



“Fruit Facts” – Thursday, April 28 2022

TODAY Statewide Pink Webinar (Zoom) – Thursday April 28, 11:30 AM – 12:30 PM (EST)

Early season precision crop load management strategies, along with pest and disease management recommendations by Cornell University faculty and Cornell Cooperative Extension Fruit Team specialists. Jointly hosted by the CCE Lake Ontario Fruit Program and the CCE Eastern NY Commercial Horticulture Program.

Please click the link below to join the webinar: **(no registration required)**

<https://cornell.zoom.us/j/93872441577?pwd=N2JhZWISbExFYUp2NEVqUzdRcXhJUT09>

Passcode: 913325

Agenda

- Craig Kahlke (CCE-LOF) - Welcome, Introductions, Plans for Future Spring Programming (5 minutes)
- Dr. Terence Robinson (Cornell U) – Precision Crop Load Management in 2022 (30 minutes)
- Dan Donahue (CCE-ENYCHP) – The Use of Prohexadione CA at Pink in Honeycrisp for Bitter Pit Mitigation (5 minutes)
- Dr. Kerik Cox (Cornell U) - Spring Disease Management (10 minutes)
- Dr. Monique Rivera (Cornell U) – Spring Insect Management (10 minutes)

The webinar will be recorded and posted to our YouTube channels shortly thereafter.

IPM Notes...Janet van Zoeren

Apple scab: There was a significant infection event across the region Monday and Tuesday. A product with kickback applied yesterday would clean that up, and if you weren't able to cover all your blocks yesterday, one applied today would still kick back to clean-up Tuesday's spore release.

Powdery mildew thrives in high humidity and temperatures in the 50s and 60s... Products with high efficacy against PM, as well as 48hrs kickback for scab, include **Flint Extra, Inspire Super, Luna Sensation, Miravis, Merivon, and Sercadis, as well as many others**. Check the recommends for a full list of products that are effective against scab, PM, cedar apple rust and summer rots, depending what diseases you have a history with.

A single **oriental fruit moth** was trapped at an inland orchard in Orleans Co this week. This is the same week as when we trapped the first OFM in that orchard last year, and last year it was mid-May by the time moths were trapped regularly in other orchards. So, if I had to guess, I would say we have a couple weeks before moths in most sites. However, if you plan to use mating disruption for OFM/CM, and especially if you have a history of early or high OFM pressure, make sure to get those dispensers out in the next week or two. If you miss the beginning of flight at your orchard, then the moths will begin to mate, the disruption will be much less effective!

Black stem borer flight began last week; they were enjoying those 80-degree days. The cool weather we're having currently means they probably will not really start flying until temps are back into the 60s. If you have a history of BSB damage, wait till temps rise again, but well before bloom, to apply an insecticide. Labeled for use against BSB are the pyrethroids Danitol

2.4EC and Warrior II 2.08CS. Use care applying pyrethroids, as they may suppress natural enemy populations and cause secondary pest outbreaks.

If you are still considering a 1% TC oil application this spring, remember that application of oil within 48hrs of a frost event may lead to phytotoxicity!

As we move into tight cluster across the region, we move into a spray window for **rosy apple aphid** and **san jose scale**. Check the recommends for products effective against one of both those pests, especially if you have a history of damage from them. **These, among other insects, will be topics of discussion at today's 'pink' meeting (see link above to join at 11:30).**

Pear Psylla adults have been seen in several orchards. Scout terminal buds on your pear trees for ovipositing adults or eggs. If you find psylla adults or eggs, you can manage from now till bloom using an oil or Surround (Kaolin clay) application to delay egg laying, followed by an insect growth regulator (i.e. Esteem).

