



Healthy Fruit, Vol. 26, No. 14, July 3, 2018

Jon Clements, Author (unless otherwise noted) and Editor

Contents

[Current degree day accumulations](#)

[Upcoming pest events](#)

[Ag-Radar Summary](#)

[Upcoming meetings](#)

[The way I see it](#)

[Insects](#)

[Diseases](#)

[Horticulture](#)

[Hawkeye's corner](#)

[Guest article](#)

[Facebook Me](#)

[Useful links](#)

[Thank you sponsors...](#)

Current degree day accumulations

UMass Cold Spring Orchard, Belchertown, MA	2-July
Base 43 BE (NEWA)	1569
Base 50 BE (NEWA)	1017

Note: this will be the last degree-day accumulation report for 2018

Upcoming pest events

Coming events	Degree days (Base 43 BE)	Meaning?
Apple maggot 1st catch	1226 to 1690	Baited yellow sticky or red spheres should be out to monitor
Apple maggot 1st oviposition punctures	1605 to 2157	Early varieties susceptible to injury, particularly Gravenstein, Ginger Gold, and a bit later Honeycrisp
Codling moth 1st flight subsides	1276 to 1834	Probably too late for effective control of hatching eggs from 1st generation, but maybe not?
Codling moth 2nd flight start	1583 to 2230	Pheromone traps should be refreshed with pheromone and new sticky bottoms to monitor effectively for 2nd generation
Dogwood borer peak catch	1434 to 1864	Lorsban trunk sprays, weed/debris-free trunks, no plastic mouse guards
Lesser appleworm 2nd flight start	1002 to 1538	Is this a problem in MA orchards? Likely not because of PF sprays for PC?
Lesser peachtree borer flight peak	853 to 1767	Mating disruption should be deployed
Oblique-banded leafroller 1st flight subsides	1630 to 2048	Time for Altacor, Delegate or similar if indicated, to target hatching larvae

Oriental fruit moth 2nd flight peak	1454 to 1951	Hang pheromone traps or replace pheromone to monitor flight
Peachtree borer flight peak	1028 to 2004	If used, mating disruption should be in place; alternately, trunk directed sprays of Lorsban...
Redbanded leafroller 2nd flight peak	1529 to 1975	Ideally, monitor situation with pheromone traps, but verdict still out how much a problem this pest is in MA orchards?
Spotted tentiform leafminer 2nd flight peak	1388 to 1783	Would not be a bad idea to hang pheromone traps to see where you stand?
Spotted tentiform leafminer 2nd generation tissue feeding mines	1378 to 2035	Start scouting for mines

Ag-Radar summary

Key insect life cycle and management dates

Note: for 2018, we have ten Massachusetts orchard locations subscribed to AR: Amherst, Belchertown (2 locations), Brookfield, Deerfield, Easthampton, Groton, Leominster, Northboro, and Westhampton. The website for looking at AgRadar for these locations is: <http://extension.umaine.edu/ipm/ag-radar-apple-sites/>. What follows is the AgRadar summary for the Belchertown location.

Apple Maggot Fly (AMF) -- Rough guess of date first apple maggot flies are caught on traps is: Saturday, June 30. Rough guess of peak AM trap captures is: August 3, Friday. Estimated dates for first and peak trap capture are only general guidelines because the effect of rain on soil conditions is not included in the calculation.

Dogwood Borer (DB) -- First dogwood borer egg hatch roughly: June 22. Peak hatch roughly: July 26.

Codling Moth (CM) -- Codling moth development as of July 3: 1st generation adult emergence at 100% and 1st generation egg hatch at 95%. Insecticide targeted against plum curculio and apple maggot may also prevent codling moth damage. If targeted codling moth control is needed, key management dates are (have passed). 2nd generation 7% CM egg hatch: July 26, Thursday, = target date for first spray where multiple sprays needed to control 2nd generation CM.

European Red Mite (ERM) -- Optimum monitoring period for 3rd ERM generation is: Wednesday, June 20 (nymphs hatched) to Friday, June 29 (egg laying starts for 4th generation).

