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Lake Ontario Fruit Program
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"*Fruit Facts*" – Thursday, August 1st, 2024

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Happy August! We are close to another harvest season – Are You Ready?

Growing Degree Day Update for Western NY – Predicting Harvest Dates for Early Apple Varieties

Questions? Contact Craig cjk37@cornell.edu, 585-735-5448. Stay tuned for more updates here and in Fruit Notes.

Another week of above normal temps, and we continue to see maturity tracking well ahead of last season. Some weather stations have been taken out of this table, as I do not think they were properly calibrated. Looking at the table below, it's showing we are close 10-16 days ahead (average of 12) compared to last year. However, we may be more like **7 to 10 days** ahead. Other degree day models and grower / crop consultant observations are in line with this. If we start to normalize and see weather patterns for the rest of the summer that are cooler, we will be a little closer to last year's harvest dates, but still ahead. The NOAA 14-day weather outlook is trending somewhat cooler than normal. See the map here: https://www.cpc.ncep.noaa.gov/products/predictions/814day/814temp.new.gif The precipitation forecast for the same time frame is trending towards above average rainfall. See the map here: https://www.cpc.ncep.noaa.gov/products/predictions/814day/814prcp.new.gif Stay tuned for more updates.

GDD Comparisons, Base 39 F, April 1-July 31

NEWA Station	2024	2023	2022	3 yr AVG	Total Acc/122 days	# GDD ahead 2023	~ days ahead 2023
Appleton (Russell Farms)	2929	2626	2689	2748	22.5	303	13.5
N. Appleton	2802	2553	2601	2652	21.7	249	11.5
Ashwood	2850	2600	2642	2697	22.1	250	11.3
Butler	2961	2727	2744	2811	23.0	234	10.2
Fairville	2876	2589	2650	2705	22.2	287	12.9
Fulton (airport)	2882	2640	2637	2720	22.3	242	10.9
Knowlesville	2969	NA	NA				
Lockport	3086	NA	NA				
Medina	2916	2610	2725	2750	22.5	306	13.6
Ransomville	3084	2749	2835	2889	23.7	335	14.1
Rochester (airport)	3070	2688	2776	2845	23.3	382	16.4
Sodus - Cherry Lawn	2863	2599	2646	2703	22.2	264	11.9
Sodus (south)	3013	2767	2804	2861	23.5	246	10.5
Waterport (Orchard Dale)	2870	2618	2674	2721	22.3	252	11.3
Will. - DeMaree Home	2930	2616	2677	2741	22.5	314	14.0
Will. - DeM. Bear Swamp	2797	2569	2610	2659	21.8	228	10.5
Williamson - Mason	2804	2536	2623	2654	21.8	268	12.3
AVERAGE				**2744**	**22.5**	**277**	**12.3**
					MIN	**228**	**10.2**
					MAX	**382**	**16.4**
						AVG	**12.3**

Subscribe Now for Harvest Maturity Reports!

Click on the link here for the form to print and mail in to Natalie: 2024 Harvest Maturity Report Subscription Form.pdf **Look for the first Harvest Maturity Report in 2 -2 ½ weeks**. Testing will begin on Wildfire Gala, Premier Honeycrisp, Ginger Gold, and Zestar! Your $75 subscription (if in the Lake Ontario Fruit Program partner counties of Niagara, Monroe, Orleans, Oswego and Wayne) gets you critical information on a weekly basis during apple harvest. Fruit samples are collected early in the week from across the region and sampled for internal ethylene concentration, firmness, starch/iodine, and total soluble solids. Results are summarized and recommendations for harvest windows of major apple and pear varieties are either faxed or emailed to subscribers later in the week. Satellite subscribers outside of the four county regions can receive reports as well, for $100. Not sure if you've subscribed this season? Contact Natalie Mrzywka at nlm53@cornell.edu or 585-798-4265, ext. 122

Registration Is Now Open for our 2nd Annual Western NY Fruit Grower Tour!

Tuesday, August 13th, 2024

Co-Sponsored by the Cornell Cooperative Extension Lake Ontario Fruit Program & Lake Ontario Ag Consulting LLC.

Register Here: https://lof.cce.cornell.edu/event.php?id=1915

Sponsor Opportunities: Please contact Craig Kahlke at cjk37@cornell.edu, 585-735-5448.

The tour will be conducted in Orleans County and will feature the following fruit farms: Toussaint Farms, Zingler Farms, Circle R Fruit Farms, and Orchard Dale Fruit Farm

Stay tuned for more details coming soon!

