Cornell University
Cooperative Extension

Lake Ontario Fruit Program
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"*Fruit Facts*" – Tuesday, May 30th, 2023

Mario Miranda Sazo, Janet van Zoeren and Anya Osatuke

Register Your Spanish- and English-speaking orchard employees for the Bilingual IPM WNY Fruit School

When: Thursday June 14 from **8:30 a.m.- 3:30 PM** (attendance is free, lunch included thanks to a generous support provided by Farm Credit East)

Place: Bible Baptist Church of Sodus, Wayne County
6181 Ridge Rd., Sodus, NY 14551

Register your employees by Friday June 9

Registration: https://cals.cornell.edu/new-york-state-integrated-pest-management/outreach-education/events/escuela-bilingue-de-mip-en-frutas

This event in Spanish and English brings the farming community together to learn more about pests and diseases in apple orchards, pesticide safety, soil health, and leadership.

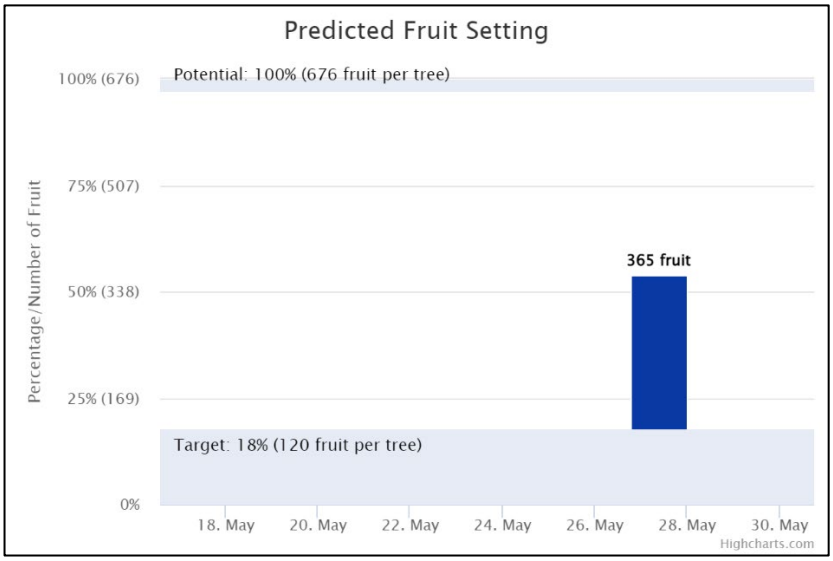
- This is also an opportunity to meet other farm employees, share ideas and experiences, and connect with agricultural service providers!
- Join the NYS Integrated Pest Management, Cornell Small Farms Program, CCE Lake Ontario Fruit Program and New York Soil health program for a Spanish/English IPM Field day!
- If you require more information or special accommodations or if you need to register more than one person please send an email to Diana Obregon in English or Spanish: do265@cornell.edu

To Do Today

- **Read/review the article sent last Wednesday May 24 titled '2023 WNY Thinning Recommendations for Blocks That Were Damaged or Not by the Recent Frost'.** The article provides detailed information about:
  - An assessment of the damage to the WNY apple crop.
  - Explains how to conduct fruitlet evaluations for cold damage.
  - Predicts optimum thinning windows for blocks located south and north of 104.
  - Suggests recommendations for several cultivars for chemical thinning at 10-13mm fruit size.
  - Lists chemical thinning programs for young trees.
  - And provides detailed spray mixing instructions considering tree row volume.

- **There is still a thinning job for a Honeycrisp site analyzed this morning (see summary table and predicted fruit setting):** This site did not receive a bloom spray and got only a petal fall spray applied on Friday May 19. The site was not damaged by the frost. Fruit diameter measurements for the Fruit Growth Rate model were conducted on Tuesday May 23 and Sunday May 28. The biggest fruitlets averaged 10.5mm on Sunday and there were a very few fruitlets with frost rings. The petal fall thinning spray reduced fruit set to about 52%. There are still 245 extra fruits hanging on the tree. The 12-13mm thinning spray is scheduled for Wednesday or Thursday of this week.

Site	Cultivar	Estimated total Initial fruitlets	Target N° of Fruitlets	Calculated N° of fruit on tree	% Fruit set	Extra fruit still on tree	Recommendation
Wayne, block 21C	Honeycrisp	676	120	365	52%	245	Need a spray of Maxcel plus Sevin



- **Irrigation reminder:** Be aware of the warm and dry weather of this end of May, which can cause significant water deficits. We're in the middle of cell division and about to start cell expansion, water shortages at this point can be critic and hard to recover later on the season.

  According to the apple irrigation model, a mature orchard in Western NY with about 1,156 trees/acre will have an average DAILY evapotranspiration of 3,500 gal/acre. A rainfall of 0.5 inches is ~ 9,500 gal/acre, so, unless we have some significant rain, we will have a considerable water deficit accumulated over the week. Check the NEWA apple irrigation model to be more accurate for your orchard.

