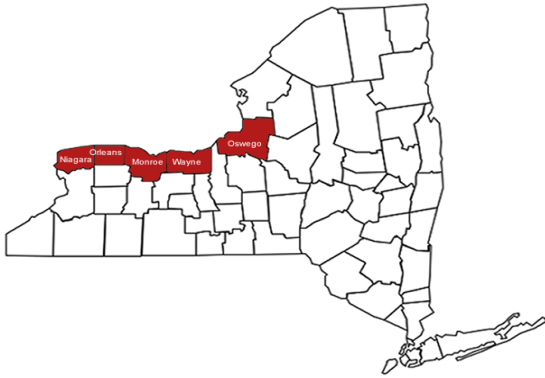


A partnership between
Cornell University and the
CCE Associations in these five
counties: Monroe, Niagara,
Orleans, Oswego & Wayne



2023 Annual Report Year in Review



Cornell Cooperative Extension Lake Ontario Fruit Program



Education & Research

1st Annual 2023 WNY Fruit Growers Tour

We were excited to host a tour with an industry partner, Lake Ontario Ag Consulting, Inc. We were able to combine expertise across our two organizations on July 28th in Wayne County. We featured several applied research projects at the sites in which the research was conducted. In addition, we featured the work of several companies and farms involved in the development of precision technologies of tree fruit crops. These included grower experiences with the new technologies. Pest management and soil health was also highlighted. Three farms plus a lunch stop concluded with a BBQ at S & L farms in Sodus. Over 250 people attended at least one stop on the tour, and we were told by multiple stakeholders to continue this tour in the future.



Equipment displayed at S & L Farms in Sodus at the 1st Annual Western NY Fruit Growers Tour on July 28.

2023 Western NY Fruit Conference

For the first time ever, LOF hosted their own multi-day winter conference. It was held on February 27-28, at the RIT Inn & Conference center in Rochester. Over 175 people attended one or both days of the conference. In addition to six educational sessions, there was a cocktail hour and sponsored (CropGrowers) banquet dinner in which three recent retirees were honored. Once again, we received great feedback that consisted of mostly positive reviews, and are planning another conference in early 2024.



The ballroom at the RIT Inn & Conference Center on February 27, during the Western NY Fruit Conference



The entire LOF team meets with Oswego County grower Eugene Hafner in his pear orchard on June 7.

Cultural Practices

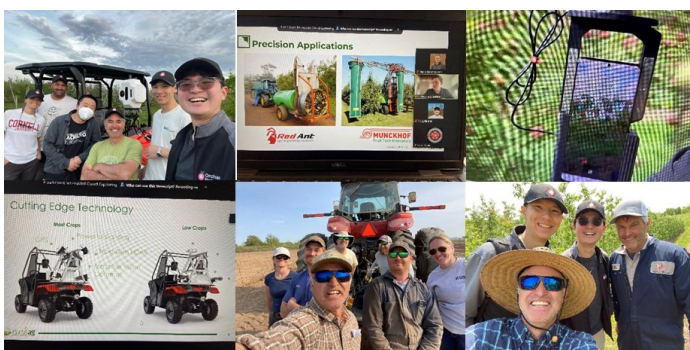
Orchard Management Programming – Mario Miranda Sazo

First Bilingual IPM Fruit School for Farm Employees in WNY: A very talented, multidisciplinary, diverse, and large group of Cornell administrators, scientists, CCE regional educators, staff, and one Cornell Ph.D. student, decided to join forces for the planning and delivery of the first bilingual WNY IPM fruit school this past summer. The one-day school was conducted at the Bible Baptist Church of Sodus, Wayne County, on Wednesday June 14. At the WNY IPM Fruit school, each instructor presented first in an English language room and then later in a Spanish language room, or vice versa (same educational content about an introduction to IPM, scion/rootstock/planting site, soil science/health, and pesticide use/safety). There was a hands-on IPM activity with 5 educational stations: 1. Pesticide Safety 2. Insect Pests 3. Diseases 4. Beneficial insects, and 5. Soil health. The school finished with a group activity about leadership development and basic communication skills.



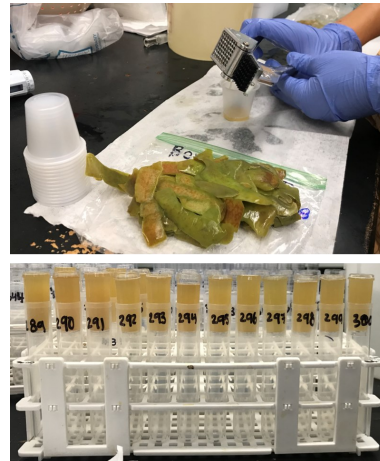
First Cornell bilingual fruit school conducted in Sodus, Wayne County in June 2023.

