

Cornell Cooperative Extension Lake Ontario Fruit Program Quarterly Report January - March 2022

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

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

Overview: The peak of winter brought the meeting season into full force. In early January, proposals were reviewed and submitted to the Apple Research & Development Program (ARDP). All LOF specialists were involved in 1-4 proposals, either as PI's, co-PI's, or cooperators. Also in January, final preparations were made for our Cornell NYS Tree Fruit Conference, co-hosted virtually for the second year in a row with CCE-ENYCHP. The conference was held January 27-28, with great feedback that consisted of mostly positive reviews. There were 8 sessions in 2 full days, with 3 sessions DEC credit-eligible. From 177-306 attendees were counted, depending on the session. Some national and regional meetings in each specialist's programming areas were still virtual, while some had live meetings. Mario was an invited speaker who gave three in-person talks at two meetings in February: The International Fruit Tree Association's Annual Winter Conference in Hershey, PA, and the Ontario Fruit & Vegetable Convention in Niagara Falls, Ontario, Canada. Mario and Craig 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. As spring neared, Craig was asked to run the chilling unit/heat accumulation models to try to predict green tip in apple. Past research by Dr. Terence Robinson has shown the model to be quite accurate, with the accuracy of the short and long term weather forecasts causing the most variability. Craig ran the model every 3-4 days, and updated green tip predictions were sent out to stakeholders in our publications.


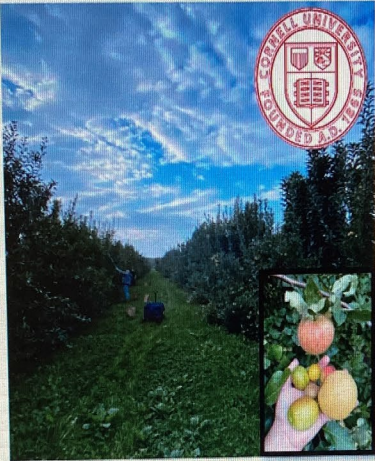
Fruit crop physiology: adaptation to climate change

Goal: Develop an interdisciplinary
physiology and genetics research
program for fruit crops. 60% research,
40% extension appointment.

Initially focusing on temperature
impacts on crop physiological
function.


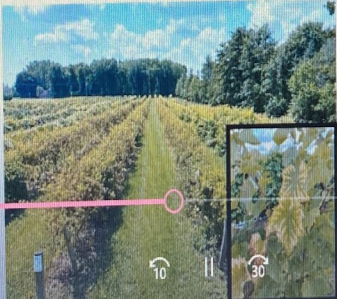
Understanding phenotypic plasticity,
Genotype x Environment x
Management (GEM).

Graft physiology and impacts of root to
shoot interactions on stress response.



Mixed molecular and field program
focused on collaboration and extension
oriented project design.

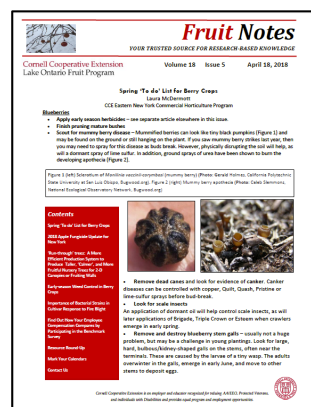
Climate and graft physiology



Dr. Jason Londo, new Cornell hire as associate professor of fruit crop physiology and climate adaptation, presents at the 2022 Cornell Tree Fruit Conference on January 27, 2022.

