



Healthy Fruit, Vol. 30, No. 18, September 6, 2022

Prepared by the University of Massachusetts Amherst Fruit Team

Jon Clements, Editor

## Upcoming meetings

December 13-15, 2022. New England Vegetable & Fruit Conference. Manchester, NH.

<https://newenglandvfc.org/>

## The way I see it

Jon Clements

Thanks to all who come to my weekly apple maturity noon Zoom on Tuesdays. It serves as my food for fodder. So, here you go:

**Apple maturity** is showing nothing terribly out of the ordinary, at least here at the UMass Orchard. Buckeye Gala, Honeycrisp, and McIntosh harvest should be starting in earnest once the rain ends. Right on schedule. See apple maturity report in [Horticulture](#) or at <https://ag.umass.edu/fruit/resources/apple-maturity-reports> where there will be weekly updates (vs. every other week in Healthy Fruit).

Somewhat frustrating **bitter pit/lenticel breakdown/black or bitter rot** continues to defy explanation in our 2014 NC-140 Honeycrisp rootstock planting. Is it bitter pit? Followed by lenticel breakdown? Or some of both? And then the rots set in. Lack of fungicide coverage? Maybe because the dry weather was deceiving and not presumably favorable for rots? Or was it? Bitter/black rot was very bad last year in these trees, so was there a heavy inoculum source? I have seen a lot of bitter pit on lightly cropped Honeycrisp on G.41 rootstock, Geneva 11 and 41 seem problematic for bitter pit compared to M.9 and B.9. I got it all, light crop, large apples, susceptible rootstocks? But still – my leaf analysis looked good! Did I mention these trees received plenty of foliar calcium (to my knowledge). Oh, and it was a hot, sunny summer, and could have damaged the skin/lenticels. My question now, is it a chicken or egg “which comes

first” situation? Any thoughts or comments welcome, or if you are seeing something similar? [See my pics here...](#) Also, see this out of Michigan State University from last year...[Lenticel damage and other spots in Honeycrisp and other varieties are becoming increasingly problematic.](#)

Coming up **ReTain recommendation?** Cortland for sure, some debate about the best ReTain strategy, but if you want to keep Cortland into early October or going to store them, ReTain is a no-brainer! And oh yea, what about Ambrosia now that we have young trees coming into bearing? According to the [ReTain Technical Manual](#) – STANDARD PROGRAM FOR **AMBROSIA** HARVEST MANAGEMENT: ReTain ½ to 1 pouch per acre applied at 3-4 weeks before harvest. (Plus organosilicone surfactant at 6.4 to 12.8 fluid ounces per 100 gallons.) So, with an Ambrosia harvest approximately the first week in October, that application window is rapidly approaching.

**“Hazel Tech® products for Apple improve the shelf life & quality of apple during storage.”** At least that is what it says on their website. The question was, do [Hazel Tech® bin sachets](#), a form of 1-MCP treatment that seems a LOT easier to use than [SmartFresh™](#), but does it work as well? Anecdotally, yes. I can’t attest to the cost, but if it works as promised, it seems like a simple way for smaller operators to achieve the results of standard SmartFresh™ applications to stored apples. Check out this [article in Good Fruit](#). Any takers out there?

One more thing, **Minneiska cv.**, also known as the trademarked **SweeTango** [comes off patent in 2026](#). Think about – and please do some decent site prep! – where you are going to plant half an acre once it can be propagated legally. Remember, you heard it here first!



Some kind of rot, note the mummified fruit and cankered-looking wood above the rot



Close up of bitter rot(?) infections. Question, did it start as bitter pit?

## Entomology

Jaime Pinero

Ed. note: Jaime says no entomology update this week. I suspect his team will compile a pest management season in review later.

# Pathology

Please Fill Out Our Survey on the Use of Beneficial Fungi in Northeast Orchards

Mike Basedow, CCE-ENYCHP; Mario Miranda Sazo, CCE-LOFP, and Jason Londo, Cornell University

Extension Specialists and researchers of Cornell ENYCHP, Cornell LOFP, and Cornell AgriTech are launching an effort to better understand the role commercially available mycorrhizal fungi products could play in promoting early tree growth in the nursery and at orchard establishment.