Announcing the 9th CCE LOF Hispanic Summer Fruit Tour to be Hosted by Dobbins Farms on Saturday August 17 Educational programming: 3-6pm Free dinner celebration with invited grower Jose Iniguez: 6:30-7:30pm

The Hispanic fruit tour will be hosted by Dobbins Farms at the orchard located close to the following home address: 11647 Alps Rd, Lyndonville, NY14098.

The entire **3-hour tour** will be conducted at this orchard location and will include three educational stops in the Spanish language (see more details for registration 'On the Horizon' section below): (1) Horticulture by Mario, (2) IPM by Janet Van Zoeren and Sandra Lizarraga, (3) and labor efficiency by Mary "Bess' Lewis of Cornell Agricultural Workforce Development.

The tour will start at **3pm and will finish at 6pm.** The tour will finalish with a dinner celebration at the nice Russ Martino pavilion of the Town of Yates from **6pm to 7:30pm**. We have also confirmed the participation of invited grower Jose Iniguez from Lamont Fruit Farm/Fish Creek who will be addressing the tour participants at the pavilion. Mexican food and drinks will be catered by the Mariachi Restaurant of Medina with a generous financial support provided by Farm Credit East.

WNY Bilingual Orchard Soil Health and Beneficial Fungi Meeting
August 22nd, 2024 - 3-6PM

Join members of CCE LOFP, CCE ENYCHP, and Cornell Soil Health Program for a bilingual training on the basics of soil health, the potential benefits of mycorrhizal fungi, and an update on the current project status of our SARE grant on orchard mycorrhizal products.

Location: CCE Orleans County, 12690 Rt 31, Albion, NY 14411

Register by August 20th for this Free Event! Register at: https://lof.cce.cornell.edu/event.php?id=1948

Agenda

3:00 PM - The basics of orchard soil health (Concurrently presented in English with Dr. Deborah Aller and Spanish with Mario Miranda Sazo)

4:00 PM - The basics of soil mycorrhizae in New York apple orchards (Concurrently presented in English with Mike Basedow and Spanish with Mario Miranda Sazo)

5:00 PM - Refreshments and Socializing until 6PM

All programming will be given in both English and Spanish

This meeting is based upon work supported by the National Institute of Food and Agriculture, U.S. Department of Agriculture, through the Northeast Sustainable Agriculture Research and Education program under subaward number LNE23-472R.

'Apple Social' Events were a success!

The first social events were a success and were well attended with approximately 10 growers in Orleans on July 16 and more than 60 growers in Wayne County this past Wednesday July 31. In attendance were growers that represented the entire industry (fresh and processing growers, including the new generation of growers). We were glad to see some growers who came accompanied by their families, spouses or partners at both events. It was nice to meet new growers and reconnect with some old friends in a nice and more relaxed social atmosphere until almost 9pm. We would also like to thank the LynOaken and VanAcker Fruit Farms for hosting these events organized for the first time this year.

Special thanks to Valent for their continued support for food and drinks and to the several vendors that participated. We hope to continue conducting these social events at some point next year. Many thanks to all for attending!

Figure 1. Group of growers who attended the CCE LOF social event hosted by LynOaken Fruit Farm on July 16 (left) and a view of the social event hosted by VanAcker Fruit Farm this past Wednesday July 31 (right picture).

To Do Today

- **Hand thinning:** As almost never done before, a few growers finished hand thinning late last week and another group of growers finished it by Wednesday or yesterday. Growers who conducted a more intense or successful chemical thinning program were able to conduct a touch up hand thinning and finished earlier than previous seasons.
- **Fruit size:** In average and for some unirrigated blocks with a well-managed crop load, fruit size on Gala averaged from 58 to 62mm fruit diameter by the middle of this week. Other mature Gala blocks with excellent crop loads and that have been irrigated, fruit size diameter reached up to almost 65mm on average this past Wednesday (see below Figure 2).

