Stakeholder Contacts

- 2 Site visits to assist growers (2 Monroe).
- Assisted stakeholders via texts, phone, and email (95).

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

• Letter of support for "An Integrated Pest Management Program for New York State, 2024 - 2028" (Wallis PI)

Other Area-Wide Education and Advocating

- Initiative to understand the cause of declining trees, including conversations and survey planning with colleagues.
- Advisory role at the BOCES teaching farm in Spencerport, Orleans county.



Lake Ontario Fruit Team - Bonalyn (Bonnie) Nelsen

Educational Programs/Presentations

- Co-teaching Farm Business Planning Workshop/Webinar series with Elizabeth Higgins (program leader) from
 December 13, 2023-February 21, 2024. This workshop entails a one-hour webinar on business planning each
 week and detailed review and coaching/commentary on farm business plans being prepared using the AgPro
 software program. Twenty farms are enrolled in the program: I'm responsible for advising nine farmers on
 their business plans.
- Presented session entitled "labor Updates" at the LOFP Western New York Winter Fruit Conference held February 8-9, 2024 in Rochester, NY.
- Chaired a session entitled "Grower and Processor Panel Discussion" at the LOFP Western New York Winter Fruit Conference held February 8-9, 2024 in Rochester, NY.

Publications

- "New York farm Labor union update, part 1." Article published in the 24 (1) edition of Fruit Notes.
- "New York farm Labor union update, part 2." Article published in the 24 (2) edition of Fruit Notes.
- "New York farm Labor union update, part 3." Article published in the 24 (3) edition of Fruit Notes.

Applied Research Projects/Collaborations

- Conducting the 2023 Crop Year Fruit Farm Business Summary (FFBS), an analysis of production costs and
 financial status of commercial tree fruit farms in the Lake Ontario Region. The 2023 FFBS will report on the
 financial performance of two enterprises (Idared processing apples and Honeycrisp apples for fresh sales) in
 addition to general production costs and financial statements. Excel templates for gathering financial data
 have been distributed to a representative sample of farm operators; to date, six completed templates have
 been received. Data will be coded, compiled, and analyzed to produce financial information useful for
 benchmarking and decision making.
- Conducting case study of four apple growers who use weather stations and NEWA models on their farm with
 Anna Wallis, NYS Integrated Pest Management Program's fruit coordinator. The purpose of the study, which
 will eventually be published in Fruit Quarterly or Fruit Notes, is to illustrate the financial and non-financial
 benefits of these systems, for the purpose of educating and persuading non-users to adopt the technology.
 To date, four interviews have been conducted with the individuals listed below. Case scenarios will be selected,
 and financial data collected and presented (data collection and analysis is in progress in conjunction with FFBS)
 from farms in Orleans, Clinton, Albany, and Wayne counties.

Grant Submissions/Awards

Received a NERME grant application entitled Building Grant Literacy and Research Skills Among New York State
Tree Fruit Growers on February 15, 2024 (Federal Award No: 2023-70027-40447) in the amounts of \$22,400.00.
Bonalyn Nelsen is the PI on this project; Dr. Brad Rickard is the faculty sponsor and Elizabeth Higgins is acting in
an advisory capacity. Bonalyn will attend the mandatory PI training session in Philadelphia, PA on April 17 &
18, 2024.

Team and Other Duties

- Attended LOF Team Meetings on Zoom on Jan 10, 17, 19, 24, Feb 1, Feb 14, Feb 22, Mar 19, 27.
- Attended the LOFP Western New York Winter Fruit Conference held February 8-9, 2024 in Rochester, NY.
- Attended the LOF Advisory Committee meeting in Ogden, NY on Mar 8.

Professional Development

- Attended Winter Fruit Webinar entitled "Weed Management in Berries" on Mar 6.
- Attended Winter Fruit Webinar entitled "Stone Fruit Rootstocks and Disease Management" on Mar 19.
- Attended H-2A Audit Preparedness in 2024 Webinar sponsored by Seso Labor, Inc. on Mar 7.
- Attended the LOFP Western New York Winter Fruit Conference held February 8-9 in Rochester, NY.

Stakeholder Contacts

- On-farm and virtual grower/stakeholder visits and assistance:
 - o 8 Wayne, 2 Orleans, 1 Monroe, 1 Niagara, 1 Satellite (virtual)
- ~50 emails/phone calls/texts



LOF's Business Management Specialist Bonnie Nelsen answers an audience question during the final wrap-up panel at LOF's 2nd Annual Western NY Fruit Conference at the DoubleTree by Hilton Hotel in Rochester, NY on February 9th, 2024.