By the Numbers:

Team Publications:	Editions:	Articles:
Fruit Notes	5	46
Email Blasts	24	N/A
Fruit Facts	1	N/A



Selected Publications by LOF Team	Periodical	Author
<i>Calling all WNY fruit growers: New professional development opportunities to advance bilingual farm managers.</i>	Fruit Notes, Vol. 22, Issue 1.	<u>M. Alvarado</u> and M. Miranda Sazo.
<i>Intentional delay of dormant pruning for 'Honeycrisp' and other important biennial cultivars (Fuji).</i>	Fruit Notes, Vol. 22, Issue 3	<u>M. Miranda Sazo</u> and T. Robinson.
<i>Save the Date for a NEWA 3.0 Tutorial Online Workshop</i>	Fruit Notes, Vol. 22, Issue 1.	van Zoeren
<i>Please Consider Commenting on the Proposed Water Rule as part of FSMA and attending the Informational Webinar on March 11</i>	Fruit Notes, Vol. 22, Issue 3	Kahlke
<i>A Comprehensive Variety and Acreage Survey for New York State</i>	New York Fruit Quarterly, Vol. 30, Number 1	Kahlke, Haskins, Miranda Sazo, Wiltberger
<i>A Cornell Vision for Modern Processing Orchards for Improved Production and Profitability in NY State</i>	New York Fruit Quarterly, Vol. 30, Number 1	Robinson, Miranda Sazo, Kahlke, Wiltberger

Selected Presentations by LOF Team	Periodical/Meeting:	Presenter:
<i>The Use of Platforms to Increase Efficiency in Modern Processing Orchards</i>	Keurig-Dr. Pepper (Mott's) Virtual Grower Meeting Jan 18	Kahlke
<i>Cornell's Partnership with Keurig-Dr. Pepper (Mott's)</i>	Wayne County Board of Supervisor's Meeting – Economic Development Committee, Feb 2	Kahlke
<i>LOF Program Update</i>	Niagara CCE Ag. Program Committee meeting, Mar 7	Kahlke
<i>Integrating current and emerging mechanical technologies in modern apple orchards.</i>	2022 Ontario Fruit and Vegetable Convention. Niagara Falls, Ontario, Canada, February 24, 2022.	Miranda Sazo
<i>Orchard management practices of 'Honeycrisp' to mitigate bitter pit.</i>	2022 Ontario Fruit and Vegetable Convention. Niagara Falls, Ontario, Canada, February 24, 2022.	Miranda Sazo
<i>First experiences with pneumatic defoliation in NY State.</i>	IFTA annual conference. Hershey, Pennsylvania, February 15, 2022.	Miranda Sazo

<i>Co-taught Beginning Farmer 223: Tree Fruit Production.</i>	Small Farms Course (70 students, virtual, 6 lectures from Feb 23 – Mar 30).	van Zoeren and Basedow
<i>Co-taught NYS Certified Pesticide Applicator License Pre-Exam Training.</i>	(22 attendees, Orleans Co office, Mar 8 and 15).	van Zoeren and Stanyard

Business Consultation

Specialist	Site Visit	~ Phone/Texts/Emails
Kahlke	0	240
Miranda Sazo	2	75
van Zoeren	4	79
Wiltberger	On medical leave	



Research

Activity/Proposal/Grant	Person(s)	Funded (Y/N) or Unfunded/ Preliminary Research (UPR)
<i>Roots and Rapid Apple Decline</i>	van Zoeren (Khan PI)	Yes-NIFA
<i>A Statewide Effort to Manage Crop Load, Nutrient Status and Bitter Pit of Honeycrisp</i>	Miranda Sazo & Kahlke (Robinson PI)	Yes-ARDP
<i>Cornell/Motts-KDP Processing apple grower collaboration: Profitability in process apple orchards</i>	Wiltberger, Miranda Sazo, Kahlke, Robinson	Yes-Keurig Dr. Pepper
<i>Testing the Use of Apogee and NAA for Bitter Pit Control on Honeycrisp</i>	Miranda Sazo (Cheng PI)	Yes-ARDP
<i>On-farm Rootstock/Training Systems</i>	Miranda Sazo (Robinson PI)	Yes-ARDP
<i>Optimizing Herbicide Strategies for Weed Control</i>	van Zoeren, Basedow	Yes-ARDP
<i>Testing the Role of Latent Viruses in the Decline of Apple Trees on G935</i>	van Zoeren & Miranda-Sazo (Fuchs PI)	Yes-ARDP
<i>Futuro Financiero</i>	Miranda Sazo (Rangarajan et al.)	Yes-USDA-NIFA & NYS Ag & Mkts, Yes! Apples

