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Cooperative Extension

Lake Ontario Fruit Program
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"*Fruit Facts*" – Tuesday, Aug 5th, 2025

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It really goes without saying but we couldn't have asked for a better day for the WNY annual fruit tour last week!

A large group of growers attended the 3rd Annual Western NY fruit growers tour featuring Wayne County.

Tour organizers would like to send a big thank you note to the growers that hosted the tour:

(1) Ted and Todd Furber from Cherry Lawn Fruit Farms,

(2) Kristen DeMarree, Alison DeMarree, and Tom DeMarree from DeMarree Fruit Farms, and

(3) Ned Morgan from Morgan Farms.

To Do Today

Harvest Date Prediction & The Use of Plant Growth Regulators Near Harvest for Gala and Honeycrisp (Terence Robinson and Craig Kahlke):

The 2025 growing season in WNY appears to be tracking about 4 days behind the early season last year. Forecasts form the National Weather Service Climate Prediction Center for the month of August (https://www.cpc.ncep.noaa.gov/products/predictions/30day/) are predicting normal temperatures for August and normal precipitation. If the weather patterns for the rest of the summer are as predicted (normal for August) we will likely see a "normal" start to the harvest season. To help growers time the applications of ReTain we give the following predictions.

- Gala harvest should begin about Sept. 5 inland and Sept. 8 lakeside
- Honeycrisp harvest should begin about Sept. 10 inland and Sept. 12 lakeside
- McIntosh harvest should begin about Sept. 7 inland and Sept. 10 lakeside

As we get closer to harvest follow the **Harvest Maturity Reports** and test your apples to dial in ideal harvest timing.

Predictions for Harvest 2025

- Pre-harvest drop: We had a significant number of days with temperatures greater than 90°F in June and July, but few days are predicted for August, thus we expect a moderate risk of preharvest drop.
- Color development: Temperature for the next two weeks in August are predicted to be slightly warmer than normal but in the last 2 weeks of August they are predicted to be cooler than normal which should result in good early color
- Fruit size: Fruit size is very large due to good heat units so far and great water supply.
- Bitter pit: Our peel sap results show a moderate level of Ca but high N levels and a slightly elevated K/Ca and N/Ca ratios; Thus, we expect a moderately high risk of bitter pit.
- Chilling injury: The predicted warmer than average temperatures in the next two weeks indicate a relatively low risk of chilling injury.

Suggested timings and rates of ReTain for pre-harvest drop control, harvest management and control of greasiness. Cracking, internal flesh pigmentation and stem end flesh browning.

- **Gala.** Almost all Gala blocks that are destined for long-term storage should receive Retain before harvest to control stem end flesh browning. We recommend the application of only ½ pouch/acre of ReTain at the 3 week before harvest which will be **August 15 inland** and **August 18 lakeside**. Later timings will also control drop, greasiness and cracking and can control stem end flesh browning. (Note from Chris Watkins: we find that the later applications can be just as good as earlier ones for FB control if fruit are stored in low oxygen and 38F, but firmness is compromised if fruit have not been treated with PGRs.) If a further delay of harvest is desired a second application of ½ pouch per acre of Retain should be made 1 week before harvest (about August 29 inland and Sept. 1 lakeside). The two applications of ReTain will permit Gala fruit to remain on the tree an additional 14-21 days resulting in improved fruit size (1 box size with a 21-day delay). Although color development will be delayed if harvest is also delayed then good color will develop. ReTain results in a more uniform maturity on the tree. Multiple picks on Gala can be reduced to 2 or even 1 picking in some cases.
- **Honeycrisp** is very sensitive to ReTain and in most cases is not needed; however, in some years there can be significant pre-harvest drop and ReTain can control the drop; however, it must be applied before drop begins. Farms with large acreages of Honeycrisp can use ReTain to spread out the harvest. We recommend a very low rate of 1/3 pouch per acre of ReTain applied 2 weeks before expected harvest (about August 27) in blocks which have had a drop problem in the past or where harvest delay is needed. A note of caution: ReTain on Honeycrisp can have negative consequences during storage of this variety. If the risk of bitter pit is high (high K/Ca ratio or low crop load), then ReTain will increase the bitter pit incidence during storage. The decision on whether to use ReTain on Honeycrisp should be made only after an assessment of the risk of bitter pit risk.

