



Healthy Fruit, Volume 20, Number 9. May 29, 2012

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Current (through May 28) degree day (DD) accumulations

Location: UMass Cold Spring Orchard, Belchertown, MA
Base 43: 946 Base 50: 630

Upcoming pest events (based on current DD accumulations: Base 43 at 946 on 28-May)

Lesser appleworm 1st flight subsides	990-1146
Codling moth 1st flight peak	574-1008
Obliquebanded leafroller 1st flight peak	843-1139
Cherry fruit fly 1st catch	775-1289
Codling moth first flight peak	574-1008
Peachtree borer 1st catch	796-1530
Dogwood borer 1st catch	831-1301

Orchard Radar key dates

Below are key dates for insects and mites from Glen Koehler's (U. of Maine) Orchard Radar output from Belchertown, MA. You can look at Orchard Radar for Belchertown here: <http://pronewengland.org/AllModels/MAModel/RADARMA-Belchertown.htm>

Codling moth (CM): Codling moth development as of MAY 29: 1st generation adult emergence at 67% and 1st generation egg hatch at 12%. In most orchards, insecticide

targeting plum curculio and apple maggot prevent codling moth damage. If targeted codling moth control needed, key management dates are: 1st generation 3% CM egg hatch: MAY 26, Saturday = target date for first spray where MULTIPLE sprays needed to control 1st generation CM. 1st generation 20% CM egg hatch: MAY 31, Thursday = target date where ONE spray needed to control 1st generation CM.

Obliquebanded leafroller (OBLR): 1st generation OBLR flight begins around MAY 26, Saturday. 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, Altacor, Proclaim, Intrepid, Rimon, Belt, pyrethroid or other insecticide against OBLR (with follow-up applications as needed): JUNE 11, Monday.

Oriental fruit moth (OFM): 1st generation 55% egg hatch and first treatment date, if needed: MAY 16, Wednesday. 2nd generation OFM flight begins around: JUNE 16, Saturday. 2nd generation - first treatment date, if needed: JUNE 25, Monday. 2nd generation - second treatment date, if needed: July 8, Sunday.

Plum curculio (PC): Increased risk of PC damage as McIntosh and similar cultivars increase fruit size: MAY 7, Monday. Earliest safe date for last PC insecticide spray: MAY 16, Wednesday.

Upcoming meetings

July 16: Massachusetts Fruit Growers' Association Summer Meeting, UMass Cold Spring Orchard, Belchertown, MA

July 26-27: International Fruit Tree Association 2012 Quebec Study Tour, Montreal PQ, Canada. More information: <http://www.ifruittree.org/?page=2012StudyTour>

The way I see it (J. Clements)

Things are heating up -- but the apple crop seems to be cooling down? Fruit set is generally modest at best, a result I am sure of all the cold spring weather and unimpressive pollination conditions. Hopefully you did not over-thin. (Or you got it just right based on our earlier recommendation to thin conservatively.) IF you are still looking at too much fruit (you think?) then ethephon/Ethrel and carbaryl are your remaining fruit thinning options as fruit is over an inch in diameter now. See the fact sheet on such here: <http://extension.umass.edu/fruitadvisor/fact-sheets/late-season-rescue-thinning-ethephon>. IF you are sure you need to hand-thin, start ASAP. Early hand thinning results in bigger fruit and better return bloom next year.

Speaking of return bloom, although it is probably not going to be a big problem in 2013, 2 oz. of Fruitone-L from here-on-out in every cover spray can improve return bloom. See the fact sheet here for more information: <http://extension.umass.edu/fruitadvisor/fact-sheets/enhancing-return-bloom-apple>

Codling moth is the only real insect pest of concern right now as curculio season is pretty much over. Based on the biofix-first trap catch model for timing codling moth

sprays, this week is it in Belchertown. (See NEWA ouptput below.) Altacor is probably one of the best choices for controlling codling moth at this timing, although there are many other (good-excellent) options too: Assail, Belay, Beleaf, Calypso, Delegate (might want to save for OBLR? Speaking of which, biofix set today @ Belchertown, see pict...), Intrepid, Proclaim, Voliam Flexi, Toursimo, and Belt.

Codling Moth Results for Belchertown-2

First Trap Catch:

First Trap Catch date above is estimated based on degree day accumulations or user input. Enter the actual date for blocks of interest and the model will calculate the protection period after first trap catch more accurately.