Selected Professional Development and Training

Activity	Team Member(s)	Comments:
NEWA 3.0 Tutorial	Kahlke, van Zoeren	Zoom
What's New In Crop Load Management?	Kahlke, Miranda Sazo	Zoom
Annual Northeast Plant Growth Regulator Conference	Kahlke, Miranda Sazo	March 8-9 in Wilkes-Barre, PA
Annual IFTA Winter Conference	Miranda Sazo	Feb 12-15 in Hershey, PA
Attended U Mass Soil Health Summit	van Zoeren	Feb 23, virtual
Attended WSU Codling Moth Summit	van Zoeren	Feb 24, virtual
Attended NE Crop Consultant meeting	van Zoeren	Mar 3, virtual

Fruit Quality Management – Craig J. Kahlke

Educational Programs/Presentations

- 2nd Annual Cornell Tree Fruit Conference (virtual)
 - Coordinated all planning meetings on Jan 5, 19, 24, and 26 and set agendas
 - Chaired a session
 - Helped with technical questions in other specialist's sessions
 - Managed CCA credits
- Presented "*The Use of Platforms to Increase Efficiency in Modern Processing Orchards*" at the Keurig-Dr. Pepper Grower Meeting on Jan 18 (virtual)
- Presented "*Partnership of CCE-LOF and Cornell with Keurig-Dr. Pepper*" to the Wayne County Board of Supervisors (Economic Development Committee) on Feb 2
- Presented "*Fruit Quality Management Programming Update*" to Niagara CCE's Ag. Program Committee on Mar 7

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

- Finalized the writing and budget for the ARDP Proposal *Advancing Maturity of High Bitter Bit Orchard Blocks to Reduce Fruit Loss* (Kahlke, PI, Watkins, Collaborator)
 - Submitted the proposal on January 10.

Publications

Fruit Notes

- Articles Written: Fruit Notes newsletter
 - *Please Consider Commenting on the Proposed Water Rule as part of FSMA and attending the Informational Webinar on March 11.* Volume 22, Issue 3
 - *Registration is Now Open for the NYS Tree Fruit Conference.* Volume 22, Issue 1.
 - *Remote Good Agricultural Practices & Farm Food Safety Plan Writing Session, April 4-5 (virtual).* Volume 22, Issue 4.
- Sorted through numerous announcements about workshops/conferences/meetings/surveys and along with the pertinent on-line registration links, and put them in the newsletter.

New York Fruit Quarterly

- Kahlke, Haskins, Miranda Sazo, Wiltberger. *A Comprehensive Variety and Acreage Survey for New York State.* NYFQ. Volume 30, Number 1.
- Robinson, Miranda Sazo, Kahlke, Wiltberger. *A Cornell Vision for Modern Processing Orchards for Improved Production and Profitability in NY State.* Volume 30, Number 1.

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 17 email blasts in the quarter.

Applied Research

- Valent BioSciences Funded Project “*Pre-harvest PGR Use to Evaluate Fruit Quality*” (Kahlke PI)
 - Traveled to Cornell AgriTech at Geneva on Jan 12 and March 24 to get color, weight, size, and fruit quality data using the Greefa Packingline.
 - Ran postharvest evaluations in the harvest maturity lab at Orleans County CCE on Jan 13 and March 28.
- USDA-SCRI Funded Project “*Precision Orchard Management in Apple*”
 - Participated in Advisory Meeting on Jan 14.
 - Met with Fruit Scout on Jan 16 to coordinate demonstrations on LOF Summer Tour.
 - Participated in Roundtable on Feb 23.
 - Participated in Extension Team discussion on Mar 4.
 - Participated in a meeting with Farm Vision to coordinate field trials with other states on Mar 21.

