



Healthy Fruit, Vol. 24, No. 13, June 21, 2016

Jon Clements, Author (unless otherwise noted) and Editor

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Current degree day accumulations

UMass Cold Spring Orchard, Belchertown, MA	20-June
Base 43 (SkyBit)	1273
Base 50 (NEWA)	750

Upcoming pest events*

Coming events	Degree days (Base 43 BE)
Cherry fruit fly 1st catch	755-1289
Dogwood borer 1st catch	771-1261
Lesser appleworm 1st flight subsides	989-1515
Obliquebanded leafroller 1st flight peak	833-1219
Obliquebanded leafroller summer larvae hatch	1038-1460
Peachtree borer 1st catch	799-1331
San Jose scale 1st flight subsiding	864-1238
San Jose scale 1st generation crawlers present	1033-1215
Spotted tentiform leafminer 2nd flight start	993-1163

*adapted from [Scaffolds Fruit Journal](#)

AgRadar

Key insect life cycle and management dates (and some disease and horticulture stuff)

Note: for 2016, we have five Massachusetts orchard locations subscribed to AR: Belchertown, Easthampton, Deerfield, Groton, Phillipston, and Sutton. The website for looking at AgRadar for these locations is: <http://extension.umaine.edu/ipm/ag-radar-apple-sites/>. What follows is for the Belchertown location.

Dogwood Borer (DB) -- first egg hatch roughly: June 19. Peak hatch roughly: July 27

Codling Moth (CM) -- 1st generation, first sustained trap catch biofix date: May 18, Wednesday. Codling moth development as of June 14: 1st generation adult emergence at 80% and 1st generation egg hatch at 30%. In most orchards, insecticide targetted against plum curculio and apple maggot prevent codling moth damage. If targetted codling moth control is needed, key management dates are: 1st generation 3% CM egg hatch: June 3, Friday = target date for first spray where multiple sprays needed to control 1st generation CM. 1st generation 20% CM egg hatch: June 10, Friday = target date where one spray needed to control 1st generation CM.

Obliquebanded Leafroller (OBLR) -- 1st generation OBLR flight begins around; June 4, Saturday. Where waiting to sample late instar OBLR larvae is not an option (i.e., where OBLR is known to be a problem, and will be managed with an 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 21, Tuesday. 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: June 30, Thursday If first OBLR late instar larvae sample is below threshold, date for confirmation follow-up: July 4, Monday.

Oriental Fruit Moth OFM -- 1st generation OFM flight starts: April 23, Saturday. 1st generation 55% egg hatch and first treatment date, if needed: May 27, Friday. 2nd generation OFM flight begins around: June 26, Sunday. 2nd generation - first treatment date, if needed, July 4, Monday.

Plum Curculio (PC) -- Increased risk of PC damage as McIntosh and similar varieties increase fruit size: May 22, Sunday. Earliest safe date for last PC insecticide spray: May 24, Tuesday. If relying on repellance by Surround instead of PC mortality by insecticide, Surround coverage should be maintained until PC egg laying begins to naturally decline around Friday, June 24.

Redbanded leafroller (RBLR) -- 2nd RBLR flight begins around June 26, Sunday. Peak catch and approximate start of egg hatch: July 10.

San Jose Scale (SJS) -- First adult SJS caught on trap: May 20, Friday. 1st generation SJS crawlers appear: June 15, Wednesday.

Spotted Tentiform Leafminer STLM -- 2nd STLM flight begins around: June 14, Tuesday. Rough guess of when 2nd generation sap-feeding mines begin showing: July 3, Sunday. Optimum first sample date for 2nd generation STLM feeding mines is July 10, Sunday.

NEW: Apple Bud Freeze Mortality Estimates -- Date: Wednesday, April 6, Estimated Potential Bud Freeze, 44%; Date: Tuesday, April 5, Estimated Potential Bud Freeze, 39%; Cumulative potential bud freeze: 66%.

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 3 is from Saturday August 6 to August 13. Date to apply ReTain to delay maturity for 2nd, 3rd or 4th pick of those apples, without delaying start of harvest maturity, is from Sunday, August 20 to August 27. Begin measuring actual McIntosh starch-iodine index no later than Wednesday, August 17. 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 Saturday, September 3. Using the Champlain Valley NY formula, McIntosh maturity is forecast to reach starch index 6.0 in Belchertown MA on Wednesday, September 14.

Upcoming meetings

13-July, 2016 (Wednesday). Massachusetts Fruit Growers' Association Summer Meeting, [UMass Cold Spring Orchard](#), 391 Sabin Street, Belchertown, MA. Details TBA.

19-21 July, 2016. International Fruit Tree Association New York Study Tour. For more information: <http://www.ifruittree.org>

For more information and updates, see [Upcoming Events](#)

The way I see it

Jon Clements

Going to be abbreviated HF this week because I am off and on the road. That being said, we may feed you some tidbits as we find them. (Scouting reports?)

