



**“Fruit Facts” – Wednesday, May 5 2021**

2021 Statewide Bloom Meeting now posted on our CCE LOF YouTube Channel:

[https://www.youtube.com/watch?v=pro\\_Cnsrqvk](https://www.youtube.com/watch?v=pro_Cnsrqvk)

Last week’s Statewide Pink Meeting and much more is on our YouTube channel at:



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

**CCE LOF and ENYCH Pruning Video Resources:**

- [Precision Pruning Honeycrisp](#) by LOF (NEW RELEASE)
- [Precision Pruning for Early Crop Load Management](#) by ENYCH
- [Pruning Honeycrisp for Annual Production Video](#) by LOF

**IPM Notes...Janet van Zoeren**



**Apple scab.**

May 5 <sup>th</sup> – 7 <sup>th</sup>	Infection Predicted	Ascospore Maturity	Predicted Spore Release
NIAGARA COUNTY	 Medium	64%	16%
WAYNE COUNTY	 Medium	69%	19%

**West of Rochester:** We continue to have continual low level infection events throughout this week, with a possible lowering of risk over the weekend. When you have a break in the rain (maybe today or tomorrow), apply a single-site fungicide that can kickback and protect forward future infections for the rest of the week (i.e. combine Mancozeb with an SDHI or DMI).

**East of Rochester:** There have been constant low level infection event throughout the first half of this week. When you have a break in the rain today, apply a single-site fungicide that can kickback (i.e. combining Mancozeb with an SDHI or DMI). Broadly speaking, infection events seem to have passed for the time, but be sure to check your weather stations on a regular basis, as predictions can be very local and can change rapidly!

**Fire Blight.**

	Infection Predicted	Highest EIP	Highest DH
NIAGARA COUNTY	 None	0	3
WAYNE COUNTY	 None	0	18

**Both West and East of Rochester:** Cold and rainy weather will lead to low risk for fire blight infection. If you are concerned, consider applying a biopesticide. Be sure to record your blossom open dates, to use in the NEWA or RimPro models for more accurate individualized predictions.

**Bees in the orchards!** A limited number of fungicides, and only two insecticides, are labeled for use during bloom. Although some pesticide applications during bloom are necessary to keep your fruit clean, remember that some of even the labeled fungicides and insecticides have been shown to have sub-lethal toxicity to bees (i.e. they do not kill them immediately, but either affect their ability to reproduce, or toxins slowly build up to fatal levels over time), or to have synergies (i.e. applying certain combinations of products at the same time increases toxicity to fatal levels).

Stay informed of which products are most safe to use! The [Pesticide Decision-making Guide to Protect Pollinators in Tree Fruit Orchards](#) provides very comprehensive information, and a shorter, more concise guide is available on the LOF website at [https://rvpadmin.cce.cornell.edu/uploads/doc\\_870.pdf](https://rvpadmin.cce.cornell.edu/uploads/doc_870.pdf).

**Internal Worms.** Consider setting out monitoring traps **Oriental Fruit Moth** and **Codling Moth**. Why monitor? There are two key reasons:

1. To determine if/when you reach a treatment threshold (>10 OFM caught per trap per week; >5 CM caught per trap per week).
2. To determine the **biofix** specific to your orchard (i.e. first sustained trap catch). This will be used in the NEWA insect models to greatly increase accuracy of those predictions.

## Stone Fruit.

**Brown Rot** management in stone fruit may be difficult this year with all the rain we're getting during peach and cherry bloom, although the cool temperatures may be to our advantage. Although blossom infection can occur at temperatures above 32F, the optimal range for pathogen development is above 60F. If you have a history of blossom blight, and especially so for nectarine growers, you may want to rotate fungicides through from pre-bloom through petal fall. There are many labeled products (see Recommends) available, including Rovral 4 flowable (may provide 24hr "kickback" activity) and chlorothalonil (in possible avoid when bees are actively foraging).

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

## **Horticultural Notes...Mario Miranda Sazo**

**Statewide bloom virtual meeting:** We had another very successful bloom zoom meeting this past Monday and all presentations are now posted in our website (please review above for more details). The following notes are the main remarks presented by Dr. Robinson this week.

### **Why is blossom thinning critical for Honeycrisp?**

- Gibberellins produced by the seed of young fruitlets and shoots tips inhibit flower formation for the next year.
- Excessive number of seeds inhibit flower initiation.
- The earlier the target fruit number can be reduced to the target fruit number the greater the likelihood of having flower initiation.

### **Should I blossom thin or not in 2021?**

Assess each block and each variety.

- If king flower damage is **less than 40%** then
  - Blossom thin especially Honeycrisp, Fuji, and Gala
- If king flower damage is **greater than 40%** then
  - Do not blossom thin
- If total blossom clusters on Honeycrisp are **close to the target fruit number** then blossom thinning is **not needed**. Example: target is 73 fruit/tree and total blossom count is less than 100 then there is not need to blossom thin.