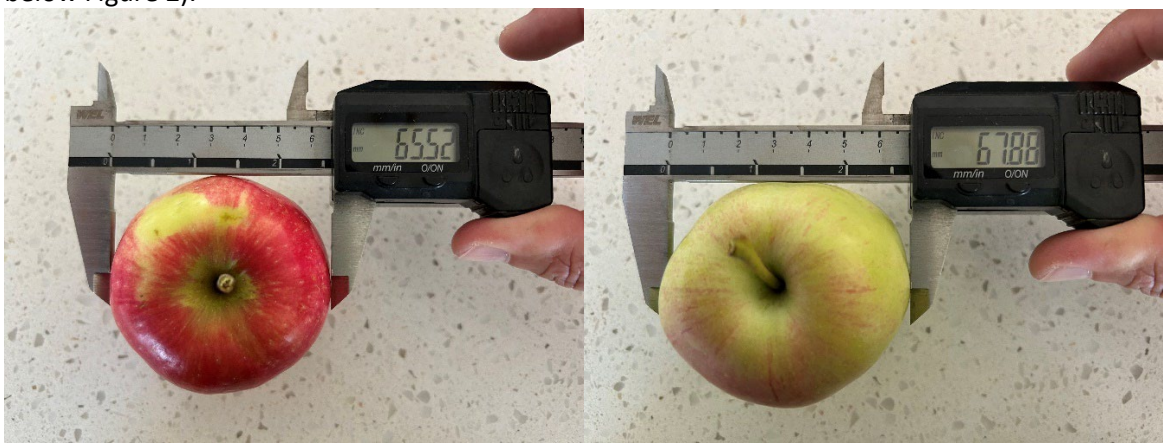


Figure 2. A well colored Gala fruit (from an irrigated block) measured 65mm in fruit diameter (left) and another one from the same irrigated block measured almost 68mm (right) this past Wednesday July 31. Gala fruit size will continue increasing in the next few weeks and especially in blocks that were early adjusted to the target crop load per tree and that have been well watered until now.

- **Budding in the on-farm nursery:** It should have been already started early this week or should be started by now if you have the supplies, time, and the required trained labor. Finished trees that will be dug this fall for storage or early next spring should have a tree height of 55 to 65 inches above the ground or higher by now. If you did not cut back one-year old shoots earlier or in the last 2-3 weeks, you can still accomplish this by the end of this week or during the weekend. Do this as soon as you have time to get some flower buds induced close to the trunk!.
- **Mechanical pruning for mature Gala and NY-1 blocks:** These small-fruited cultivars should be mechanically pruned at the end and very close to harvest to minimize any fruit size reduction. In some situations, some Gala blocks will be mechanically pruned and pneumatically defoliated by the end of next week (see Figure 3).

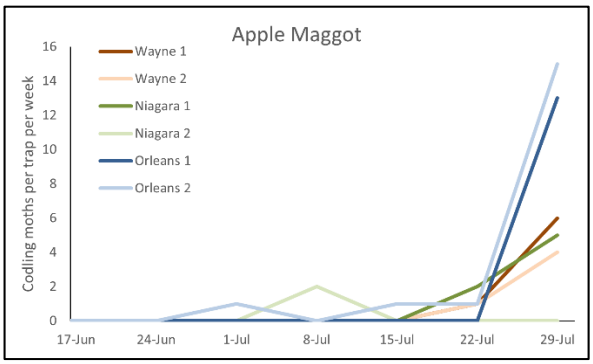
Figure 3: A very bushy, nice, and mature canopy of Gala with healthy, long one-year old shoots (loaded with a nice amount of fruit inside the BOX!) will be mechanically pruned late next week (~August 8-9) and then will be immediately pneumatically defoliated to improve color development without the use of reflective fabrics or pgrs.

- **Summer pruning:** This practice should have been started by now with this early season and for early cultivars. In some cases and to avoid sunburned fruit, summer pruning should be conducted inly in the east side of the row and until 6-7 ft height.

