



Healthy Fruit, Vol. 26, No. 11, June 12, 2018

Jon Clements, Author (unless otherwise noted) and Editor

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Current degree day accumulations

UMass Cold Spring Orchard, Belchertown, MA	11-Jun
Base 43 BE (NEWA)	1025
Base 50 BE (NEWA)	619

Upcoming pest events

Coming events	Degree days (Base 43)	Meaning?
Cherry fruit fly 1st catch	755 to 1289	Does this mean we might expect to start catching SWD in traps at similar timing?
Lesser appleworm 1st flight subsides	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	If used, mating disruption should be in place
Oblique-banded leafroller 1st flight peak	843 to 1218	Hang pheromone traps to monitor presence/absence and set biofix
Oblique-banded leafroller summer larvae hatch	1038 to 1460	Time in a week or two for Altacor, Delegate or similar if indicated
Oriental fruit moth 1st flight subsides	829 to 1103	Getting late for mating disruption, petal fall insecticides should be taking care of
Peachtree borer 1st catch	781 to 1320	If used, mating disruption should be in place
Pear psylla 2nd brood hatch	967 to 1185	See ' Hawkeye's corner '
San Jose scale 1st generation crawlers present	1033 to 1215	See ' Insects '

Spotted tentiform leafminer 2nd flight start	938 to 1158	Too late to do much at this point...or see Ag-Radar summary for more info
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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.

Codling Moth (CM) -- 1st generation, first sustained trap catch biofix date: May 15, Tuesday. Codling moth development as of June 12: 1st generation adult emergence at 73% and 1st generation egg hatch at 20%. In most orchards, insecticide targeted against plum curculio and apple maggot prevent codling moth damage. If targeted codling moth control is needed, key management dates are: Optimum first application date for RIMON ovicide against 1st gen. CM eggs is at 75-100 CM degree days after the biofix for first sustained trap catch of adults: May 23 to May 24. For ESTEEM, the optimum first application timing is at 100 DD: May 27. For INTREPID, the optimum first application timing is at 150-200 DD: May 27 to May 31. For RIMON, ESTEEM, or INTREPID, second application date is at 20% egg hatch: June 12. For standard insecticides or Granulovirus, best timing for first of two applications is at 3% CM egg hatch: June 2, Saturday, 1st generation 20% CM egg hatch: June 12, Tuesday, = target date where a only one spray needed to control 1st generation CM.

ObliqueBanded Leafroller (OBLR) -- 1st generation OBLR flight begins around June 7, Thursday.

Oriental Fruit Moth OFM -- 2nd generation OFM flight begins around: June 28, Thursday. 2nd generation - first treatment date, if needed: July 6, Friday. 2nd generation - second treatment date, if needed: July 19, Thursday.

Spotted Tentiform Leafminer (STLM) -- 2nd STLM flight begins around: June 16, Saturday. Rough guess of when 2nd generation sap-feeding mines begin showing: July 6, Friday. Optimum first sample date for 2nd generation STLM sapfeeding mines is July 13, Friday.

Upcoming meetings

From Mary Concklin @ UConn

Twilight Meeting: The CT Pomological Society Annual Summer Twilight meeting will be held on **WEDNESDAY, June 13, 2018** at 6 PM. [Bishops Orchard](#), 520 New England Rd, Guilford, CT. RSVP is requested for dinner planning purposes. E-mail Michael Williams at michael.w@bishopsorchards.com or text to 860-304-3506 and include your name and # attending. No cost to you. This is open to everyone. Join us, meet new friends and catch up with old ones. Discussion on pest issues with Dr. Jaime Pinero, UMass Extension's new fruit entomologist; I will discuss disease issues; Evan Lentz and Casey Lambert, UConn iPIPE interns, will discuss the iPIPE program; staff at Bishops will give a tour of the farm; and more. 2 Pesticide credits will be available.

From Heather Faubert @ URI

RIFGA Twilight Meeting, **THURSDAY, June 14, 2018** at 5:30. [Barden Family Orchard](#), 56 Elmdale Rd, North Scituate, RI. During meeting we will assess this year's crop and cover topics such as summer pruning, and insect, disease, and weed management and more. Meeting is free with annual dues payment of \$40, or \$20 for non-RIFGA members. (\$20 for MFGA Members.) Registration is not necessary. Light dinner will be served. Two hours pesticide recertification credit available.