Many species of beneficial mycorrhizal fungi form symbiotic relationships with plant roots, including apple. These fungi greatly increase the surface area of the roots, allowing trees to take up more nutrients and water from the soil when these are limited in the field. Some previous studies have found mycorrhizal fungi also increase apple tree resistance to neonecrotia canker. Mycorrhizal fungi occur naturally in our soils, but there are also commercially available formulations of mycorrhizae that can be incorporated at the nursery and during orchard planting. We are curious to know if incorporating these commercial products may improve tree survival and growth, and help trees take up nutrients and water more efficiently, possibly allowing growers to reduce the amount of fertilizer and irrigation required to grow a high quality crop.

Before we move this work forward, we would like to hear from you! We would like to know your interest in using these products, and what questions you would like us to research so that we can better identify barriers to their use, and develop a project that best addresses these barriers.

The survey should take under five minutes to complete, and is anonymous. You can complete it by clicking on the following link:






[https://cornell.ca1.qualtrics.com/jfe/form/SV\\_2rEeIIPOuC2mifs](https://cornell.ca1.qualtrics.com/jfe/form/SV_2rEeIIPOuC2mifs)

If you'd like to discuss mycorrhizal inoculants more in depth, please get in touch with Mike at 518 410 6823 or at [mrb254@cornell.edu](mailto:mrb254@cornell.edu).

## Horticulture (apple maturity report)

Jon 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.

2022 Date	Variety	Drop	Diameter (inches)	Color (% red)	Firmness (lbs.)	Brix	Starch Index	DA Meter	Comments	Picture
9/5	Rubymac McIntosh	nil	3.0	95	14	11.4	3.5-4	NA	Good color, minimal drop, could wait a week to mature a bit	
9/5	Rogers Red McIntosh	nil	3.1	50	16	12	3.5-4	NA	Classic late-ripening Mac, wait until all other Macs are harvested	
9/5	Marshall McIntosh	nil	3.0	75	13.5	11.8	3.5-6.5	NA	Classic early ripening Mac, pick within a week or it will drop	
9/5	Buckeye Gala	none	3.1	95	16	12.3	3.5-6.5	0.30	A bit uneven ripening, but should be picked soon, good background color change to yellow	
9/5	Blondee	none	3.0	NA	17	12.2	4-6.5	0.11	Not widely planted, somewhat unique, very attractive yellow apple, prone to biennial bearing	

9/5	Honeycrisp	few	3.2	80 striped	17	13.9	5.5-7	0.33	Light crop on dwarf trees, thus harvest ASAP	
9/5	Minneiska (Sweetango)	nil	3.2	65	14	12.9	4-6	0.10	Despite the low DA, Duane says wait a week to pick; note <a href="#">it comes off patent in 2026</a>	
9/5	<a href="#">Pink Luster</a>	few	3.5	40 blush	18	10.9	3.5-4.5	0.37	Needs another week, rather attractive	
9/5	<a href="#">SweetMAIA</a>	none	3.1	90	19	13.6	7.5-8	0.28	Should have been picked a week ago, watercore	
9/5	<a href="#">Summerset</a>	nil	3.8 very large	65 dullish	12.5	13.4	4-6	0.40	Light crop, biennial? Hard to compete with Honeycrisp?	

## Useful links

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

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

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[The Jentsch Lab](#) (Peter Jentsch, Poma Tech)

[Acimovic Lab](#) (Srdjan Acimovic at Virginia Tech)

[Tree Fruit Horticulture Updates](#) (Sherif Sherif at Virginia Tech)

App store: Malusim (iOS and [Google Play](#)); Fruit Growth Model (iOS); Orchard Tools (iOS); MyIPM (iOS and [Google Play](#)); Eco Fruit/Apple App (iOS and [Google Play](#)) Note: for iOS apps search the App Store on your iOS device.

The next Healthy Fruit will be published on or about September 20, 2022. In the meantime, feel free to contact any of the [UMass Fruit Team](#) if you have any fruit-related production questions.

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