- **The war on bitter pit!:**
  - This very special Ag-type of war against bitter pit on 'Honeycrisp' or targeted/customized management to reduce the incidence of bitter pit should have been started way earlier this year. You can not expect to win this war by only applying foliar calcium sprays late in the season if you did not do the most important things earlier in the season to increase fruit calcium levels before 30mm.
  - If you are not fully aware, more and more growers this season (both sides of the city!) made sure that EARLY nutrient uptake of available soil Calcium (or applied early through irrigation) was optimum with adequate soil moisture levels during cell division the first 6 weeks after bloom with enough irrigation early in the season.
  - Do not forget that early foliar calcium sprays before or at petal fall and until 30mm are valuable but not essential.
  - The most important period for foliar calcium sprays is from 30mm until harvest because xylem disfunction during this period limits the movement of calcium to the lower half of the fruit.
  - As we have mentioned in previous seasons, instead of a single managing approach against bitter pit, we have been suggesting for a multipronged approach to managing this calcium deficiency disorder on 'Honeycrisp'.
  - The 2024 peel sap results were already sent to growers in the last two weeks. In general, the overall Ca level is lower than last year, but it's not bad at all.
  - We expect to see a bit more incidence of bitter than the almost zero incidence of bitter pit we predicted at this same time last year.
  - As we approach the use of plant growth regulators for drop control on 'Honeycrisp' orchards and if you got a **high K/Ca ratio of 27 or higher** as determined by the peel sap analysis, we recommend that growers:
    - **Do not apply Retain or Harvista** to avoid exacerbation of bitter pit development this year.
    - Don't precondition at 50°F for one week when risk is high and store immediately at 38°F for one month before packing.
- **Deficit irrigation for Honeycrisp orchards (if irrigated):** We recommend that irrigation of Honeycrisp orchards be suspended on August 1 (yesterday!). This imposed water stress can reduce bitter pit by limiting vigor and fruit size as both vigorous trees and large fruit size contribute to bitter pit development. However, even with the suspension of irrigation, we can not control rainfall and in many years large storm systems can bring large amounts of rain to WNY. We suggest that deficit irrigation in the later part of the season during fruit cell expansion can reduce bitter pit incidence.
- **Summary - Please remember that the important things that you did early in the season will contribute more than the late foliar calcium sprays applied at the end of the season to try to reduce the incidence of bitter pit:** Foliar calcium sprays can increase calcium levels in fruit by a small amount of approximately 10%, which is insufficient to overcome calcium deficiencies in the fruit. However, when proper amounts of calcium are added to the soil and sufficient irrigation is applied, fruit calcium levels are naturally often close to being adequate and then foliar calcium sprays can add enough calcium to significantly reduce bitter pit.

- **Apple scab** continues to infect many orchards. Keep your fungicide program going if you see scab symptoms. Rotate between single-site products such as Cevya (0day PHI), Merivon (0day PHI), Tesaris (0day PHI), Rhyme (14day PHI); Flint Extra (14day PHI), Luna Sensation (14day PHI), Aprovia (30day PHI), and Sovran (30day PHI).
- **Summer diseases** such as **sooty blotch and flyspeck**, **black rot, white rot and bitter rot** are now a main focus as we move into mid-summer.
  - Products that are effective for SBFS, and black, white, and bitter rots include Flint Extra (14day PHI), Inspire Super (14day PHI), Luna Sensation (14day PHI), Merivon (0day PHI), and Pristine (0day PHI).

- **In general, fungicide covers for the rots go on every 14 days**, but remember that 1.5" of rainfall would trigger a re-cover (rule of thumb, varies some by product).



- **Apple maggot** has reached threshold on baited traps (cumulative 5 flies per trap) in all counties where we have traps set. Consider **Assail or Imidan** (both 7 day PHI) for AM management. The pyrethroids Baythroid (7 day PHI), or Danitol or Mustang Maxx (14 day PHI) are also effective options, but likely to cause flair ups in mites and/or woolly apple aphids due to removing natural predators.
- **Woolly apple aphid** populations continue to increase. Your best management window for WAA was spring/early summer. Management options now include: Sefina (7day PHI), Sivanto Prime (14day PHI), and Versys (7day PHI). **Coverage is critical** so drive slowly and use a high gallons per acre. Watch for more information about Dr. Rivera's WAA insecticide trial at the summer tour and winter meeting.
- **Brown marmorated stink bug** continues to be present at low numbers. None of the blocks I monitor have yet reached threshold. If you have a history of damage in your blocks and want to plan an application, effective materials include Brigade (30day PHI), Beseige (21day PHI), and Leverage 360 (7day PHI).

Stone Fruits

- **Cherry leaf spot** has been seen in several orchards; even if you have never seen this disease before keep an eye out for it this year – it has been a perfect year for diseases to build up. Early symptoms are brown/rusty speckling of the leaves, which then leads to leaf yellowing and defoliation. This may lead to poor overwintering and poor fruitset for next year. Post-harvest chlorothalonil is a good fungicide – it will not cure the disease already present but may help prevent it from spreading. If you have cherry leaf spot symptoms now, this fall would be a good year to try using urea or a brush hog to break down fallen leaves in the fall, and to use a dormant copper application either this fall or next spring.