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>

The way I see it

Jon Clements

I will be [Facebook Live](#) at the UMass Orchard Tuesday, (June 12) at 5:30 PM. Ideally, you would "Friend" me on Facebook, but I am not sure you have to? (Although I am not sure how you would find the live feed on Facebook?) This is an experiment, your participation and feedback would be welcome! Win Cowgill will be my guest, and we may have a few other surprises too! Training and pruning young trees after planting will be the main topic of demonstration and discussion. You are also welcome to come to the UMass Orchard in Belchertown and visit with us too. Sorry, no pesticide credits and no food. But just think, you can sit in the comfort of your house, out of the sun, drink, well, whatever you want. Even eat supper while watching! You can submit questions, we will try to answer, and comment. The video will be recorded and available for later viewing or reviewing. One hesitation I have is that the cellular connection at the UMass Orchard is not the fastest, I worry we might get cut off? (Thanks Verizon.) But we will keep your fingers crossed and hope for the best. The plan is to limit the show to 45 minutes to an hour at most. Hope to see you there...Jon Clements on Facebook

[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 Francescatto 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.

Insects

Jaime Pinero

The plum curculio season is nearly over!

According to NEWA, and using Belchertown Degree Day data, the PC season is nearly over! As of June 11th, **304 DD50** have accumulated since petal fall. If your last insecticide spray against PC took place so that there is still residual activity for the next 3-4 days, then according to the oviposition DD model, there won't be a need to spray against PC again. As a reminder, the oviposition model indicates that the last spray against PC should have sufficient residual activity for effective control until 308 DD50 have accumulated since petal fall.

Fruit sampling by the UMass entomology team will be conducted within the next 3 weeks in selected orchards throughout the state where odor-baited trap trees as a way to congregate PCs to the canopies of those trees have been deployed. Sampling results will be reported in Healthy Fruit.

San Jose Scale

With less residual insecticide in the orchard after the threat of PC has passed, it is easier for San Jose scale to reproduce in tree fruit blocks.

If you have experienced high pressure by San Jose scale in your orchard in recent years, please let me know.

First generation crawler emergence is predicted to occur approximately 500 DD after March 1st. NEWA indicates that, in Belchertown, 553 DD have accumulated thus far. So, monitoring for the crawlers needs to be initiated. A small amount of tape is applied tightly around a scaffold limb after removing surface debris with sandpaper. A limb with a known infestation should be selected. Crawlers will appear as extremely small flattened yellowish insects which can be seen with a hand



Electrical sticky tape around limb to detect San Jose scale crawler activity. Photo credit: <http://www.omafra.gov.on.ca>

lens on the tape (especially around the edges). Within two days, the crawlers will find a permanent resting spot where they will feed and begin to secrete a protective waxy covering. If this pest was a serious problem last season, begin treatment.

If and when a treatment against this stage is needed, the most effective insecticides listed in the NE Tree Fruit Management Guide (<https://netreefruit.org>) are Esteem* 35WP (4 to 5 oz./acre), Centaur 0.7WDG (34.5 oz./acre) and Movento 240SC (6 to 9 fl. oz./acre). Movento must be used with adjuvant having spreading and penetrating properties. Other options include Imidan 70W (2.1 to 5.7 lb./acre), and Assail 30SG (8 oz./acre)

** From Cornell University: A low rate (0.25% or 1 qt/100) of a highly refined summer oil has been shown to improve penetration and, therefore, control.*

Apply two sprays, against the first and peak (7-10 days later) activity of crawlers. If monitoring, suggested action threshold is 1-2 crawlers/trap (sticky tape trap around limb).

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

Dan Cooley

Ed. note: Dan says it's dry, thus plant pathogens are taking a break. "Oh yea?" Jon says, what's this then? Brownie points for anyone who can answer, there are two possibilities. (Or that is what Jon thinks.)



Danube cherry at UMass Orchard, 11-June, 2018

Oh, BTW, this is what happens when Dan does a fire blight experiment at the UMass Orchard...



Jonagold tree at UMass Orchard, 11-June, 2018 (fire blight experiment)

Horticulture

Please come and participate in Fruit Twilight Meetings this week to learn all you need to know about timely horticultural practices!

