



“Fruit Facts” – Wednesday, June 23 2021

Plan to register for the third ‘Honeycrisp Meetup’ next week..

Topic: Nutrition

When: Thursday, July 1, 2021

Time: 7-8:30 PM (EST)

Registration link: <https://lof.cce.cornell.edu/event.php?id=1544>

All recordings of the previous Honeycrisp meetup on crop load management are available at:

<https://mailchi.mp/wsu/virtual-honeycrisp-meetup-1305592?e=31e182fde1>

Our previous zoom meetings and much more is on our YouTube channel at:

<https://www.youtube.com/channel/UC6PXjEkx7nLDY1A81Ek5brQ>

IPM Notes...Janet van Zoeren

Internal Leps

Oblique banded leafroller DDs are at 300-330. It is recommended to apply a larvicide at 350DDs, which would be today or tomorrow in Niagara/Orleans Cos, and at the end of the week in Wayne County. Effective options include Delegate and Entrust (IRAC 5), Intrepid (18), and Altacor, Exirel, and Verdepryn (28).

Oriental fruit moth and **Codling moth** first generation flights are over, and second generation has not yet begun. No application necessary at this time.

Potato Leafhopper has been seen in the area. This is especially problematic in young plantings. Potato leafhopper can be controlled with a wide range of products, including neonicotinoids, pyrethroids, and carbamates.

Fire Blight. If you have any reason to believe you may have Strep resistance in your orchard, please contact me (contact info below) or Kerik Cox’s lab, to have it tested!

If you find fire blight in your orchard, you may want to consider applying prohexadione-calcium (i.e. Apogee, Kudos) at the highest rate for the planting (6-12 oz/100 gal, or 3-6 oz/100 gal for young orchards). This will shut down shoot growth, but may save the tree. Allow 5 days for the product to take effect, then prune out any shoot blight strikes. Avoid additional streptomycin applications after bloom, unless an infection event is predicted.

San Jose Scale crawlers are moving. Ideally, monitor for the bright-orange crawler emergence using black sticky tape (inside out electrical tape) on a branch of an infested tree to time your application for the beginning of crawler activity. Esteem, Centaur, Imidan, Admire Pro, Assail, Voliam Express, Endigo ZC, and Leverage 360 are effective products. You will likely need a follow up application 7 to 10 days later. A review of SJS management can be found in Peter Jentsch’s 2017 [blog post](#).

Aphids are still being seen in the fresh foliage. These are ok at low density, but don’t allow them to get out of control.

Powdery mildew. Continue to cover for PM approximately every 14 days until terminal bud set, rotating models of action. Options for PM include **Rally, Topguard, Flint, Sovran, Fontelis** and others. Some blocks looked like they were reaching terminal bud set already, but the recent rain has flushed new growth.

Stone Fruit and berries.

Spotted wing drosophila still has not really shown up in the area. Although we've caught an odd single adult in a trap on occasion, we have not caught more than 1 per trap, or reached sustained trap catch, at any site. Although fruits are beginning to ripen, it may not be necessary to control for swd yet this year. That is a risk calculation that will be farm specific. However, if you would be interested in monitoring your own plantings for swd, let me know.

Pear.

Pear psylla. If you had any signs of psylla this spring, continue monitoring through the summer. For summer monitoring, examine ~ 10 recently expanded shoot leaves per tree on ~5 trees per block. The action threshold during the summer is an average of 1.5 nymphs per leaf. We recommend you remove water sprouts from your pears trees in late June in blocks susceptible or at threshold for psylla. This will remove their best summer food source, keeping populations in check. If a spray is necessary, be aware that most of the products that are effective against psylla will have off-target effects on natural enemies, so be aware of you the costs and benefits.

Fabraea leaf spot. If you have had Fabraea in your peach block previously (note Bosc is especially susceptible), you will want to keep trees covered now through July 4th. Options include Topsin M, Ziram, Manzate and Syllit.

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

Horticultural Notes...Mario Miranda Sazo

Start thinking about Honeycrisp fruitlet collection for peel sap in 2021: In early July we will begin a cooperative effort between Cornell extension, growers, consultants and storage operators to collect Honeycrisp fruitlets statewide to analyze them for mineral nutrient concentrations. This is part of a statewide extension effort funded by ARDP to evaluate Honeycrisp orchards throughout the state for determination of fruit storage potential and the risk of bitter pit in storage.

Peel sap cost for NY fruit growers is minimal (\$5/sample): We would like to encourage all Honeycrisp growers to start thinking about which Honeycrisp blocks (or ideally all blocks at your farm) you would like to collect fruit for peel SAP analysis this July 2021. We are specially inviting all packinghouses and their Honeycrisp fruit growers to submit peel samples to CCE this season. There will be a **minimal fee of \$5 for each sample submitted**, but most of the analysis cost will be covered by the ARDP grant we were awarded. More information about timing for fruit collection, peeling protocol, and sample submission will be available in a coming CCE LOF newsletter article to be sent this week.

Leaf sampling collection for Honeycrisp is next week: Last year we recommended for the first time that growers collect Honeycrisp leaf samples for nutrient analysis about one month earlier than traditionally suggested dates for other apple varieties in early to mid-August. This season the optimal timing for leaf sampling collection is next week or the week of **June 28-July 4 in WNY**. Specific dates for inland and lake sites may change based on crop load, rootstock choice, the onset/severity of zonal leaf chlorosis, etc. There are two reasons for this early leaf sampling: 1) Honeycrisp trees typically stop their shoot growth by the third week in June, earlier than many other apple varieties; and 2) development of zonal leaf chlorosis (Figure 1) affects leaf nutrient concentrations, particularly leaf nitrogen status.