Fire blight is likely to continue to be an issue across the region, considering the high inocula levels we're starting with in many orchards this spring. We recommend you hit the ground running this year with an application of **prohexadione-calcium (Apogee/Kudos) at pink at 6 oz/100 gal**, PhCa at pink reduces fire blight pressure in two ways: by reducing shoot vigor and also thickening cell walls, meaning it may reduce both blossom blight and subsequent shoot blight incidence in high vigor blocks. This pink Apogee application is considered added bonus control, but *does not reduce the need for carefully timed sprays during bloom!*

Consider using mating disruption to keep on top of **dogwood borer**. Assail at petal fall may provide some control of DWB (also would double up as a good product against the internal leps), but relying on a single chemistry is asking for trouble with development of resistance. Mating disruption, in some orchards, would either complement or replace that Assail application. The same qualifications apply to DWB mating disruption as to the internal leps: a, if you have small irregular shaped blocks and are surrounded by non-disrupting orchards, mated females will likely fly in and you will not have good results, and b, be sure to get disruptors out before moths begin to fly (i.e. mid May). I would like to know your thoughts on DWB: Is it an important pest in WNY? Have you used or considered using mating disruption for this pest?

Stone Fruits:

The **brown Rot** management period in stone fruit has begun. Although the optimal range for pathogen development is above 60F, blossom infection can occur at any temperature above 32F. If you have a history of blossom blight, and especially for nectarine growers, rotate fungicides from pre-bloom through petal fall. There are many labeled products available (see Recommends), including Rovral 4 flowable (which may provide 24hr "kickback" activity) and chlorothalonil/Bravo (avoid when bees are foraging, if possible).

Any questions about pest management, please call or email me: jev67@cornell.edu, 585 797 8368.

Horticultural Notes...Mario Miranda Sazo

Think/plan ahead about the benefits of Boron and Zinc to overcome the effects of any early spring frosts that may occur in 2022: For years we have recommended pre-bloom applications of zinc and boron to stimulate early bud, leaf, and shoot development. Growers might consider applying Dr. Warren Stiles "spring tonic" of 3 lbs of urea (feed-grade) plus 1 lb Solubor plus 1 qt zinc chelate EDTA per 100 gal. Application of this tank mix to apples at **tight cluster to pink** has shown to **strengthen buds** and could help in a frost year.

The benefits of a prebloom boron foliar application are:

- (1) the spray provides boron to the flower during the critical period of development of the ovules and anthers.
- (2) improves pollen germination and pollen tube growth.
- (3) improves early season leaf and shoot growth.
- (4) is also beneficial in overcoming the effects of winter injury or early spring frosts.
- (5) a prebloom application of zinc can also help to stimulate early bud, leaf, and shoot development.
- (6) one of the most critical periods that a zinc shortage may seriously impair tree performance is between budbreak and fruit set. A zinc shortage at this time often results in poor growth of the leaves and new shoots as well as abnormal development of pollen tubes, ultimately resulting in poor seed set.

Nitrogen, potassium, and calcium recommendations for 'Honeycrisp' are different than for most other cultivars:

If you have leaf analysis results from last summer (leaf samples take in early to mid-July) then use the following **three rules to determine N fertilization rates**.

- For blocks with leaf N lower than 2.0% we suggest 20 to 50# of N per year to keep the tree vigor from falling too low. If tree vigor falls too low then no new renewal shoots develop from limb renewal pruning cuts.
- For blocks with a leaf N level between 2.0 and 2.25% we suggest slightly lowering the rate of N from last year's to allow a gradual lowering of leaf level to the 2.0% target.
- For blocks with a leaf N level >2.25% we suggest no ground applied N.

Based on leaf K levels, we suggest you use the following **three rules to determine K fertilization rates**.

- For blocks with leaf K lower than 1.0% we suggest 60# of K₂O per year to keep fruit size from being too small.
- For blocks with a leaf K level between 1.0 and 1.2% we suggest 30# of K₂O per year to maintain good fruit size.
- For blocks with a leaf K level >1.2 we suggest no K fertilization until leaf level drops below 1.2%.

Based on leaf Ca levels, we suggest you use the following four rules to determine lime fertilization rates.