Faculty/Industry Collaborations

- Mott’s/KDP Initiative
 - Gave a presentation titled “*The Use of Platforms to Increase Efficiency in Modern Processing Orchards*” at the Keurig Dr. Pepper (Mott’s) virtual grower meeting on Jan. 18th.
 - All LOF specialists attended, and Mario also gave a presentation.
 - Over 65 growers attended the meeting.

Team and Other Duties

- Team Leader Administrative Duties

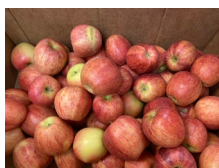
- Approved invoices and vouchers as needed.
- Reviewed budget and monthly financials.
- Approved timesheets/vacation/sick leave hours for team members as needed.
- Disseminated pertinent info to rest of team as needed from:
 - Monthly Team Leader Zoom™ calls on Jan 20, Feb 17, and Mar 24.
 - Group and other email lists
- Conducted Performance Review Dialogues with 3 specialists and 1 technician.
 - Signed off and submitted through Workday after modifications were made.
- Organized and led weekly team (Zoom™) meetings on Feb 18, Feb 24, Mar 11, Mar 18
- Held Weekly Check-Ins with Mark Wiltberger on Feb 2, Feb 10, Feb 18, Feb 25, Mar 3, Mar 10, Mar 17.
- Submitted October-December 2021 quarterly report.
- Submitted Annual Report.
- Had my Performance Dialogue with Peter on Feb 14.
- Interviewed 1 candidate for the Temporary Technician position with our team.
- Mileage Reporting for funded grants.
- Attended Meeting with Blake Farms and Tour of renovated Food Venture Center at Geneva on Feb 11.
- Held Food Safety Workshop Planning Meeting with Keurig-Dr. Pepper on Jan 25.
- Attended the Produce Safety Alliance's Executive & Steering Committee Quarterly Zoom on Jan 18.
- Attended WNY AMG on Jan 21. Gave team update.
- Attended Pruning Demonstration at Kast Farms on Mar 16.
- Attended a CCE-Niagara Staff Mtgs on Feb 8 and Mar 29.
 - Listened to programming and goings-on of CCE-Niagara personnel.
 - Gave the group an update on CCE-LOF programming.

Professional Development

- Attended 2022 NY Fruit Conference – Jan 27-28
- Attended Strawberry Soil Health Session at Empire Producer's Expo (virtual) on Feb 15.
- Attended Precision Crop Load Management Webinar hosted by UMass on Feb 22.
- Attended Root to Fruit Webinar on Mar 1.
- Attended Annual Northeast Plant Growth Regulator Conference in Wilkes-Barre, PA on Mar 8-9.
- Attended NE Regional Webinar on the Proposed Agricultural Water Rule on Mar 11.
- Attended Apple Grower Listening Sessions on Mar 11 & 17.
- Attended the What's New in Crop Load Management Webinar on Mar 18.
- Attended Success with Laser Scarecrows Webinar in 2022 on Mar 22.
- Organized and Held Climate Smart Farming Grant meeting on Mar 31.

Stakeholder Contacts

- Assisted stakeholders via texts (~45), phone (~110), and email (~85).