Hawkeye's corner (notes from the field)

Liz Garofalo


Potato leafhopper (PLH) has migrated up the coast into our orchards. While your larger trees will exhibit typical leaf edge burn from this pest, it's the smaller trees and new plantings that require protection. So, go out and check for adults, one per plant, on vulnerable trees, is enough to trigger action! Avaunt (IRAC 22) is rated highly effective against PLH, has a 14 day pre-harvest interval for apple and a 12 hour REI. Exirel is also a good choice (IRAC 28) and a viable rotational material with Avaunt (the fact that both these materials are from Dupont is

strictly coincidence). A note of caution or two on Exirel: DO NOT MIX WITH CAPTAN as Exirel is oil based.




Also, there is this reminder on the label:

PROTECTION OF POLLINATORS



APPLICATION RESTRICTIONS EXIST FOR THIS PRODUCT BECAUSE OF RISK TO BEES AND OTHER INSECT POLLINATORS. FOLLOW APPLICATION RESTRICTIONS FOUND IN THE DIRECTIONS FOR USE TO PROTECT POLLINATORS.



Look for the bee hazard icon in the Directions for Use for each application site for specific use restrictions and instructions to protect bees and other insect pollinators.

This product can kill bees and other insect pollinators.

Bees and other insect pollinators will forage on plants when they flower, shed pollen, or produce nectar. Bees and other insect pollinators can be exposed to this pesticide from:

- Direct contact during foliar applications, or contact with residues on plant surfaces after foliar applications
- Ingestion of residues in nectar and pollen resulting from foliar applications.

When Using This Product Take Steps To:

- Minimize exposure of this product to bees and other insect pollinators when they are foraging on pollinator attractive plants in and around the application site.
- Minimize drift of this product on to beehives or to off-site pollinator attractive habitat. Drift of this product onto beehives or off-site to pollinator attractive habitat can result in bee kills.

Information on protecting bees and other insect pollinators may be found at the Pesticide Environmental Stewardship website at: <http://pesticidestewardship.org/PollinatorProtection/Pages/default.aspx>.

Pesticide incidents (for example, bee kills) should immediately be reported to the state/tribal lead agency. For contact information for your state, go to: www.aapco.org/officials.html. Pesticide incidents should also be reported to the National Pesticide Information Center at: www.npic.orst.edu or directly to EPA at: beekill@epa.gov

While bloom has passed, there is still danger of off-target **pollinator** exposure resulting from their foraging in blooming weeds. Please consider mowing prior to spraying!

Pear psylla is still kicking about the orchard. Right now we appear to be in between generations. Summer adults are laying eggs, currently there are not any nymphs moving about though.



Summer **adult** psylla, note the distinct color banding.



Eggs are laid on the underside of leaves, often along a vein, and on succulent shoots as well.

These extra squishable **gypsy moth**, and its less squishy (as its known to cause skin irritation) cousin, the **tussock moth caterpillar** have gotten too big to treat with a *Bacillus thuringiensis*

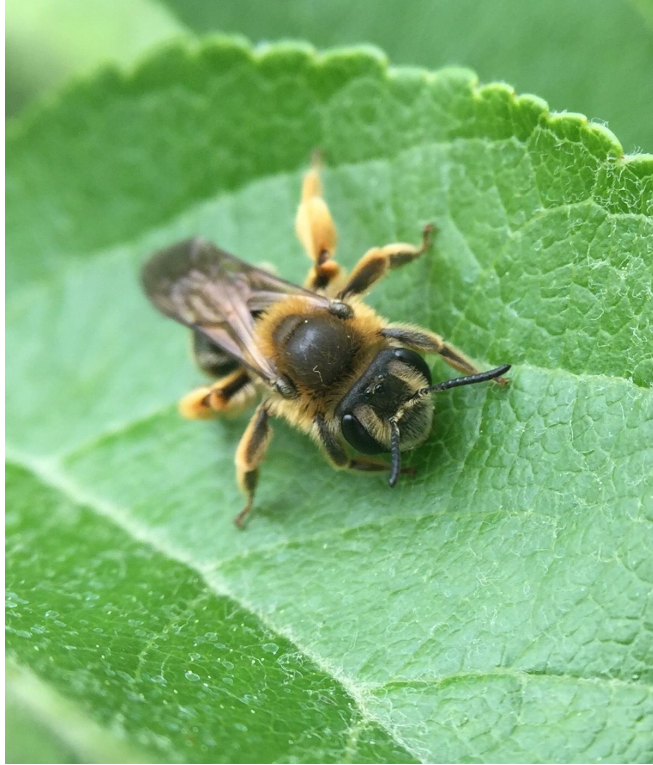
material. Hopefully, you got Dipel (or some other) on in time to prevent them from reaching this size!