Figure 1. Honeycrisp leaves on the outer part of the canopy already began to show leaf chlorosis 15-20 days ago or earlier in some cases. The discoloration starts on the edges and spreads to the rest of the leaves. Development of zonal leaf chlorosis affects leaf nutrient concentrations, particularly leaf nitrogen status. Honeycrisp growers should collect Honeycrisp leaf samples for nutrient analysis at the optimal time as suggested today.

Time to begin hand thinning Honeycrisp: Kings measured this week are now above 28-30mm in WNY, and are now at a point where we can begin early hand thinning. Early hand thinning will help somewhat to mitigate biennial bearing in Honeycrisp, where floral initiation is earlier than many other varieties. Once you get through Honeycrisp, hand thinning will also improve fruit size in small fruited varieties like **NY-1 and Gala**. Take advantage of your platforms to get hand thinning done quickly and more efficiently this season.

We recommend that you count total fruit per tree on 5-10 representative trees in each block and reduce fruit number (via hand thinning, ideally with a platform) to the most profitable crop load (your targeted fruit number per tree). Hand thinning will be necessary in blocks where final fruit set (desired number of fruit/tree at harvest) is still relatively high in the tops of the trees.

Avoid the common mistake of excessive crop loads in years 2 to 4 which leads to too little tree growth (varieties differ in their biennial bearing tendency and this must be incorporated into the crop loads allowed on young trees).

| Cultivar ¹ | Growth Habit | Biennial bearing tendency | Crop load per tree after hand thinning |
|--|-------------------------|----------------------------------|---|
| Honeycrisp ² | Weak growing cultivar | Biennial | 2 nd year: 12-18 apples 3 rd year: 20-35 apples 4 th year: 40-70 apples |
| Fortune, Fuji, Golden Delicious", Jonagold, Mutsu, Spy | Strong growing cultivar | Biennial | 2 nd year: 16-20 apples 3 rd year: 25-40 apples 4 th year: 65-80 apples |
| Gala, Empire, Mac, Rome, Idared | Medium growing cultivar | Annual (more reliable bearer) | 2 nd year: 20-25 apples 3 rd year: 30-50 apples 4 th year: 80-100 apples |

¹ For **NY1 trees** which had moderate or poor growth in the first year or were planted on a weak rootstock, these trees should be de-fruited because fruits will outcompete with overall tree and shoot leader growth for carbohydrates and water.

² Please remember that early hand thinning in Honeycrisp @ 28-30mm is critical for good return bloom next year.

Time to start mechanical summer pruning of 2-D Tall Spindle Honeycrisp trees: We encourage growers to target their mechanical summer pruning time based on the fruit size characteristics of the apple cultivar instead of the exact number of leaves per shoot at a particular time during the growing season. This timing approach to mechanical summer pruning has become a more practical method. Therefore, for large fruited

varieties like **Honeycrisp** (where we intentionally want to control or reduce an excessive fruit size at harvest) we recommend an “early” timing for mechanical summer pruning. Under current WNY weather conditions, a mechanical summer pruning program should be started for Honeycrisp this week (after the summer solstice last Monday).

- A “late” timing should be used for small fruited varieties like **NY-1** and **Gala** to avoid a negative effect on crop size reduction before harvest. Varieties like Gala, Ambrosia, NY-1, and NY-2 should be done approximately 2 to 3 weeks before harvest to facilitate the use of harvest platforms and/or equipment for harvest.
- Medium fruited varieties should be mechanically summer pruned after Honeycrisp and before Gala to have the same controlling effect on fruit size (from about July 15 until early August).

Rootstocks which impart beneficial characteristics to 3 common apple varieties:

| Characteristics that could use improvement | Fuji | Gala | Honeycrisp |
|---|---|---|--|
| | Too much vigor Biennial Color | Fruit size Productivity Color/maturity Fire blight | Weak vigor Biennial Fruit disorders |
| Rootstocks that have shown to improve Biennial Bearing | G.935, G.214, CG.5257, G.41, CG.4004, CG.4011 | | G.935, B.10, G.814, G.41TC, G.202, CG.4003 |
| Rootstocks that have shown to lower (better) Potassium/Calcium ratio in fruit | CG.5257, G.222, G.935, G.814, G.214 | | CG.4003, G.214, G.16, G.814, G.969, CG.6001, CG.6976 |
| Rootstocks that have shown to increase Fruit Size | G.11, G.41, CG.5257, G.222, G.935, CG.4004, CG.3001 | G.11, G.41, G.814 | |
| Rootstocks with improved Productivity | G.11, G.41, G.214, G.935, CG.4011, G.814 | G.41, G.214, G.814, G.935, G.11, CG.4004 | G.890, G.41, G.935, G.814, G.969 |

Suggestions for return bloom sprays in 2021:

- For mildly biennial varieties spray 4 sprays of Ethrel (1pt/100) or 10ppm NAA beginning when fruits are 25mm in diameter at 10 days intervals.
- For strongly biennial varieties (Honeycrisp and Fuji) spray 4 sprays of Ethrel beginning when fruits are 16mm in diameter at 10-day intervals (first 2 sprays ½ pint/100 and last 2 sprays 1pt/100). Follow the Ethrel sprays with 2 more sprays of 10ppm NAA.

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 2021. 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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