Lesser Appleworm (LAW) -- 2nd LAW flight begins around: July 9, Monday

ObliqueBanded Leafroller (OBLR) -- 1st generation OBLR flight begins around June 7, Thursday. Where waiting to sample late instar OBLR larvae is not an option (= where OBLR is known to be a problem, and will be managed with insecticide against young larvae): Early egg hatch and optimum date for initial application of B.t., Delegate, Proclaim, Intrepid, Rimon, Altacor, Belt, pyrethroid or other insecticide effective against OBLR (with follow-up applications as needed): June 22, Friday. Where waiting to sample late instar OBLR larvae to determine need for treatment is an option, or to check on results from earlier sprays: Optimum sample date for late instar summer generation OBLR larvae: July 1, Sunday. If first OBLR late instar larvae sample is below threshold, date for confirmation follow-up: July 4, Wednesday.

Oriental Fruit Moth (OFM) -- 2nd generation OFM flight begins around: June 28, Thursday. 2nd generation - first treatment date, if needed: July 4, Wednesday. 2nd generation - second treatment date, if needed: July 15, Sunday.

Redbanded Leafroller (RBLR) -- 2nd RBLR flight begins around June 28, Thursday. Peak catch and approximate start of egg hatch: July 9.

Spotted Tentiform Leafminer (STLM) -- 2nd STLM flight begins around: June 16, Saturday. Rough guess of when 2nd generation sap-feeding mines begin showing: July 3, Tuesday. Optimum first sample date for 2nd generation STLM sapfeeding mines is July 9, Monday.

Preliminary McIntosh Harvest Date Forecasts -- Date to apply ReTain to delay first harvest for apples which without treatment would be ready for storage harvest on September 6 is from Thursday August 9 to August 16. Date to apply ReTain to delay maturity for 2nd, 3rd or 4th pick of those apples, without delaying start of harvest maturity, is from Thursday, August 23 to August 30. Begin measuring actual McIntosh starch-iodine index no later than Saturday, August 18. The Michigan formula estimates that non-spur McIntosh will reach starch index 4.0 and start the optimum harvest window for long term storage on Thursday, September 6. Using the Champlain Valley NY formula from Cornell Bulletin 221 '[Predicting Harvest Date Windows for Apples](#),' McIntosh maturity is forecast to reach starch index 6.0 in Belchertown-ColdSpring MA on Saturday, September 15. (Yup, we are already talking about harvest.)

Upcoming meetings

TUESDAY, July 10, 2018. Massachusetts Fruit Growers' Association Annual Summer Meeting, UMass Cold Spring Orchard, 391 Sabin Street, Belchertown, MA. 10 AM to 3 PM. For more information, and to pre-register: <http://massfruitgrowers.org/2018/2018summermeeting.html>

INTERNATIONAL FRUIT TREE ASSOCIATION Summer Tour, **July 22-25, 2018**, Coast Capri Hotel, Kelowna, British Columbia. For more information and to register: <https://www.ifruittree.org/>

The way I see it

Jon Clements

[Program information and pre-registration](#) is here for the **Massachusetts Fruit Growers' Association Annual Summer Meeting** in Belchertown on July 10. We have invited Dr. Srdjan Acimovic and Dr. Poliana Francescato from Cornell! Between them and Dr. Jaime Pinero here at UMass we have diseases, insects, and horticulture well covered! Should be a great day, hope you plan on coming. You can sign-up any day now and pay for lunch/attendance using a credit card! Please don't wait until the last minute so we can have the right amount of lunch here to fee you! Oh, the other big news, SWD has made it's presence known. More on that below from Dr. Pinero. PLEASE pre-register for meeting before Friday, I don't think you want to miss this one...

Insects

Jaime Pinero

Apple maggot and European cherry fruit fly

Apple Maggot. The first adult apple maggot fly of the season was spotted resting on an apple fruit this past week. It's time to set up monitoring traps! Some research involving use of the apple fruit-based lures and attracticidal spheres will be conducted this summer at the UMass Cold Spring Orchard and in a few collaborating orchards. Research will be expanded to include more orchards next year.

