



“Fruit Facts” – Wednesday, July 26th, 2023
Mario Miranda Sazo, Janet van Zoeren and Anya Osatuke

Tree Fruit and Small Fruit Twilight Meeting:

Thursday July 27th at 7pm at Burnap’s Farm Market and Garden Café, 7277 Maple Ave ext., Sodus, NY.

Join specialists Anya Osatuke, Anna Wallis and Janet van Zoeren for a conversation about fruit and berry phenology and pest management.

This series of monthly meetings will examine seasonal changes in tree fruit and berry crops, demonstrate scouting techniques, and discuss integrative pest management solutions to maximize the health and productivity of berry and fruit plantings.

Meetings are held from 7:00PM – 8:30PM on the last Thursday of every month, from April through August. Attendees are encouraged to bring pictures or descriptions of pests they are concerned about on their farm.

1.5 DEC credits will be offered in categories 1a, 10, and 22. Please arrive at 6:45PM to sign-in for DEC credits.

This event is free to attend, and no pre-registration is required.

Time: 7:00-8:30pm EST

Friday July 28th 1st Annual Western New York Fruit grower Tour: ‘Growing Better Together’

Pre-registration is CLOSED.

You can still attend and pay the full amount of \$20 dollars at the registration desk of the first stop at Cherry Lawn Fruit Farms LLC., this Friday July 28 (8130 Glover Rd., Sodus). Check in & last-minute registration will be conducted from 8:30-9:00am at the first stop. Don’t miss the opportunity to attend a great tree fruit educational and social event this summer!

Registration Open for the 2023 Cornell Annual Hispanic Summer Fruit Tour in Wayne County
(please notice that this event will have limited attendance this year).

For **registration**, please visit: <https://lof.cce.cornell.edu/event.php?id=1799>

Brief summary: The half day tour (8:30-noon, lunch included) will be conducted at G and S Orchards, 825 Atlantic Ave. (Route 286), Walworth, NY14568. The tour will include a wagon tour of the orchard and facilities. Some educational topics to be covered during the tour include:

Western New York Berry Specialist Anya Osatuke will cover blueberry soil health, mulching, pruning, and pest management.

Mario Miranda Sazo (CCE LOF) will discuss the importance of irrigation, irrigation systems, etc.

Janet van Zoeren (CCE LOF) will briefly discuss brown marmorated stink bug identification and damage.

Deborah Breth (Cornell Soil Health Program) will talk about the importance of crop rotations and how to build/sustain healthy soils.

Mildred Alvarado (Ag Futuro of Cornell Small Farms Program) will guide a discussion about the G&S CSA, sales/marketing, and housing.

The tour will finalize with Mexican food and refreshments (food provided by Ag Futuro). Deadline for registration will be Friday August 11. Register your employees for the tour!