Accumulated degree days (base 50°F) first trap catch through 5/28/2012: 238 (0 days missing)

Pest stage:

The pest stage above is estimated. Select the actual stage and the model will recalculate recommendations.

Pest Status	Pest Management
Eggs usually begin to hatch about 220 DD after the first catch, and catches of adults should be increasing in pheromone traps.	Apply the first spray for control of overwintering CM at 250 DD after first catch. In some seasons, Plum curculio will still be active at this time and a broad spectrum material should be selected to control both of these pests at this time in high risk PC orchards. If internal worm damage has been observed in past years in an orchard, CM populations may be resistant to organophosphate and synthetic pyrethroid insecticides and other classes of materials may be more effective.

It's probably not too early (although it seems it) to start monitoring for the arrival of **potato leafhopper** in 1st-leaf plantings. It does not take them long to stunt growth.

It's also time to hang Isomate PTB-Dual if you are going to do mating disruption for **peach tree borer**. Art Agnello in Scaffolds has an excellent review of peach tree borer and mating disruption in this week's Scaffolds:

<http://www.scaffolds.entomology.cornell.edu/2012/index.html>

Disease-wise, the relatively dry and humid weather has been ideal **powdery mildew** breeding conditions. If you are out putting on that last scab spray, include something for powdery mildew: sulfur (if it is not too hot and you can stand it) or Rally. Young plantings might benefit from a targeted powdery mildew application by themselves. For more on powdery mildew, see Dan Cooley's article below.

Obliquebanded leafroller first trap catch (= biofix)
UMass Cold Spring Orchard, Belchertown, MA



Apple Disease Update (D. Cooley)

With the return of wet weather, **apple scab** inoculum revived and by now has finished in all areas, ending over the past week. Active scab first appeared in a test block at Belchertown about 10 days ago, the result of the first heavy infection period around bloom (Apr 22 – 23). Scab infections from later infection period will appear over the next week to 10 days, and it is important to maintain fungicide coverage during that time.

While scab remains the most important disease issue in New England, **powdery mildew** continues to show up more and more often. This is partly because the fungicides that we've emphasized for scab control are not very effective mildew fungicides. This year, make sure that effective mildew fungicides are in the disease management program for at least a couple of applications. Without effective fungicides applied at least a couple of times from bloom through first cover, mildew will continue to grow and cause new infections, generating more inoculum for next year. While this may not be a big problem this year, eventually the gradual build-up of the disease will reach economically damaging levels, particularly in smaller trees. The weather we are presently enjoying, hot and humid, is great for mildew growth. Rain will actually suppress the fungus, but humidity without rain makes it grow.

Sulfur is a great mildew fungicide, but **with hot weather (over 80 F), sulfur should NOT be used** to suppress mildew because it can damage trees and fruit. The best option in hot weather is an effective SI (Rally or Topguard are most effective) or a strobilurin (Flint or Sovran) at some point over the next week. Since primary scab should still be controlled, include captan in the mix. Remember the unfortunate fact that the effectiveness of SI's against scab is opposite their effectiveness against mildew. That is, a good SI against scab is a poor SI against mildew, and vice-versa.

If you've used sulfur, an effective SI or a strobilurin in two sprays already, it's still not a bad idea to keep mildew controls in the mix for another week or two, particularly in younger, smaller trees. This is a great year for powdery mildew and so it deserves more attention than we usually give it.

Don't forget **fire blight** either. While the vast majority of bloom is long gone, there are still blossoms out there on small trees. Either take them off, or keep on eye on fire blight risk and use streptomycin if needed. The risk level for fire blight is extreme and predicted to stay that way for the next few days at Belchertown.

Sprayer calibration

Proper sprayer calibration means accurate pesticide application. If you would like to go over your sprayers calibration and spray pattern, let me -- Jon Clements -- know. I have the tools and expertise (at least I think I do!) to help you out.

clements@umext.umass.edu, 413-478-7219.

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>)
- UMass Vegetable & Fruit IPM Network (on Facebook, <https://www.facebook.com/umassipmteam>)

The next Healthy Fruit will be published Tuesday, June 5 or thereabout, 2012. As always feel free to get in touch with any member of the UMass Fruit Team (<http://extension.umass.edu/fruitadvisor/about/members>) if you have questions or comments.