Insects (and some disease and horticulture)

Elizabeth Garofalo and Jon Clements

- Here's another [YouTube video on entomology](#) from Dean Polk at Rutgers. Please watch...
- I'd be on the lookout for **potato leafhopper (PLH)** any day now. Threshold for tolerance is zero in new plantings, consult [NETFMG](#) for treatment options.
- **Obliquebanded leafroller (OBLR)** treatment (Altacor, Delegate, Belt, among others, see [NETFMG](#)) should begin soon, but I would probably hold off until next week.
- **Pear psylla** are still out there, but the 2nd generation of adults should be waning. Hatching eggs and the nymphs are what's going to be doing the dirty deed now. We had a report of some phytotoxicity on pears where oil was used at arguably too high a rate. Be careful with summer oil, use at no more than 1% (preferably 0.5%).

Thorough coverage is necessary. Although repeated oil applications can be effective at managing psylla, at this point in time I would have a tendency to rely on a systemic insecticide such as Movento or Sivanto (the latter preferred) as I believe it has a better chance of stomping out the pear psylla problem for the rest of this season.

Diseases

Liz Garofalo, Paul O'Connor, Arthur Tuttle and Dan Cooley

• **Fire blight** strikes are still wanted for streptomycin resistance testing. If you find fire blight, we would like to know about it. Give us a call (413-478-7219) or [e-mail](#). Needless to say, any shoot blight should be removed when the weather is dry. Be sure to cut far back from where the infection appears to start. Here are some fire blight reminders gleaned from the [Cornell ENYCHP Tree Fruit E-Alert](#) for June 21st, 2016 (Thanks Dan Donahue and Anna Wallis):

- ***Damage appears to be caused by native or endemic fire blight populations.*** Strikes have been detected in various planting ages and sizes. While fire blight can be brought in to an orchard on nursery trees, this does not appear to be the case in this situation.
 - ***For bearing trees with few strikes,*** copper should be applied as a protectant to protect infected and surrounding trees from secondary infection. And strikes should be pruned out at least 12" into healthy tissue. Cueva + Double Nickel has been used extensively in other regions without affecting fruit finish. It should be applied on a 7-10 day schedule until terminal bud set.
 - ***For non-bearing blocks or blocks with severe fire blight,*** the primary goal should be to save the trees. Trees should only be removed if the strike has infected the main leader. Aggressively prune out strikes and apply a heavy dose of metallic copper (i.e. Kocide)
 - ***The bacteria is able to travel through the xylem of the plant.*** It may be present in healthy tissue, beyond where pruning cuts were made. Cankers may form on large limbs or trunks where pruning cuts were made. These will be difficult to see and prune out later this season, but are a potential source of inoculum during bloom next season.
 - ***Streptomycin application should be used after a storm event.*** The antibiotic will be effective immediately before or within 24 hours after a storm event including 1) trauma in the form of high winds or hail, 2) warm temperatures and 3) rain. It must be present to kill bacteria while wounds to the tree tissue are still open.
 - ***Streptomycin application should be limited to 1 application this summer.*** Repeated applications can lead to development of streptomycin resistant bacteria. Despite label recommendations (up to 6 applications post boom), you should make every effort to limit applications to 1 spray.
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Horticulture

J. Clements

- **Irrigation.** It's still dry. According to the NEWA Apple Irrigation Model, the Water Balance (gallons/acre) for a mature tall-spindle apple orchard is currently -32, 846 gallons. By June 27, it's predicted to be -48,294 gallons per acre. That means I would have to turn the trickle irrigation on for nearly three days straight to make up that deficit (including the rain predicted for this Thursday.) We have not seen it this dry in some time, turn on the water if you have it.
- **Tree training and pruning.** Not too late to strip leaders and finish up any errant apple tree pruning. Time to turn to peaches: remove big wood shading the interior of the canopy; remove vigorous, upright shoot growth;

just try to open up center of tree so some filtered sunlight enters.

• **Hand thinning.** Apples should be hand-thinned ASAP now to reduce crop load (where necessary) and improve return bloom for next year. The earlier the better on the latter, although I have to wonder how big a problem return bloom is going to be next year? Still, June drop is pretty well over so you can hand thin where necessary.

Guest article

No Guest article this week.

Facebook Me

Follow me (jmcextman) on FB: <https://www.facebook.com/jmcextman>



Eastern NY Commercial Horticulture Program

June 16 at 8:30am · 🌐

First SWD catch in eastern New York is earlier than ever with the use of new Scentry lures. Check your June bearing strawberries for signs of an infestations.

<https://blogs.cornell.edu/.../15/washington-county-first-fin.../>

Washington County first find : Spotted Wing Drosophila Latest information from the NYS IPM Program.

A single female SWD was caught on June 13, 2016 in one of four traps set in a blueberry planting in Washington County. These traps are being monitored by Laura McDermott, extension specialist, and Annie Mills, ag technician, with the Eastern NY Commercial Horticulture Program of Cornell Cooperative...

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YouTu.be

Nice entomology/insecticide update from Dean Polk at Rutgers University.

Tree Fruit Entomology Update



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>)

[David Rosenberger's Blog](#)

[Peter Jentsch's Blog](#)

[Healthy Fruit archive](#)

The next Healthy Fruit will be published on Tuesday, June 28 (or thereabouts), 2016. As always feel free to get in touch with any member of the UMass Fruit Team (<http://extension.umass.edu/fruitadvisor/team-members>) if you have questions or comments.