To Do Today

- **Quick update on where we are on ‘Honeycrisp’ peel sap analysis this week:** The peel sap nutrient data is almost finalized. And the sap nitrogen for grower samples was just finished. We plan to summarize results and get started on sending recommendations out to growers after the WNY fruit grower tour!
- **The premier fruit tour of the Northeast brought to you by CCE LOF and Lake Ontario Ag Consulting is almost here!** The tour will provide high-level educational information this Friday July 28. As stated above, registration is closed but you can still register on site and pay the full amount of \$20 dollars. There will be two stops covering all aspects related to Honeycrisp (first stop at Cherry Lawn Farms) and the new advances on precision crop load management (second stop at DeMarree Fruit Farms). Here is a detailed list of the speakers to be present at each of the two stops. There will be plenty of time to ask your questions. For both stops we will spend approximately 60 minutes total. So, plan to attend the tour and be ready to ask questions that are important to you for the benefit of your operation. We hope to see many of you on Friday!
 - **Honeycrisp stop at Cherry Lawn Farm (9:10-10:10am, 60 mins):**
 - Introduction to the Honeycrisp stop by Mario Miranda Sazo (CCE LOF)
 - Introduction to xylem sap (sap analysis) by JP Jacobson (Agro-K) and results/interpretation by Vaughn Gingerich (Lake Ontario Ag Consulting) and Brad Palmer (Reality Research).
 - An update about the work with ABA, auxins, and bitter pit by Ph.D. candidate Chayce Griffith (MSU)
 - An update about the peel sap project on Honeycrisp by Dr. Lailiang Cheng (Cornell U.)
 - Calcium foliar spray trials by Dr. Luis Gonzalez (Cornell U.)
 - Putting the pieces together for Honeycrisp management/final remarks by Dr. Terence Robinson (Cornell U.)
 - **Precision crop load management guided by vision systems at DeMarree Fruit Farm (11:10-12:15pm, 65 mins):**
 - Dr. Terence Robinson (Cornell U.) will be moderating a Q&A session with invited growers, industry, and extension people.
 - Kristen DeMarree (fruit grower host at DeMarree Fruit Farm)
 - Hannah Nascimiento and Hannah Maloney (R&D, Vivid)
 - Charlie Wu (CEO, Orchard Robotics)
 - Ph.D. candidate Laura Hillman who is helping to develop the Fruit Size Distribution model (MSU)
 - Rod Farrow (grower advisor for SCRI POM project)
 - Dr. Yu Jiang and Dr. Luis Gonzalez (Scientists at Cornell AgriTech)
 - Mario Miranda Sazo and Craig Kahlke (CCE LOF)
- **Sunburn: Apples Become Susceptible to Sunburn at about 38 – 40 mm fruitlet diameter – or Roughly Golf Ball Size:** Sunburn can be caused by either heat or light, or both. When caused by heat, ambient air temperature is not as important as fruit surface temperature. Each variety has its own fruit surface temperature threshold for sunburn to occur. Some varieties, like Cripps Pink, require a very high FST – something like 120° F. Other varieties have a much lower threshold. For example, sunburn occurs on Cameo when the FST reaches 115° F. Many of the newer managed varieties appear to have an even lower FST threshold, Minneiska appears to be one of those as does Smitten.

Types of sunburn: Sunburn caused by light can be from UV-A, UV-B, or both. There is also another type of sunburn called photo-oxidative sunburn that is caused by sudden exposure to light, as occurs after hand thinning, mechanical pruning, summer pruning, or re-positioning limbs by tying.

Best methods for preventing sunburn:

- The use of shade cloth. This reduces both heat and light exposure.
- Overhead evaporative cooling in combination with Raynox. The cooling prevents / reduces sunburn caused by heat, and the Raynox prevents / reduces sunburn caused by both heat and light.
- Best is overhead evaporative cooling by itself, but this is only effective for sunburn caused by heat.

Sprayable protectant materials:

These basically come in two categories – **particle films like Surround (Kaolin clay)**, and the **calcium carbonates like PurShade**. There are others as well, but these all work by creating a whitish film on the apple that reflects both heat and light. These will typically reduce sunburn incidence by up to 50%. The problem with these is that they do leave a heavy white film on the apple that can be very difficult to remove from the fruit on the packing line, especially from the stem bowl and calyx where brushes can't reach. Also, bi-colored apples do not color well under these coatings. Under heavy splashes and droplets, the fruit develops a mottled appearance.

The other sprayable protectants are the Raynox brands: These are a carnauba-based waxy matrix that filter light and reduce FST. These also typically reduce sunburn incidence by about 50%. These do not leave the heavy white film residue, so fruit colors normally underneath, and there are no issues on the packing line. There are a couple of different formulations of Raynox – Raynox; Raynox Plus; and Raynox Organic. Regular Raynox requires the addition of a water conditioner, and it contains two emulsifiers – one of which is morpholine. Morpholine has a low or no MRL tolerance in many export markets, so a grower should check with his/her packer before using it. Raynox Plus needs no water conditioner, and uses a nonionic emulsifier so there is no morpholine to worry about. Same with Raynox Organic.