Horticulture – Mario Miranda Sazo

Educational Programs/Presentations

Orchard Workshop(s):

- A pruning workshop with Robinson was conducted in Wayne (hosted by C. Bailey) on Mar 10 (English language)
- A pruning workshop with Robinson was conducted in Orleans (hosted by B. Kast) on Mar 16 (English language)
- A pruning workshop with Miranda Sazo was conducted in Orleans (hosted by J. Toussaint) on Mar 16 (Spanish language)
- More English and Spanish pruning workshops will be conducted for WNY growers in April

Orchard Tour(s) in the Winter:

- Hosted Dr. Christian Andergassen (scientist from the Laimburg Research Station, Bolzano, Italy) and introduced him to several Cornell faculties and WNY growers on Feb 16
- Conducted a follow up zoom with same researcher to discuss best and safe approaches to pneumatic defoliation with growers, L. Gonzalez, and L. Cheng on Mar 15

Presentations Given – Conference Presenter/Organizer:

- “Modernization of processing orchards for improved production and profitability”. Motts Fruit School. Keurig/Dr. Pepper-KDP. Williamson, NY, January 18, 2022.
- “Grower experiences with fabrics, leaf pruning, and pneumatic defoliation machines in NYS”. Planned, coordinated, and led a virtual discussion with five growers. Cornell tree fruit conference. January 28, 2022.

Other Presentations Given – Invited Presentation:

- “Integrating current and emerging mechanical technologies in modern apple orchards”. 2022 Ontario Fruit and Vegetable Convention. Niagara Falls, Ontario, Canada, February 24, 2022.
- “Orchard management practices of ‘Honeycrisp’ to mitigate bitter pit”. 2022 Ontario Fruit and Vegetable Convention. Niagara Falls, Ontario, Canada, February 24, 2022.
- “First experiences with pneumatic defoliation in NY State”. IFTA annual conference. Hershey, Pennsylvania, February 15, 2022.

Publications

Fruit Notes

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

- “Calling all WNY fruit growers: New professional development opportunities to advance bilingual farm managers” (M. Alvarado), page 5, Vol. 22, Issue 1.
- “Intentional delay of dormant pruning for ‘Honeycrisp’ and other important biennial cultivars (Fuji)” (M. Miranda Sazo and T. Robinson), pages 1-2, Vol. 22, Issue 3.
- “Announcing Spanish pruning meetings” (M. Miranda Sazo), page 1, Vol. 22, Issue 4.
- “Predicted green tip date for WNY in 2022” (T. Robinson and L. Gonzalez), page 1, Vol. 22, Issue 5.
- “Fruit Facts begins next week” (M. Miranda Sazo and J.v. Zoeren), page 2, Vol. 22, Issue 5.

- “Managing pruning and fertilization of ‘Honeycrisp’ to balance growth, cropping, and fruit quality” (T. Robinson, L. Cheng, and M. Miranda Sazo), pages 2-3, Vol. 22, Issue 5.
- “Three additional pruning workshops to adjust bud load of ‘Honeycrisp’ trees on April 12, 13, and 20” (M. Miranda Sazo), pages 6-7, Vol. 22, Issue 5.
- “Looking for a qualified Spanish orchard employee to work in high density apple production” (M. Miranda Sazo), page 10, Vol. 22, Issue 5.

CCE LOF Fruit Facts:

- Green tip prediction dates, pruning workshops and recommendations, first publication sent on Mar 30

Extension Articles/Editorials/Press Releases:

- Robinson, T.L., Miranda Sazo, M., Kahlke, C., and M. Wiltberger. 2022. A Cornell Vision for Modern Processing Apple Orchards for Improved Production and Profitability in NY State. Fruit Quarterly. Vol. 30(1): 4-9.
- Kahlke, C., Haskins, C., Miranda Sazo, M., and M. Wiltberger. 2022. A Comprehensive variety and acreage survey for NY State. Fruit Quarterly. Vol. 30(1): 19-22.

CCE LOF YouTube Videos – Other social media efforts and collaborations

- This quarter Liz posted two new videos to our YouTube channel:
 - ‘Pruning guide for precision crop load management’ – (13 mins total) - 393 views
 - (available online at: <https://www.youtube.com/watch?v=29cF8yOKup0>)
 - ‘Guía de poda para manejar con precisión la carga frutal’ - (con subtítulos en Español) – (13 mins total) – 129 views
 - (available online at: <https://www.youtube.com/watch?v=8kZYT-7etL4>)

Applied Research Projects/Collaborations

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

- Trees were ordered in 2021
- Trees will be produced in 2022 and planted in the spring of 2023
- There will be 2 on-farm demonstration plots each 1.6 acres in size which will compare 3 orchard production systems for 10 years.