- For blocks with leaf Ca lower than 1.3% we suggest 4 tons of lime every other year to raise soil calcium level even if pH goes to 7.1 or 7.2. If soil pH goes above 7.2 then add gypsum instead of lime.
- For blocks with a leaf Ca level between 1.3 and 1.8% we suggest 2 tons of lime every other year to raise soil calcium level even if pH goes to 7.1 or 7.2. If soil pH goes above 7.2 then add gypsum instead of lime.
- For blocks with a leaf C level between 1.8 and 2.0% we suggest 1 ton of lime every other year to maintain soil Ca.
- For blocks with a leaf Ca greater than 2.0% we suggest no lime but add gypsum until soil Ca level is ~5000 lbs. per acre.

Use/apply the "three-four fingers" stub-pruning concept to secure renewal in low vigor apple cultivars like 'Honeycrisp' and 'NY-1'. A few years ago we started noticing a low renewal rate of pruning cuts on low vigor cultivars, especially on NY-1 and Honeycrisp trees. This negative effect was even more pronounced when growers and their pruning crews tried to leave a perfect bevel or 'dutch' cut (by leaving more surface wood at the bottom, less at the top). In some extreme cases, we saw some untrained pruning crews leaving almost not surface wood for renewal (whether at the bottom or top of a bevel cut). This situation almost completely 'flushed' the wood for renewal and ended up producing long sections of blindwood along the trunk, without the possibility of any renewal. This negative effect of repetitive pruning with short, or almost absent stubs, and without successful renewal year after year, was more pronounced on very low vigor cultivars such as NY-1 and Honeycrisp.

When we started leaving stubs of 3-4 fingers length (a minimum of 2-3 inches) the rate of renewal was increased by more than **50-60%** in these low vigor cultivars.

"Don't head the leader!" for all the new plantings established in our region until now: A few growers are still asking if heading the leader for 3x11-12ft plantings is feasible when whips are planted. I tell them select and support the best leader as soon as possible with your trellis. Then, if needed, just do a bit of corrective pruning (review the '3Ts pruning rules' below) and remove branches that are too low (those located below 24-26 inches), broken, or are more than half the diameter of the leader by leaving a stub of three-four fingers length (minimum). Spray the whip with Maxcel for additional branching (short feathering) after budbreak. Pick a warm day for a Maxcel spray. The spray won't work with low temperatures.

Use the “3 Ts pruning rules”: After planting remove anything that is out of balance, especially any branch that is Too thick, and/or Too long, and/or Too narrow. Use the “3 Ts pruning rules” for new plantings. You can use the same rule for 2-year old plantings this year. Remove anything that outcompetes the main leader and leave the tree well balanced along the trunk.

Finish stubbing back pruning technique for Gala (before pink) this week: The ‘pencil size’ stubbing back technique is particularly important for all mature Gala cultivars grown as a Vertical Axe or a Tall Spindle apple tree. It has to be conducted for each fruiting branch to the point where it has “pencil diameter” size wood. To maintain high-density apple orchards over the long term the trees must be kept narrow and columnar with the top narrower than the bottom. When trees are mature, the tree height must be limited annually by cutting the trunk to a small side branch.

You can still adjust bud load targets via precision pruning (count, count buds!): Severity of pruning (especially for last minute pruning of ‘Honeycrisp’ and ‘Fuji’) can still be adjusted if your trees have excessive bud loads/tree today (count, count buds and get good estimates!). Growers should define a target final fruit number at harvest for each variety and orchard.

We expect a big bloom in Honeycrisp this season. So, how many flowering spurs to leave for a mature Honeycrisp tree in 2022? Last year several Honeycrisp blocks had a poor bloom. For many farms that have planted a lot of Honeycrisp, that was a large financial setback. Bloom is likely to be excessive in 2022, which will lead to poor bloom in 2023. Thus, 2022 is a critical year for managing Honeycrisp. **Please plan to attend the statewide pink webinar (zoom) at 11:30 today !** (see details above).

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 2019. 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.

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