More Digital Agriculture Technologies Were Featured in 2023: The CCE LOF conducted Cornell research and extension activities by facilitating the early adoption of new digital technologies and by interacting with key innovative growers and tech-industry partners.



Cornell Peel Sap Project for Honeycrisp Growers:

CCE LOF contributed to the research, development, and outreach of the statewide implementation of the peel sap method for prediction of bitter pit risk. We also disseminated several new Cornell recommendations for tree fruit nutrient management and rootstock adoption.



Peels frozen then thawed. Peel sap was obtained with a garlic press in mid-July 2023.

2023 CCE LOF Spanish-summer tour:

The number of collaborations, and quality of Spanish-related extension activities significantly increased with the strong support provided by Janet van Zoeren and Liz Tee.



8th CCE LOF Spanish summer fruit tour conducted in collaboration with CSFM and Cornell Soil Health Program in Walworth, Wayne County in August, 2023.

Integrated Pest Management

Integrated Pest Management Programming—Janet van Zoeren.

Twilight Meeting Series: Regular, seasonal, in-person programming continues to be especially important when talking about pest identification, scouting and management. In an era of Zoom meetings, it can seem easy to provide more virtual programming, especially when growers are busy during the day times.

In collaboration with Anya Osatuke (Harvest NY) and Anna Wallis (NYS IPM), we decided to trail a series of five “Twilight meetings” for berry and tree fruit growers, once a month from April through August, at five different farms across the region. During these 1.5 hr meetings, we discussed pests likely to be encountered at that time on the farm, and management practices and strategies relevant to the growers in that month. So, for example, in April we focused on spring pests such as apple scab, fire blight and berry Phomopsis, as well as pollination, whereas in the late summer meetings we focused on late summer pests such as rots, stink bugs, and weed management.



Twilight meetings were intentionally informal, to provide growers an opportunity to participate with us in conversations about what they are seeing on their farms, and what management strategies they have

been employing, which in turn also helps them to stay engaged as well as offering us new insights.



The meetings each had around 15 attendees (and up to 21 at one of them), and in 2023 were held in Niagara, Orleans, Wayne and Ontario counties. Feedback from growers who attended and hosted the meetings was overwhelmingly positive. We plan to continue in 2024, and to include the counties that were not included in 2023 (Monroe and Oswego).

Business Management

Business Management Programming—Bonnie Nelsen

Bonaly (Bonnie) Nelsen joined the Lake Ontario Fruit Program as a Business Management Specialist in May 2024. In this role, she conducts programs to improve profitability, resiliency, legal compliance, planning, and decision making on commercial fruit farms.

The featured program addresses financial risks faced by New York State commercial tree fruit growers due to inexperience with grants as a funding source for farm projects. A variety of federal, state, and local entities make business grants available to help farm operations increase revenues, profitability, and long-term viability. However, many fruit growers are unfamiliar with available grants and procedures for identifying the best grant opportunity for their needs. Consequently, many bypass grants despite the high cost of capital and uneven access to commercial loans.

This program will address this problem by building grant literacy and research skills among commercial tree fruit growers in New York State. Bonaly Nelsen has applied for a 2024 Northeast Risk Management Education Center (NERME) grant (“Building Grant Literacy and Research Skills Among New York State Tree Fruit Growers”) to fund this program. A program consisting of six online sessions aimed at increasing awareness of farm grant opportunities and building skills needed to target suitable grants. Participants in the proposed program will learn how to identify components of a project plan that may qualify for a grant, research available grant opportunities, understand selection criteria and grant requirements, and choose the best funding opportunity for their project. Information will be reinforced with weekly skill building assignments and two participant surveys will measure program impact.

In addition to acquiring skills in identifying, researching, and developing grant opportunities, participants will participate in three panel discussions with representatives from entities providing farm grants (county and municipal economic development professionals, USDA National Resource Conservation Service, USDA Rural Development, New York State Department of Agriculture and Markets, New York State Energy Research and Development Agency). These sessions will offer insight into key aspects of projects that are successful in getting grant support. Each panel will also feature a farmer who has received a grant from a funder being featured in that session. Farmers will be asked to describe their experiences with grants and give practical advice. Panel discussions are intended to increase participants’ confidence and improve their ability to target suitable grants.

