



## Healthy Fruit, Vol. 28, No. 21, September 15, 2020

Prepared by the University of Massachusetts Amherst Extension Fruit Team

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### Announcements and Upcoming meetings

**Apple harvest open office hour.** Tuesdays at noon through harvest (or when I call it quits or no one shows up). Apple maturity update, PYO logistics, open discussion. Via Zoom, <https://umass-amherst.zoom.us/j/7562823263>, Meeting ID: 756 282 3263 One tap mobile +16468769923,,7562823263# US (New York)

**UMass Vegetable Program: Agricultural Water Twilight Series**

The UMass Extension Vegetable Program is offering a series of online twilight meetings all about water! We will welcome Extension specialists and farmers from Massachusetts and beyond to cover a range of water-related topics.

[Part I: Water Use Regulations, Water Monitoring Tools, and Efficient Irrigation](#)

Wednesday, September 16, 2020 - 6:00pm to 7:30pm

Speakers:

- Rachel Schattman, UMaine Agroecology Lab - Water use regulations in New England
- Joshua Faulkner, UVM Extension – Moisture monitoring technologies and irrigation efficiency
- Tim Wilcox, Kitchen Garden Farm, Sunderland, MA – Tile drainage, wells, and irrigation equipment

Register [here](#)

[Part II: Water System Mapping and Water Testing for FSMA](#)

Wednesday, September 23, 2020 - 6:00pm to 7:30pm

Speakers:

- Massachusetts Department of Agricultural Resources Produce Safety Inspection Program - Massachusetts' draft produce safety regulations and update on water testing rules
- Scott Monroe, Purdue Extension - Water sampling, understanding risks to source water and understanding water test results
- Phil Tocco, MSU Extension - Water distribution system mapping and inspections

Register [here](#)

[Part III: Post-harvest Water Quality and Sanitizer Use](#)

Wednesday, September 30, 2020 - 6:00pm to 7:30pm

Speakers:

- Amanda Deering, Purdue Extension - Background on the different sanitizer materials available or practical for small-medium scale growers and how to measure and monitor them
- Phil Tocco, MSU Extension – Sanitizer use demonstration

Register [here](#)

## **The way I see it...**

Jon Clements

I don't have much to report, watch my [apple harvest open office hour on YouTube](#) when it becomes available. BUT, here's the synopsis:

- Weather could not be better for harvest, fruit condition seems good if not great, little pre-harvest drop noted, your results may vary.
- Mc harvest should be in full swing, firmness still 15 lb. or greater, starch-index 4-5. You have another week to get 90% of Macs picked.
- Cortland, what can I say, I presume they are economically ripe but would benefit by waiting a week. Don't even think about picking Macouns until next week.
- Honeycrisp harvest should be going full-swing.
- Gala harvest is approaching the end.
- Storage of McIntosh, Honeycrisp, and Gala. See [HORTICULTURE](#).



Has anyone else noticed the smoke?

## **Insects**

Jaime Piñero


Ed. note: Jaime says he has nothing new to report this week. Maybe he can do a synopsis of growing season when it comes to insect management for the last Healthy Fruit of 2020, on September 29?




## Horticulture



### Apple maturity report

J. Clements

All observations from UMass Orchard, Belchertown, MA unless otherwise noted. Target maturity numbers: red color, >50%; firmness, >14 lbs.; soluble solids, >12; DA, 0.60 to 0.40 for Honeycrisp, 0.65 for Gala, 1.00 for Golden Delicious, 1.15 to 1.00 for Red Delicious (higher DA = more "green"); starch index, 4-6.

2020 Date	Variety	Drop	Diameter (inches)	Color (% red)	Firmness (lbs.)	Brix	Starch Index	DA Meter	Comments	Picture
9/14	Rubymac McIntosh	nil	3.2	95	14	12.1	4-5	NA	Still looking good, although softening a bit, large for Macs, hold on trees nicely	

9/14	Lindamac McIntosh	few	2.9	80	15	12.1	4-6	NA	Should be harvested ASAP	
9/14	Rogers Red McIntosh	few	3	65	17	12.5	3.5-5.5	NA	Classic late-season McIntosh strain, harvest could start any day	
9/14	Cortland (Recort?)	none	3.4	55	17	12.1	1-2	NA	Most likely had ReTain, wait a week	

9/14	Honeycrisp	few	3.6	70	14	12.7	5-8	0.60	Variable maturity as usual, some rots, bitter pit, kind of rough looking crop overall but some apples are beautiful, needs to be spot-picked on color and finished up within the week	
9/14	Buckeye Gala	none	3.0	100	18	12.4	2-7	0.45	½ rate ReTain, still some stem-end cracking, needs to be harvested ASAP, very sweet	