An update about the 2025 peel sap nutrient results and ratios: A total of 108 Honeycrisp blocks for peel sap analysis were sampled in early July. The analysis results were sent to the packers on Sunday July 20. The WNY min, average, max values and the interpretative keys for the peel sap ratios of K/Ca and N/Ca were provided at the bottom of the respective peel sap nutrient data provided to each of the packers.

The mean peel sap N level across 108 samples we received from WNY this year is significantly higher than last year (around 101 ppm this year vs. 66 ppm last year), leading to a higher mean N/Ca ratio (3.5 vs. 2.1 last year). This is most likely due to the wet spring/early summer we had this year. This could increase bitter pit risk and other fruit quality problems at harvest and during storage.

The mean peel sap K/Ca ratio is about 1.5 units higher this year than last year (24.5 vs. 23.1 last year). This is probably related to good soil moisture conditions in May, June, and early July this year as well, which promoted more K uptake than Ca uptake.

For blocks with medium or high bitter pit risk, we suggest increasing the frequency of foliar Ca sprays, strictly controlling/stopping irrigation by the first week of August, and skipping Retain or Harvista applications to mitigate the risk.

Recommendation of deficit irrigation (DI) for Honeycrisp in early August: This year we are recommending that irrigation of 'Honeycrisp' orchards be suspended on August 1 to limit the uptake of K to limit bitter pit incidence. This imposed water stress can reduce bitter pit by limiting vigor, reducing K uptake and reducing excessive fruit size as both vigorous trees and large fruit size contribute to bitter pit development. However, even with the suspension of irrigation, we cannot control rainfall, and in many years, large storm systems bring large amounts of rain to Western NY.

The reasons and importance of deficit irrigation to reduce bitter pit on Honeycrisp. An early season dry period (May-mid June) or mid-season dry period (first half of July) can also be related to increased incidence of bitter pit due to poor Ca uptake. Thus, in dry years irrigation should begin during the early season and continue through July to ensure adequate Ca is absorbed by the plant and transported to the young fruitlets. However, irrigation in August likely causes increased bitter pit. This is because in 'Honeycrisp', xylem functionality in the fruit itself begins to decline in mid-July and by August 1 is almost completely lost meaning that Ca which arrives to the fruit stem end cannot be moved down the fruit to the calyx end anymore. However, K can still be moved down the fruit via the phloem. When the month of August is wet due to either rainfall or irrigation, the uptake of K continues at a high rate causing too much K in the lower part of the fruit but Ca cannot be moved into the fruit resulting in a high K/Ca ratio. We therefore recommend that irrigation of 'Honeycrisp' orchards be suspended on August 1 in Western NY.

Some key factors supporting the use of deficit irrigation in August for Honeycrisp: They include low crop load, high vigor, and high potential for large fruit. If the trees are calm, the K/Ca ratio is low, and crop load on target or higher, then deficit irrigation likely isn't needed because the risk of bitter pit is low.

Disease and Pest Outlook:

- **Apple maggot fly** numbers are still below threshold in the traps where I am monitoring. Threshold for a non-baited trap is a 2 apple maggot flies per week per trap. Apple maggot management options include the diamides (which double up for lep protection): Altacor (5day PHI) and Exirel (3day PHI). A highly recommended AM product is the neonicotinoid Assail (7day PHI). Other options include the organophosphate Imidan (7day PHI), and the pyrethroids: Baythroid (7day PHI) and Danitol and Mustant Maxx (both 14day PHI).
- **Japanese beetles** are beginning to show up in orchards. Watch for leaf skeletonizing or for the beetles themselves. If you see damage, consider using Assail if you are able for your next cover spray (4applications per year; 7day PHI).
- **Woolly apple aphid** continues to build up in many blocks, although the rains seem to have set them back some. Scout now and manage WAA problem blocks before they have time to build up large colonies that can protect the center aphids from any contact with a spray. WAA can be controlled by Sefina (7day PHI), Sivanto Prime (14day PHI) or Beleaf (21day PHI) at this timing.
- **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** management continues now through harvest.
    - 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).
- **Brown marmorated stink bug** is likely to begin to move into orchards around this timing. If you plan to monitor for BMSB, put those traps and lures up now. Across the state BMSB numbers have been now this year. However, if you have a history of damage in your blocks, effective materials include Brigade (30day PHI), Beseige (21day PHI), and Leverage 360 (7day PHI).
- **We are just beginning the second generation flight for Codling Moth and Oriental Fruit Moth**. Sometime mid-week next week will be the best timing to target larvae. Save your best lep materials for next week's spray.