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Fruit Quality Management

Fruit Quality Management Programming—Craig Kahlke

Good Agricultural Practices (GAPs) Training & Food Safety Plan-Writing Workshop

Starting with the 2023 apple harvest, Keurig-Dr. Pepper (KDP), the parent company of Mott's, are requiring all of their growers to undergo a successful food safety audit and subsequent certification in order to continue to deliver product to their facilities. For smaller growers that are strictly processing (no fresh fruit sales), this could have proved to be a stressful and difficult undertaking. Craig was approached by KDP in the offseason to offer a training to help their growers learn about Good Agricultural Practices (GAPs), and what they can do (and may already be doing) to reduce the risk of microbial contamination on their farms. Another requirement of the audit certification is to have a farm food safety plan, that is use by the auditors during the audit. This workshop also offered a second (optional) farm food safety plan writing session. The 2-day workshop was held on February 2&3, 2023, and 19 people from 15 farms attended one or both days. In addition, there were eight total instructors, consisting of CCE educators and NYS Department of Agriculture & Markets produce safety auditors.

The end result was that these farms were given the tools they needed to successfully meet KDP's food safety requirements. In addition, they learned additional ways to reduce microbial contamination risk on their farms. One farm followed up with Craig, and he was able to review their food safety plan prior to their audit, which was a successful one.

Microorganisms of Concern in Fresh Produce

- Bacteria
 - *Salmonella*, toxigenic *E. coli*, *Shigella*, *Listeria monocytogenes*
- Viruses
 - Norovirus, Hepatitis A
- Parasites
 - *Giardia lamblia*, *Cryptosporidium parvum*, *Cyclospora cayentanensis*, *Toxoplasma gondii*



Team Publications

The team publishes timely information throughout the entire year for growers and industry members that enroll in the program via the county associations.

“Email Blasts” -Now that over 90% of our enrollees get electronic versions of our newsletter, the team continues to email more timely information and meeting announcements. We have continued to use this as a key source of key information in between *Fruit Notes* issues.

To: CCE-LOFP-SUBSCRIBERS-L; CCE-LOFP-COMPS-L

Subject: LOF Announcements - WNY 11-12 mm Thinning and Pest/Disease Management Meetings Monday 5/22 (Orleans) & Tuesday 5/23 (Wayne)

Date: Friday, May 19, 2023 7:05:43 AM

Attachments: image001.png

LOF Announcements

From the CCE Lake Ontario Fruit Program

In this LOF Announcements

WNY 11-12 mm Thinning and Pest/Disease Management Meetings Monday 5/22 (Orleans) & Tuesday 5/23 (Wayne), both 10:30 AM – Noon. No registration required.

“Fruit Notes” is a comprehensive newsletter covering time-relevant information on various fruit growing topics, for fruit and berry production. (12-16 issues per year, email or mail). A printed mailed copy will have an additional charge in 2024.



1ST ANNUAL
**WESTERN NEW YORK
FRUIT GROWER TOUR**
“Growing Better Together”
FRIDAY, JULY 28TH 2023



We are excited to announce the first annual Western New York Fruit Grower Tour, the premier fruit tour of the northeast brought to you by Cornell Cooperative Extension's Lake Ontario Fruit Program and Lake Ontario Ag Consulting, LLC! The first of many tours to come, this orchard field day will highlight new and existing products, chemistries, practices, technologies & equipment that shape the orchard industry today. The Western NY Fruit Grower Tour will combine two past orchard tour events, the LOF Summer Fruit Tour and the Wayne County Fruit Grower Tour, giving industry members the opportunity to

Draft Agenda - subject to minor changes, but most speakers/topics confirmed.

Stop 1 – Cherry Lawn Fruit Farms, LLC, 8130 Glover Rd., Sodus, NY, 8:30-10:35 AM – Hosted by Ted & Todd Furber, and Eric Budinger.

8:30 – 9:00 AM – Check in & receive name tags (pre-registration will be required for lunch count and BBQ estimates.)
9:00 Program Begins – Welcome & Introductions, format for the day

“No More Ugly Honey!” – Presentations and discussion on current Honeycrisp (HC) management practices to produce quality fruit and reduce beekeeping. Perspectives from other crop consultants and business will be shared, in addition to Cornell/CCE-LOF. Specifics include past nutritional studies conducted at the farm (Dr. Lallang Cheng, CU), early, mid, pre-harvest diagnostic tools, Passport concept for HC management (Dr. Terence Robinson, CU), Calcium foliar spray discussion for bitter pit reduction (multiple people), soil and other sap analysis (multiple people), and the use of PGR's to reduce bitter pit (Dr. Todd EINHORN, MSU). There will be ample time for questions and group discussion.

Pre-site Preparation & Mulching – Ted Furber discusses what has and hasn't worked on his farm thus far.