Testing the use of Apogee and NAA for bitter pit control on Honeycrisp (ARDP/Cheng and Miranda Sazo – third year in collaboration with Robinson and Gonzalez in 2021)

- Results were presented by L. Gonzalez at the NEPGR meeting in Wilke Barrel, PA, on Mar 8-9

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

- Partial results presented by T. Robinson at the SCRI R2F webinar on Mar 1

Course: Futuro Financiero (NYS Agriculture and Markets, Yes! Apples, Rangarajan, Miranda Sazo, Waters)

- This course is an improved version of the Master Class training offered through the project titled *“Labor readiness: Pathways for farmworkers to start up and advanced beginners to scale up new farm business”* (USDA-NIFA, 2017-2021, Rangarajan, Miranda Sazo)
 - Helped as translator and facilitated sessions with students
 - FF classes were conducted on Feb 3, 17, and Mar 3
 - Graduation ceremony was conducted on Mar 5

CALS Innovation Project: ‘A Sus Órdenes: Developing and strengthening CALS & CCE capacity for innovative and transformational engagement with Spanish-speaking stakeholders’ (Funds provided by CALS Innovation Fund. PIs: Rangarajan, Miranda Sazo, Waters, and 18 more Cornell staff)

- This quarter we sent a Spanish language survey to the entire Cornell system
- We held three meetings with the rest of the team to review results and assign tasks for project objectives

On-farm nursery project (ARDP/Robinson and Miranda Sazo)

- Field data was presented by the researchers at the Motts School in Jan 18

Ph.D. related course/research work in Ithaca campus (SCRI and ARDP/Cheng and Miranda Sazo)

- This quarter we continued presenting preliminary results during:
 - Cornell SIPS Graduate review day on Jan 21
 - IFTA annual conference on Feb 15
 - Fruit and vegetable convention in Ontario, Canada, Feb 24
 - SCRI AppleRoot2Fruit webinar on Mar 1

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:
 - ARDP proposals, Motts school, 2022 Cornell Fruit Conference
 - Canvas flyer/brochure for NEWA webinars
 - Cornell soil health initiative
 - SCRI R2F webinar
 - 2022 virtual meetups
- Met with M. Basedow via zooms for the planning of a grower panel and fruit sessions
- Plan/coordinated/delivered one Hort session
- Reported fleet mileage as needed during this quarter, changed oil, etc.
- Authored and submitted four articles to LOF newsletter editor
- Submitted Sept-Dec. 2021 quarterly report
- Submitted 2021 success story and reviewed data for annual federal reporting
- Consulted with Robinson, Cheng, and Kalcsits for the resubmission of a SCRI grant proposal (temperature extremes)
- Continued working closely with Basedow and van Zoeren to get funds for SH initiative in tree fruits
- Communicated and strategically worked with Cornell Small Farm Program (mainly with N. Waters and started with M. Alvarado and H. Rae)

- Developed idea/ assembled project team/led a CALS innovation project

Professional Development

- Attended 2022 NY Fruit Conference – Jan 27-28
- Attended 2022 IFTA Annual conference – Feb 12-15
- Attended NE PGR meeting – Mar 8-9

Stakeholder Contacts

- Assisted 9 growers via 15-20 emails, 20 phone communications, 30-40 texts (pics, videos, voice messages, etc.).
- Conducted 2 pruning trainings in Wayne and Orleans