  Frequency of irrigation depends on soil type: With sandy soils, water should be added either daily or every 2 days. With silt or clay soils, the daily amount of water needed can be added up for several days.

  Remember, if irrigation fails, nutrition fails.

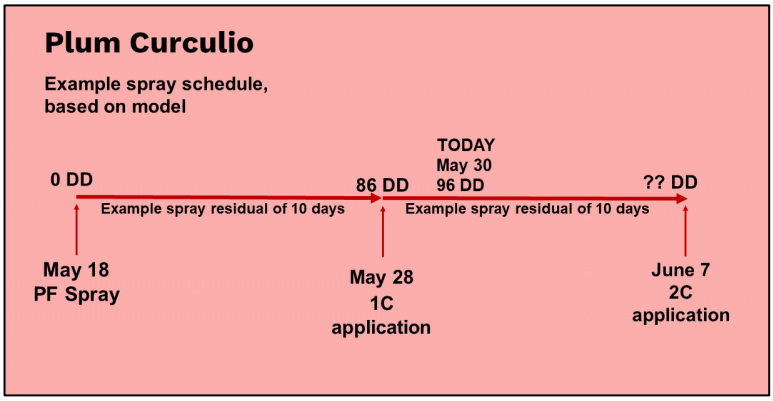
- **Growers can still develop and use practical 'cold damage distribution maps' to guide thinning sprays this week:**
  - By now growers should have a better idea of the extend of cold damage at their farms. This information can be hand-drawn and colored by cold damage levels as shown in the drawing.
  - Hopefully, several growers carefully assessed their blocks (bottoms and tops with the use of ladders) and did not find damaged fruitlets and the crop needs to be thinned with full/normal rates.
  - For those growers with a **whole range of damage levels** (none, low, moderate, high) with some blocks showing no damage and others showing massive fruit damage, we suggest the use of **cold damage distribution maps** to guide thinning sprays.
  - If through a systematic assessment of damage levels growers find that only **20-30%** of the fruitlets are damaged then a full dose thinning spray will remove the damaged fruitlets and also thin of excess fruits.
  - If the damage level is more severe where around **50%** of the fruitlets are damaged then a reduced rate thinning program is prudent.
  - However, if damage levels are in the **70-75%** level then no thinning sprays is suggested.

- **Expected optimum thinning window:**
  - The main thinning window closed yesterday (Monday May 29) for blocks located south of 104.

  For blocks located north of 104, it started yesterday and will be open until tomorrow Wednesday May 31, or possibly until Thursday June 1.

- No risk of **Apple scab** this week. Apple scab foliar symptoms began showing up in hotspot blocks this week.
- **Fire blight** could triggered in any blocks **with continuing open bloom**, when you apply thinners or cover sprays this week. The wetting from the spray is enough for the bacteria to infect open flowers.

  If you see any fire blight ooze in your orchards please let me know. I've seen it in research blocks but have not yet seen any in commercial orchards.
- **Watch for powdery mildew**. Some locations have fairly extensive PM infection already this season. Some options for PM control include Flint extra, Inspire Super, Luna Sensation, Merivon, Miravis, Rally, and others.
- We've begun to see PC damage scars in apples and stone fruits. **Continue to keep Plum Curculio coverage in your blocks!** With the cooler temperatures we've had the past week, it will likely be a long plum curculio oviposition season. As a reminder, plum curculio continues to ovisposit until we reach 308DDs past petal fall. At this time, we're at around 70DD at most locations (using a petal fall date of ~May 18th). To be more precise, calculate using NEWA and your own petal fall and spray dates.



  Materials effective against PC include: Exirel, Imidan and Verdepryn (also control OFM), Actara (also controls Rosy apple aphid), Assail and Avaunt.
- Spray to target **oriental fruit moth** larvae should go on this week.
  - inlands sites ~Thursday for OFM
  - lakeside sites over the weekend for OFM
- However, note that OFM damage is usually not as prevalent as codling moth damage, so unless you have a known history of OFM larvae in your fruit, you may want to **target codling moth** with an ovicide this week or a larvicide next week.
  - Inland sites Rimon application ~Wednesday for CM
  - Lakeside sites Rimon application over the weekend for CM

Good to Know!

The MaluSim model is NOT designed to simulate stresses like frost or drought damage. Growers should not use it as normal though it will still give some idea of weather-related differences in extremes of sensitivity:

- The carbon balance model is not a reliable guide here because it was constructed upon the data collected from healthy spurs.
- According to Cornell Professor Emeritus Dr. Alan N. Lakso, the model assumes a healthy tree with good water relations, nutrition, and normal function, so it does not try to account for stresses like the unexpected frost recently occurred on May 18.
- Such stresses will change the carbon supply if the leaves are hurt and would affect the demand if the number of fruit are reduced.
- It still will give an idea if there are major carbon deficit in addition to any frost problems.
- Growers have to know this so they do not depend on the model under these conditions as carbon balance may vary well not be the limiting factor (or might be due to tree damage, not due to weather).