“Fruit Facts” is a weekly email report with horticultural reminders covering the day-to-day activities that are more time sensitive and important at that moment in the growing season. This report is available by fax or email for fruit and berry production.

The **“Harvest Maturity Report”** covers fruit ripening indicators for over 20 apple varieties. This report helps growers make good harvest decisions to ensure optimal fruit quality.



Cornell University
Cooperative Extension

Lake Ontario Fruit Program
Your Trusted Source for Research-Based Knowledge

“Fruit Facts” – Wednesday, June 28th, 2023
Mario Miranda Sazo, Janet van Zoeren and Anya Osatuke

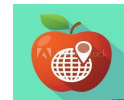
Spotted wing drosophila first trap catch in Orleans and Wayne counties this week

A single SWD female was trapped in a sweet cherry planting in Orleans county and another in a tart cherry planting in Wayne county this week. Numbers are still very low, but they can increase quickly if not managed. Please keep all ripe or ripening susceptible fruits covered. Management recommendations follow.

Management recommendations (Copied from <https://fruit.cornell.edu/spottedwing/management/>)

- Excellent sanitation to reduce SWD populations.** Fruit should be harvested frequently and completely to prevent the buildup of ripe and over-ripe fruit. Unmarketable fruit should be removed from the field and either frozen, “baked” in clear plastic bags placed in the sun, or disposed of in bags off-site. This will kill larvae, remove them from your crop, and prevent them from emerging as adults.
- Canopy and water management to make the environment less favorable.** Prune to maintain an open canopy, increase sunlight and reduce humidity. This will make plantings less attractive to SWD and will improve spray coverage. Repair leaking drip lines and avoid overhead irrigation when possible. Allow the ground and mulch surface to dry before irrigating. Female flies prefer to lay eggs in shaded locations, away from heat and sunlight.
- Exclusion netting to prevent SWD infestation of fruit.** Insect exclusion netting can be installed prior to the arrival of SWD to create a physical barrier between the insects and the fruit. Netting is woven polyethylene yarn, available in different gauges (i.e. hole size). Field trials have demonstrated that 80 gram netting (1.0 x 0.6 mm) is effective for exclusion, but 60 gram netting is not. Netting is 100% effective if effectively managed, meaning netting is installed before SWD arrives, no holes are present, and nets are routinely inspected and maintained throughout the season. Netting also provides protection from other damage, such as bird, high wind, and hail. For more detailed information, see [“Thinking exclusion”](#) on the WSPM Spotted Wing Drosophila blog.
- Insecticide sprays will kill SWD adults and thereby reduce egg laying:** Insecticide treatments should begin when fruit are ripe or ripening and SWD are found in traps. Follow regional monitoring alerts about the first SWD trap catch nearest your farm or consider monitoring SWD traps in your susceptible fruit crops. Keep records of when susceptible fruit crops begin to ripen. Treatments should be applied at least every seven days and repeated in the event of rain. Choose the effective insecticides with pre harvest intervals that work for your picking schedule. Rotate insecticides according to their modes of action. Use the most effective insecticide when you first initiate your spray program – research shows this delays the build up of SWD over time.
Quick reference guides:
 - SWD insecticides for berries
 - SWD insecticides for stone fruits and grapes
 - SWD insecticides for treated dropped fruitCheck the [Cornell Guidelines](#) for the latest list of approved pesticides in NYS. Special needs labels and 2(ee) recommendation labels are being sought for NY berries and cherries. Always read and follow the pesticide label instructions and have the special needs or 2(ee) labels with you when applying.
- Regular fruit sampling:** At least 100 fruit per block per harvest should be observed for infestation. Talk to your local CCE agent about a monitoring program. Fruit can be inspected for evidence of larval feeding. Small holes in berries where the eggs were laid may leak juice when the berry is gently squeezed; this is especially diagnostic on blueberry. Infested red raspberry fruit may leave a red juice stain on the berry receptacle when the fruit is picked. Fruit with small indent or bruises where the surface appears to have flattened or deflated may be infested – typical of SWD infestation in blueberry, strawberry, and cherry. A salt flotation method,

Harvest Maturity Report #2



August 30th, 2023

Craig J. Kahlke, Area Extension Educator, Team Leader, Fruit Quality Management Cornell Cooperative Extension – Lake Ontario Fruit Program

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cjk37@cornell.edu

This is the second Apple Maturity Report for the 2023 harvest season. Reports will be sent out every week, with supplemental reports during peak season if needed.

Maturity Update: Although the wetter, cooler weather from most of the summer still have us behind in GDD, **maturity thus far in early-season varieties is highly variable.** While picking dates may average just a few days ahead of last season.



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