Gypsy moth caterpillars



Tussock moth caterpillar



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

Guest article

Question: Many people today are afraid to share data because their trust has been broken and their data misused. How can trust be built into information networks so participants can share data for the public good?

Lyndsey Anne Ware, UMass iPIPE Intern, on the iPIPE Intern Blog, in response to the above Question...

[Wendell Berry](#) wrote "the primary motive for good care and good use of the land-community is always going to be affection, which is too often lacking."

This, like many things written by Berry, resonates with me.

If it has not been apparent so far, I am a bit older than most other iPIPE interns. Existence has taken me on what we now refer to as a "nontraditional path."

However, I keep in mind my people's traditions and constantly remind myself of how much I learned from my paternal grandparents who were children during the Great Depression and did not attend school past the age of 13. They always grew their own food, made their own jelly, and even cleaned and processed their own meat. Additionally, they shared with their neighbors who in turn shared with them.

My grandfather had a respectful relationship with the land. Now, when posed the question of trust, I think of him and draw on my "leftover-ever-adapting" journalism experience.

Communication is just as important as your soil's pH and the reason many people no longer trust journalists is because those foundational rules have been lost to some degree. A man like my grandfather or many of our growers are in tune with the world in a way that allows them to detect intent.

Those ethical rules of journalism include...

- be diligent in determining your own motives. That is to say, be careful not to exploit others for personal gain
- do not insult the intelligence of your audience
- avoid jargon
- always ask yourself WHY others should care about the subject...
- avoid making assumptions
- and half of communicating is listening

These are guidelines that can help us in communicating with anyone. Although, I am human and I have failed in many of my interactions throughout the years.. it is worth saying that my successful interactions and established relationships happened when I slowed down enough to consider these factors and was genuine.

I think the common bond among all agricultural minded people is our concern and love of the land. By tapping into this single element, a mutual respect can develop. We should always ask ourselves how others will benefit from taking the time to share data or knowledge... "Why should they care?" AND we should follow up by asking them directly rather than making assumptions.

Most people do not want to be misrepresented and do not want to be responsible for the repercussions that misrepresentation can bring about. The beauty of working with people in this field is that common bond of caring about the land, food security, and sustainability. That is the affectionate root we can all grow from. It's a great starting point in developing trustful relationships much like the ones people have with the land they work.

In regards to social networking platforms, it may take some convincing for people who spent years socializing and networking face-to-face. They have to know that what they share will not be exploited or used to make others money and leave them in the dust. This is a factor we should not ignore. I hope this helps some. Just in writing, it has helped me recall some characteristics of my own that need watering. Theories are nothing without application.

Facebook Me



Jon Clements was live.

June 8 at 3:59pm · 🌐 ▼

At UMass Cold Spring Orchard



128 Views



Like



Comment



Share



Abdul Qadoos Beig, Poliana Francescatto and 9 others

Most Relevant ▼



Write a comment...



Jon Clements · 0:00 Gypsy moth caterpillar feeding 🤔

Like · Reply · 3d



2



Poliana Francescatto replied · 2 Replies



Jon Clements · 0:00 I agree, I should be more disciplined, but was thirsty 😊

Like · Reply · 3d



Jon Clements · 14:13 If you look close, lots of little fruits on the ground in most cases...

Like · Reply · 3d



Poliana Francescatto · 10:56 We see a lot this year like that on galas. Lots of blank clusters then other with 3-4 fruitlets

Like · Reply · 3d



1

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/jmccextman>) and Facebook (<http://www.facebook.com/jmccextman>)

[Acimovic Lab at Hudson Valley](#)

[Peter Jentsch's Blog](#)

The next Healthy Fruit will be published on or about June 19, 2018. 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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