If growers have a hot spell coming up, it would certainly be worthwhile to get ahead of that with one of the sprayable protectants. While not as effective as starting the program earlier (apples become susceptible to sunburn at about 38 – 40 mm fruitlet diameter – or roughly golf ball size), it is better than doing nothing and should still provide enough protection to be worth the cost.

A couple of tricks that can help:

- If you have a tower sprayer that can apply from the top of the canopy down, those are more effective than traditional airblast sprayers because they apply the product where it is most needed.
- Also, if your rows are oriented North – South, you can spray only the west sides of the rows. Most sunburn comes from afternoon sun exposure, not morning.

If you do apply sprayable protectants, they should be applied in the morning before ambient air temperature reaches 85° F. One application should last for a few weeks until the fruit grows through it.

- **Brown marmorated stink bug** is present in WNY orchards. If you plan to set out monitoring traps for BMSB, put those out now! As a reminder, there are two types of monitoring traps available. Previously we usually used the black pyramid traps, with a jar on top containing a kill strip. Another method is to use a clear sticky panel trap. Either trapping method needs to include a “dual lure”, with the pheromone for both BMSB as well as the green stink bug (they come together when you buy a monitoring lure for BMSB), and traps should be set along the edge between an orchard and woodlot. Either trapping method is fine, and both have advantages and disadvantages.

- **The black pyramid traps** have an established threshold of when to spray – once a cumulative 10 BMSB have been caught on average per trap. Personally, I have found them clunky to store, difficult to set up, and hard to keep from falling over.
- **The clear sticky panel traps** are easy to set up and to check. However, the sticky substance on these traps can get very gunky if the panels are left in the sun – I recommend you store them in a cool barn up until the moment you are setting them out! There is a “provisional” threshold for the clear sticky traps to spray once a cumulative 4 BMSB have been caught on average per trap, and we are doing a project this summer to see if that threshold makes sense in our orchards.



- **Spotted wing drosophila** has now been trapped across our entire region, and anyone with ripe or ripening susceptible fruits should be managing for SWD. Cherry growers please check out our SWD/ECFF quick guide to help determine best insecticide choices: https://rvpadmin.cce.cornell.edu/uploads/doc_1140.pdf. For more management recommendations, please visit: <https://fruit.cornell.edu/spottedwing/management/>.
- **Scab (both of leaves and beginning on fruit) is present in some orchard blocks.** In blocks with scab pressure, keep rotating through single-site products such as Aprovia\$\$, Miravis\$\$, Tesaris (group 7s); Cevya, Rhyme (group 3s); Flint Extra, Sovran\$\$ (group 11); Luna Sensation, Merivon (group 7+11s).
 \$\$ indicates fungicides with a 30 day PHI – the longest in this list.
- Concerned about **fungicide resistant scab or fire blight** on your farm? Contact me and I will collect a sample to bring to the Cox lab for resistance testing.
- **Woolly apple aphid** is in full swing. Scout for colonies in the angle of a branch or twig crotch, or at pruning cuts. **Sefina** is a new product labeled in NYS for “suppression” of WAA. **Assail** (plus Regulaid), **Movento** (plus Regulaid), **Beleaf**, **Sivanto Prime**, **Senstar** (contains Movento), and **Diazinon** (if your market allows) are other recommended products. These products will also be effective against **green apple aphids**, which continue to move into many blocks.
- **Codling moth, Oriental fruit moth, and Oblique banded leafroller flights continue to be between generations.**

Every effort has been made to provide correct, complete, and up-to-date pesticide recommendations. Nevertheless, changes in pesticide regulations occur constantly, and human errors are still possible. These recommendations are not a substitute for pesticide labeling. Please read the label before applying any pesticide. Copyright 2023. All rights reserved. No part of this material may be reproduced or redistributed by any means without permission. Cornell Cooperative Extension provides equal program and employment opportunities.

The Lake Ontario Fruit Program is a Cornell Cooperative Extension partnership between Cornell University and the Cornell Cooperative Extension Associations in Monroe, Niagara, Orleans, Oswego and Wayne counties.