Integrated Pest Management – Janet van Zoeren

Educational Programs/Presentations

- Co-presented talk with Mike Basedow “Should I apply residual herbicides in the spring or fall?” at our NYS Tree Fruit Conference (287 attendees, virtual, Jan 28).
- Helped organize the LOF and ENY combined winter meeting programming, including organizing speakers for and moderating an integrated pest management session, and helping with DEC credit application (287 attendees, virtual, Jan 28).
- Organized “NEWA 3.0 Tutorial” webinar: coordinated speakers, organized logistics for the day, and advertised to growers in NY and across the US (164 attendees, virtual, Feb 7).
- “Using the Codling Moth Model in NEWA 3.0” at NEWA 3.0 Tutorial webinar (164 attendees, virtual, Feb 7).
- Co-taught “Beginning Farmer 223: Tree Fruit Production” Small Farms Course (70 students, virtual, 6 lectures from Feb 23 – Mar 30).
- Helped organize and facilitated the “Biological Orchard IPM Tactics” webinar (110 attendees, virtual, Mar 14).
- Co-taught “NYS Certified Pesticide Applicator License Pre-Exam Training” with Mike Stanyard (22 attendees, Orleans Co office, Mar 8 and 15).

Publications

Fruit Facts Articles Written:

- 1 issue

Fruit Notes Articles Written:

- van Zoeren, J. *Save the Date for a NEWA 3.0 Tutorial Online Workshop*. Fruit Notes, Volume 22, Issue 1. P 2.

Applied Research Projects/Collaborations

- ARDP Project “Optimizing Herbicide Strategies for Weed Control” (PI-Mike Basedow)
 - Check on plots, re-flag, re-build trunk guards (Mar 22)
- ARDP Project “Testing the role of latent viruses in the decline of apple trees” (PI-Fuchs)

- Communications via email and telephone with collaborators to prepare for 2022 season
- USDA NIFA Project “*Root Traits and Rapid Apple Decline in High-Density Orchards*” (PI-Khan)
 - Stakeholder engagement and feedback session

Team and Other Duties

- Editor of Fruit Notes publication (January – March; 5 total).
- Served on planning committee for 2022 Ag Extension Retreat.
- Served as Fruit Program Working Team Co-chair (Mar).
- Attended team meetings.

Professional Development

- Attended, and helped organize, virtual NE IPM “Stupid Question Sessions” (virtual, Jan – March; 8 total).
- Attended NE Fruit Consortium webinars (virtual, Jan - March; 4 total).
- Attended U Mass Soil Health Summit (virtual, Feb 23).
- Attended WSU Codling Moth Summit (virtual, Feb 24).
- Attended NE Crop Consultant meeting (virtual, Mar 3-4).

Stakeholder Contacts

- 4 site visits to assist growers (4 Wayne).
- Assisted stakeholders via texts, phone, and email (79).

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

- Resubmitted ARDP proposal for another year of funding for “*Optimizing Herbicide Strategies for Weed Control*” project.
- Resubmitted ARDP proposal for another year of funding for “*Testing the role of latent viruses in the decline of apple trees*” project.
- Submitted ARDP proposal for new “*Assessing the significance of brown marmorated stink bug damage to New York apple production*” project.

Other Area-Wide Education and Advocating

- Advisory member for Mott’s (Keurig Dr Pepper) regenerative agriculture initiative brainstorming sessions.
- Collaboration with Jason Londo to assess temperature variation and declining tree symptoms in a commercial orchard.
- Guest lecture on “Tree fruit crops” for high school Intro to Horticulture class at Bishop Kearney high school (Monroe Co, Jan 20).
- Stakeholder advisory committee member for SCRI-funded nation-wide “spotted wing drosophila” working group.
- Conversations and collaborations with growers and other researchers regarding key insect pests brown marmorated stink bug and black stem borer.

Production Economics and Business Management – Mark Wiltberger

Mark went on medical leave in late March, and as of this date has not returned. Therefore, his quarterly report is not complete at this time.