European Cherry Fruit Fly (*Rhagoletis cerasi*) Quarantine. The European cherry fruit fly, *Rhagoletis cerasi*, is a highly destructive pest of cherries in Europe and Asia. In 2016, *R. cerasi* was detected in Ontario, Canada, and in 2017 in New York State, the first records of this

pest in North America. The initial detections in Canada caused concern for the major cherry-growing states of Michigan, Washington, Oregon, and California in the United States.

This fly is not the Western Cherry Fruit Fly, *Rhagoletis indifferens*, which is native to North America and has been found in the Pacific Northwest states since the 1940's.

Effective June 7, 2018, The USDA's Animal and Plant Health Inspection Service has established a quarantine area in a portion of Niagara County for European cherry fruit fly, already considered the most serious pest of sweet cherries in Europe. The quarantine covers about 92 square miles in an area where the European cherry fruit fly was found in traps last September and October. Officials fear U.S. cherry growers could be hit by reduced access to foreign markets and lower prices if the pest becomes established in the U.S. Additional trapping surveys are underway to determine if the invasive fruit fly is present in other areas.



Apple maggot (*Rhagoletis pomonella*) female. Picture: Joseph Berger, Bugwood.org



European Cherry Fruit Fly (*Rhagoletis cerasi*).
The pattern on the wing can be used to distinguish it from native fruit flies.
Picture: Steve Paiero, University of Guelph



Western Cherry Fruit Fly, (*Rhagoletis indifferens*) female. Picture: PNW Handbooks

Do you have any suggestions for articles on arthropod IPM? Please let me know!

Contact info: jpinero@umass.edu; (413) 545-1031 (campus office); (808) 756-2019 (cell).

Diseases

See [Guest article](#) below, Mid-Season Tree Fruit Disease Update

Horticulture

Jon Clements

Frankly, it's too darn hot to do much. But, we are: picking cherries, hand-thinning peaches, pruning rootsuckers and low-hanging branches (prior to spot herbicide application), cleaning out the cooler, cleaning up any remaining debris in orchard, and mowing. Also see [Guest article](#) below.

Hawkeye's corner (notes from the field)

Liz Garofalo

Say what you will about this hot weather but, the **mites** and I are quite happy with it (I could live without the mites, of course)!



Two-spotted spider mites and European red mite (and egg).



Bronzing of apple foliage from European red mite feeding.

Sooty blotch and flyspeck don't much care for the heat either. The optimum range for growth is 65°F to 80°F. With this week's average day time temperature hovering in the mid 90's, growth and spread have been halted (one more reason ya can't beat the heat!).



Don't forget to check out [Ag-Radar's](#) Honey Bee Activity Chart!

Guest article

Ed. note. Call me slacking off here, but, it's two weeks until the next Healthy Fruit. And just out, are a bunch of very good articles/advice in PennState Extension Fruit Times. Please take some time at your leisure to check them out. (Over your favorite adult beverage?) JC

[Orchard Nutrition: How Do You Know What Fertilizers You Need?](#)

[Mid-Season Tree Fruit Disease Update](#)

[Orchard IPM: Natural Enemies and Biological Control](#)

[Planting Sorghum Sudangrass Following Orchard Removal](#)

[Orchard Weed Control: Protect the Tree Trunks!](#)

Facebook Me



Jon Clements

Just now · Twitter ·  

Last week in Geneva, NY attending a tour highlighting 3 years of PGR research by Dr. Poliana Francescato. Poli is post-doc for Dr. Terence Robinson while on sabbatical. Her research focus on apple flower bud initiation, chemical thinning strategies, and crop load management. <https://t.co/n7nkP1mpZD>



TWITTER.COM

Jon Clements on Twitter

"Last week in Geneva, NY attending a tour highlighting 3 years of PGR..."



Like



Comment



Share



Write a comment...



Useful links

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

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 July 17, 2018. In the meantime, feel free to contact any of the UMass Fruit Team if you have any fruit-related production questions.

Thank you sponsors...



[Orchard Equipment and Supply Company, Inc. Conway, Massachusetts](#)



[Nourse Farms](#)