### **Should I use ATS or NAA/NAD?**

- Where king flower damage is **minimal use ATS**
- Where king flower damage is **significant use NAA or NAD**

**Where there has been frost damage, apply no thinner to the bottom half of tree.**

**Don't use surfactants like Regulaid or Oil.**

### **Blossom thinning with ATS by using the Pollen Tube Growth Model (PTGM)**

- Measure style length of 20 king flowers by removing petals but not sepals
- Determine the moment in time when enough king flowers are open to match the target fruit number (with Tall Spindle Honeycrisp @ 70-100 flowers with Tall Spindle Gala @ 100-130 flowers)
- Start the PTGM when enough king flowers are open
- Spray with ATS when PTGM reaches 60-80%
- Re-start the PTGM after the first spray and sprays the second spray when model reaches 60-80%
- If some kings are damaged, then allow more flowers to open before beginning the PTGM clock

### **Special considerations when blossom thinning with ATS**

- ATS burns stigma of the pistil, thus only the droplets on the pistil itself cause thinning. Thus, the concentration of ATS in the droplet is the important factor.
- ATS concentration of 2.0-2.5% (use 80-100 gallons of water and do not concentrate ATS in the tank)
- Use 2.0% if temperatures are above 75°F
- Use 2.5% if temperatures are below 75°F
- Use a uniform spray pattern with equal nozzles from top to bottom
- Use @ 100 gallons of water/acre
- Causes mild leaf phytotoxicity but no effect on fruit finish
- Requires 2-3 applications

### **Bloom thinning with hormone thinners (NAA/NAD)**

- Precise timing is not important
- We suggest 80% bloom (4 out of 5 flowers in each cluster are open. Ignore lateral bloom on 1-year wood when determining full bloom)
- Spray 50-100 gallons water/acre
- Use TRV to adjust amount in tank for a dilute equivalent spray
- **NAA** (Fruitone, Pomaxa, Refine)
  - A mild thinner (safe) when used at bloom
  - Can be sprayed safely at a high rate of 100ppm (4oz/100)
  - Little or no depression of photosynthesis at bloom
  - Can help improve return bloom on Honeycrisp
- **NAD** (Amide-Thin W)
  - A mild thinner (safe) when used at bloom
  - Can be sprayed safely at a high rate of 8oz/100
  - Little or no depression of photosynthesis at bloom
  - Can help improve return bloom on Honeycrisp

### **Cautions/special mixing considerations**

- Do not spray caustic thinners under slow drying and wet conditions of if there is frost
- Frost causes damage to fruit skin and caustic thinners then cause russetting
- You can mix and spray strep and ATS but without Regulaid
- The use of NAA plus strep plus Regulaid is OK

## Berry Notes... Janet van Zoeren

The cool wet weather we have had recently could lead to high disease pressure this spring. In addition, if you had your strawberries under row cover for frost protection, you may see some insect flare-ups when you remove those covers. A few reminders of upcoming fungicide and insecticide suggestions.

### Blueberries

- Cool, moist weather is perfect for **Mummyberry**. Research shows that mummyberry infection temperatures hover between 45° and 60° F. Abound and Indar are excellent choices for both Botrytis and Mummyberry at the pink stage. If you miss this spray window, then focus on bloom. The bloom spray is designed to prevent flower infections. It's important when primary shoot blight infections were not controlled. Substituting captan in the mixture may be preferred if Phomopsis canker is a problem. Mixtures with captan may be repeated at 7 to 10-day intervals throughout bloom if rain occurs. Discontinue use of Ziram DF or Ziram Granuflo as they are labeled only for the shoot blight phase, not flower infection. Highest levels of control are often achieved by using either Pristine WG or Indar 2F.
- A pink fungicide application will help control **botrytis blossom and twig blight**. Many of the same fungicides labelled for mummyberry will control botrytis.
- A fungicide application at bloom is best to control **anthracnose fruit rot**. There are many different fungicides that can help manage these fruit rots – the key is timing. Remember that many fungicides have been shown to have sublethal but still damaging effects to bees, so do your best to choose less toxic products and spray when bees are not foraging.

### Strawberries

- At least 2 well timed fungicide sprays to protect against **Botrytis** makes a huge difference to berry quality. Botrytis sprays should start at 10% bloom. For organic growers, there is a new-ish biological product called Botrystop specifically marketed for organic management of Botrytis – we'd love to hear from anyone who has tried it.
- **Red stele and Leather Rot** are both caused by Phytophthora species. You may experience problems with Phytophthora rots if you've had long periods of wet soil, frequently used overhead irrigation for frost protection, or if leather rot has been a problem in past years. Ridomil Gold and phosphorus acid products can be sprayed at first bloom to control Phytophthora.
- If you used row cover to protect berries during the cool temperatures, be sure to check for a build up of **mites or aphids**. The warm humid environment under the row cover provides ideal conditions for their population growth. In general, native natural enemies keep these pests under economically damaging levels.
- Monitor for **Tarnished Plant Bug** nymphs from just before blossoms open until harvest. To monitor, shake flowers or fruit over light-colored saucers and count the nymphs caught. The general recommendation is to apply an insecticide if you have on average 1 to 2 TPB nymphs per inflorescence.

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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