Cornell University
Cooperative Extension

Lake Ontario Fruit Program
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# "*Fruit Facts*" – Wednesday, April 10th, 2024

Mario Miranda Sazo and Janet van Zoeren

## Register for the Cornell Statewide Frost Protection Webinar
## Friday, April 12, 12:00 – 1:30pm
## Register at the following link: bit.ly/4aENAFq

Spring started earlier than usual in some parts of New York's fruit production regions, and CCE is taking a proactive approach to get information on frost protection and its science out to NY fruit growers. There have been some advances in frost protection in recent years, along with promising ongoing research. We will be having a **Cornell Statewide Frost Protection Webinar** with several Cornell scientists and an invited speaker this Friday. Growers will have plenty of time to ask questions during this very informative webinar as apple trees continue advancing their bud phenology.

**Agenda:**

**Introductions**
*Mike Basedow and Mario Miranda Sazo, CCE*

**Climate Monitoring of Apple Bud Development and Freeze Risk**
*Jessica Spaccio, Climatologist, Department of Earth & Atmospheric Science (EAS), Northeast Regional Climate Center (NRCC), Cornell U.*

**The Physiology of Frost Damage, and the Practical Challenges of Testing Mitigation Tools**
*Dr. Jason Londo, Cornell AgriTech*

**Practical Tips for Using Promalin as a Frost Mitigation Tool**
*Dr. Terence Robinson, Cornell AgriTech*

**Research on Sprayable Frost Protectants**
*Dr. Brent Arnoldussen, University of Kentucky*

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## Virtual IPM Scout Training to Take Place April 15

**Registration now open: https://bit.ly/2024-orchard-scout-training**

**2 DEC credits offered for this virtual training.** If you will want credits, please send a picture of your applicators license to Anna Wallis (aew232@cornell.edu) prior to the 15th.

**What:** Join us for a live, virtual training on scouting of major insect pests of apple orchards. Anna Wallis (NYSIPM Program), Mike Basedow (CCE ENYCHP) and Janet van Zoeren (CCE LOFT) will broadcast from orchards in their region to discuss best practices for monitoring. We will review monitoring/scouting procedures for major economically significant pests. We will also share resources available for helping with identification of pests and forecasting pest activity.

**Who**: Anyone on your farm with IPM responsibilities, who is looking for new or refresher training.

**When:** Monday April 15, 2-4PM

**Where:** Virtual via Zoom.

## Fire Blight Webinar Series

Updates from a multi-state research project involving MI, NC, NY, CA, OR and WA funded by the Specialty Crop Research Initiative.

**April 18, 2024 @2pmPST/5pmEST,**
**"Fire Blight Moves Fast in the Plant. Prune Fast to Stay Ahead"**
Katherine Olive, Michigan State University

**Nov 6, 2024 @2pmPST/5pmEST**
**"Plant Defense Products Actigard and Kudos/Apogee"**
George Sundin, Michigan State University; Tom Kon, North Carolina University
Co-authors Kerik Cox, Cornell University; Tianna DuPont, Washington State University and Sara Villani, North Carolina State University

**Register at: https://events.anr.msu.edu/fireblight_webinar_series_2024/**

1 pesticide update credit requested per session from NYS DEC

## *To Do Today*

- **Topping of rootstocks in the on-farm nursery:** Don't forget that the portion of the rootstock above the inserted bud should have been removed by now (Figure 1). A few Wayne growers already pruned or are close to finish by the end of this week. Please do this if you have not done it yet. Any sucker growth that occurs on the rootstock should be removed by rubbing it off as it is shown in the below picture. This may be necessary 1-2 times before the growth from the inserted buds dominate.

**Figure 1.** An on-farm nursery where the top portion of the rootstock was recently pruned (right).

- **Remove also the top of the rootstocks for some plant-in-place projects that were budded last summer:** Please do this asap in the orchard (see below Figure 2). Make sure the tape is removed and it is not covering the new bud.

**Figure 2.** A plant-in-place project where the top portion of the rootstock was just pruned one inch above the inserted bud. Please make sure the tape is not covering the bud. Install a horizontal wire and support the new shoot with a vertical element in the next weeks.

- **Start planning or continue the annual maintenance of your trellis system:**
  1. Replace broken and weakened posts (see pics taken in a mature Honeycrisp block yesterday)
  2. Re-pound anchors and in-line posts that have heaved.
  3. Straighten leaning posts.
  4. Check and replace pulled staples especially those at stress points where wire changes direction.
  5. Readjust wire tension before this year crop.

**Other important essentials to building a support system that will withstand almost anything:**

- Use pressure-treated or a rot-resisting wood species. Lodgepole, Southern yellow pine, Locust, and Cedar are the best. All locally sourced posts should be debarked. Avoid wood species that have whorled branches, and large knots. End posts and anchors should be at least 4-5 inches and inline posts 3-4 inches in diameter.

- Match the trellis system to the planting system. Trees in tall planting systems such as the "Tall Spindle" or "Vertical Axis" should be supported to 10 feet. Use 10 foot end and in-line posts with individual tree stakes to provide tree support and use 12 foot posts when wire alone provides tree support.
- Use an equilateral triangle end assembly consisting of an angled end post, high tensile steel wire, and the distance along the ground from the base of the angled post to the wire as the three sides of the triangle. The physics of this end assembly is the most stable of all end assemblies.
- Drive posts – do not auger. Driven posts will not move through the soil
- "Deadmen" or screw-type anchors are not as strong as driven anchors. Rings on the ends must be securely welded to prevent straightening out under stress.
- Drive the anchor post vertically 3-4 feet into the soil. This will seat the anchor below the frost line to prevent heaving and the resistances preventing the anchor from being pulled out of the ground will be maximized.
- Space inline posts no more than 30 feet apart. Increasing crop load and taller systems have created more torque on the support system than before.
- Pound end and inline posts at least 3 feet deep to prevent frost heaving.
- Drill the post for the top wire and thread wire through. One of the major causes of trellis failure is staple pull-out. By drilling through the posts and threading the top wire, staple pull-out is eliminated. Any additional wires on each post can safely be attached with staples without the threat of pull out.
- Use 1.75 inch galvanized barbed staples to minimize pull out and use two staples (1 horizontal and one vertical) at stress points where wire changes direction. This provides 3 points of contact for the wire. Be sure and drive staples so that arms flare away from each other rather than toward each other.
- Use 12.5 gauge Hi-Tensile steel wire. Soft wire will stretch too much.
- Use a high quality wire tightening device on each wire so that wires can be tightened and loosened as needed.

- If you did not do so yesterday or Monday, today may offer a window to apply any scab protectant product (i.e. **Captan** or **Mancozeb**) for apple blocks, and any blossom blight protectant (**i.e. Echo, Bravo, Rovral**) for stone fruits with open flowers. **Make sure your blocks are covered prior to the rains coming the latter half of this week!**
  - **Avoid copper after ¼" green on fresh varieties, or after ½" green on processing blocks** (rule of thumb - see label for product-specific directions).
- We have a good window now to apply 2% oil, **unless you are within 10 days of a Captan application** (before or after).

## *On the Horizon*

**Time to start thinking and getting ready your frost protection devices:** Apple growers should check and test the use of frost protection devices (wind machines) next week. Typically, a wind machine can protect 10 acres or so. We emphasize that the best methods to reduce frost risk and prevent crop loss are through **orchard site selection** and the use of wind machines during frost events.

**Site location matters:** New stone and pome fruit plantings will be more prone to future frost events if located in low-lying areas where cold air settles, and in areas where wind and air movement are blocked by obstructions such as trees, hills, fences, and or buildings.