



“Fruit Facts” – Friday, May 7 2021

Horticultural Notes...Mario Miranda Sazo

Bloom thinning update and guidance by the PTGM by Dr. Robinson:

Is today the day to apply ATS to Fuji or Gala or Honeycrisp?

- This year ‘Fuji’ flowers have opened ahead of Gala and Honeycrisp. Some inland sites reached enough king flowers open to start the Pollen Tube Growth Model (PTGM) on Monday at noon. With the warm temperatures of Tuesday and moderately warm on Thursday, those blocks have reached 60% of the PTGM this morning as of 6:00am and should be sprayed with ATS as soon as possible this morning (Friday). If your Fuji block bloomed slightly later and did not reach the target of open kings until Tuesday morning then the model indicates you should spray this afternoon (Friday).
- For Gala many inland blocks had enough king flowers open on Tuesday noon or afternoon but with a slightly longer style length than Fuji, the model indicates they should be sprayed with ATS tomorrow Saturday around noon.
- For Honeycrisp many inland blocks had enough king flowers open on Tuesday afternoon. The model indicates they should be sprayed with ATS Monday morning.
- **The cool weather has spread out the moment in time when enough king flowers were open to start the clock of the PTGM between varieties and inland vs lake sites. The continued cool weather since Tuesday has also spread out the optimum time to apply ATS from today through Monday depending on variety and location. Please run the model yourself for your situation.**
- An important note: The PTGM will not update each time you log on unless you edit the block information and click the update button. (The edit button is a symbol of a pencil in the upper right-hand corner of the graph.)

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 or 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

Fire Blight. There is a very low risk of fire blight infection across the region over the weekend, despite open flowers and rainy weather, due to predicted temperatures remaining in the 40s or low 50s.

Apple scab. There is a moderate scab spore release predicted for today. Following today, the weekend and early next week looks to be low risk, as of current weather predictions.

Consider applying a product with kickback activity as soon as you get a break in the rain, if you were not adequately covered for scab in the previous couple days.

May 7 th – 9 th	Infection Predicted	Ascospore Maturity	Predicted Spore Release
NIAGARA COUNTY	 Low	90%	5%
WAYNE COUNTY	 Low	84%	8%

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

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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