Berries

- Collect **foliar samples** of berry crops you are planning to keep around next year. A foliar sample consists of 40 mature leaves from this year's growth. Rinse leaves to remove any product residue, allow to dry, and mail in a paper bag. Link to Dairy One foliar sampling form. Your agricultural product dealership may also offer foliar testing-- we recommend keeping the same lab from year to year to have consistency in extraction methods, which can affect the results of your analysis.
- Sample blueberries and raspberries for **spotted wing drosophila** using the salt float test (link to instructions, or contact us for a paper copy). Many U-picks are closing this week due to the high levels of spotted wing drosophila in their fruit, compounded by the frequent rains this summer that made applying insecticides challenging.

On the Horizon

For berries: Consider preventative applications of copper octanoate (such as Cueva) on a cool, cloudy week (when maximum daily temperatures are around 80˚F) to control foliar diseases, such as leaf spots and leaf blotches, on strawberries and raspberries.

Plan to register your Hispanic employees for the Hispanic summer tour on Saturday August 17:

Registration for the tour (including food and beverages to be offered at the end of the tour at the Russ Martino pavilion of Town of Yates) is **FREE** thanks to funds provided by Farm Credit East.

IMPORTANT - Registration process for the 2024 CCE LOF Hispanic summer fruit tour:

Pre-registration will be required for attendance of your Hispanic employees (55 participants is the limit!) for the CCE LOF Hispanic tour this year (the last day for pre-registration will be Wednesday August 14, 2024 by 5pm). It is especially important for food counts/seating, and handouts.

We encourage all growers to register their Hispanic employees EARLY (again, there will be a limit for registration of 55 people!) by **emailing a list of participants** with first name(s) and second last name(s)) plus a phone number from your organization to Mario (mrm67@cornewll.edu) or Janet (jev67@cornell.edu). Please contact Mario or Janet if you need more specifics about the tour or have any doubt.

Good to Know

Have you experienced, seen, or heard of a sudden leaf yellowing on Gala trees and not in other cultivars? Are the yellow leaves still on the Gala trees, have started to drop, or are already on the ground orchard? Please let us know if you are experiencing similar issues with Gala!

During the last LOF social event conducted at Van Ackers this past Wednesday, there was a discussion about a sudden leaf yellowing being experienced predominantly on Gala trees. We were first told a couple weeks ago about this issue of a sudden development of leaf spots, blotches, or a quick yellowing of leaves. In some of the cases reported earlier, there is already significant defoliation not common at this time of the year. This early and sudden defoliation may have reduced fruit size especially in orchards without trickle irrigation. Some Gala growers with irrigated blocks also began to experience similar leaf yellowing recently. Initially, the first symptoms were reported by Gala growers in Orleans county, but by now the Gala leaf yellowing has been reported in several sites in Wayne County as well. There are also Gala growers that are not reporting any issue with leaf yellowing at this moment. In some instances, there are Gala blocks showing the typical symptoms while that another nearby Gala block is not showing the symptoms at all.

What do we know at this moment?

- The leaf yellowing symptoms we are seeing on Gala seems to be very similar to the necrotic leaf blotch reported in the literature. However, symptoms this year are much worse than we have seen previously, and so we are still in the process of confirming what is causing this leaf yellowing.

- Necrotic leaf blotch is a physiological disorder and is not produced by a fungal disease. The exact cause of necrotic leaf blotch is not known, but it is associated with a Zinc deficiency and is often triggered by a period of cool temps and rain followed by heat.
- Necrotic leaf blotch occurs on 'Golden Delicious' and is also seen in other cultivars with Golden parentage like Gala. Other descendants of Golden Delicious include Goldrush, Jonagold, and Pink Lady.
- Gala is a cross between Kidd's Orange Red and Golden Delicious. It was bred in New Zealand many years ago.
- The similar looking Glomerella leaf spot is caused by a fungal pathogen. At first glance, it can look quite similar to necrotic leaf blotch. They can be distinguished by looking under a microscope for fungal spores, or by putting a sample of leaves in a plastic bag at room temperature to allow the fungus to grow. Unfortunately, the same cultivars are highly susceptible to both Glomerella and necrotic leaf blotch. However, usually an orchard with strong season-long scab fungicide applications will be unlikely to develop Glomerella – suspect Glomerella in organic blocks and those where lack of primary scab symptoms led to a reduction in late-season fungicide applications.

What can you do if leaf yellowing symptoms are showing up on your trees by now?

The first step will be to confirm what is causing the symptoms on your trees. Please call or text us to let us know you are seeing these symptoms, both so we can help confirm the diagnosis, and also because we are looking for further information about how widespread this syndrome is this year.

If it is confirmed to be caused by necrotic leaf blotch, foliar zinc oxide may diminish symptoms.