### McIntosh, Honeycrisp, and Gala storage recommendations...

Ed. note: Below are excerpts from Harvest Maturity Report #4, via Craig J. Kahlke (Area Extension Educator, Team Leader, Fruit Quality Management, Cornell Cooperative Extension – Lake Ontario Fruit Program) e-mail on September 10, 2020

#### **GALA Storage from Dr. Chris Watkins, Cornell** (Summarized by Basedow & Donahue, CE-ENYCHP)

A major concern for Gala right now is stem end flesh browning (SEFB). So far we know that:

- Harvista or ReTain decrease the incidence of SEFB.
- DCA at 0.5% O<sub>2</sub> delays browning development, but will not completely prevent it. DCA may also prevent core browning.

- 1-MCP treatment has inconsistent effects on SEFB incidence. Washington State and Ontario studies suggest delayed cooling, paired with early CA storage, may help to reduce some browning disorders. This approach needs more study in New York conditions.

### **HONEYCRISP Storage from Dr. Chris Watkins, Cornell** (Summarized by Basedow & Donahue, CE-ENYCHP)

- Fruit in air or CA should be stored at 38°F as any lower temperature is risky. Conditioning for 7 days at 50°F reduces soft scald, but will likely exacerbate bitter pit. The decision to condition or not should be determined by your block history and results of prediction protocols. If a block is very vulnerable to bitter pit, it is likely best to skip conditioning.
- Soft scald can be particularly prominent if fruit are stored at lower temperatures, closer to 33°F, but risk is lowered if fruit are conditioned. While not always a problem, some extensive soft scald losses were observed in the Hudson Valley in 2019 when fruit were stored at these lower temperatures without conditioning. If a 38°F room is absolutely not possible, precondition fruit and do not store for more than 2 months. Monitor fruit condition regularly for development of off-flavors as this can be a sign of pending fruit damage.
- Air stored fruit can be treated with 1-MCP, as it will help fruit retain acceptable levels of acidity. 1-MCP may decrease the incidence of bitter pit and senescent breakdown.
- An increasing number of growers are using Harvista to manage their Honeycrisp harvest. Chris's recent work found that Harvista decreased soft scald, but increased bitter pit incidence of stored fruit. Fruit treated with a combination of Harvista and 1-MCP also had a greater incidence of leather blotch.
- For fruit destined for CA storage, CO<sub>2</sub> injury can be problematic, and is generally worse further south in the state. CO<sub>2</sub> injury can be controlled with diphenylamine (DPA), or by delaying CA storage by up to 4 weeks. In Chris's studies, fruit that were delayed CA storage for up to 4 weeks and treated with 1-MCP had very little loss of fruit quality, but greasiness and core browning did increase to a small extent.

Chris's overall recommendation for Honeycrisp currently is air storage with 1-MCP to avoid CA related injuries. Storages should be high quality however, i.e. modern CA-like storages with good control of temperature.

### **MCINTOSH Storage from Dr. Chris Watkins, Cornell** (Summarized by Basedow & Donahue, CE-ENYCHP)

1-MCP helps keep Macs firm on the shelf after long-term storage, and will also help reduce superficial scald and senescent breakdown. It may, however, slightly increase CO<sub>2</sub> injury, and maintaining low CO<sub>2</sub> in the CA storage for the first 4-6 weeks is



critical. CO2 levels should then be increased as maintaining lower levels will compromise maintenance of firmness. DPA eliminates any concerns of CO2 injury, and there is no need to be concerned about risk of injury.

## **Guest article**

No guest article this week...

## Facebook Me

 **Steve Cavrak**  
4h · 🌐

From Sea to Shining Sea



The map shows the contiguous United States with a semi-transparent grey shaded area covering most of the landmass. A cluster of orange dots is concentrated in the central and western parts of the shaded area, primarily over the states of California, Oregon, and Washington. The map includes labels for major cities and geographical features.

 Jon Clements 2 Comments

 Like  Comment

## Useful links

UMass Fruit Advisor: <http://umassfruit.com>

[UMass Extension Fruit Team YouTube Channel](#)

[UMass IPM Fruit Loop Podcast](#)

Scaffolds Fruit Journal: <http://www.nysaes.cornell.edu/ent/scaffolds/>

Network for Environment and Weather Applications (NEWA): <http://newa.cornell.edu>

Follow me on Twitter (<http://twitter.com/jmcextman>) and Facebook (<http://www.facebook.com/jmcextman>)

[Acimovic Lab at Hudson Valley](#)

[Peter Jentsch's Blog](#)

The next Healthy Fruit will be published on or about September 29, 2020. In the meantime, feel free to contact any of the UMass Fruit Team if you have any fruit-related production questions.

Thank you sponsors...



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