



Healthy Fruit, Volume 20, Number 8. May 22, 2012

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Current (through May 21) degree day (DD) accumulations

Location: UMass Cold Spring Orchard, Belchertown, MA
Base 43: 771 Base 50: 488

Upcoming pest events (based on current DD accumulations: Base 43 at 771 on 21-May)

Lesser appleworm 1st flight peak	355-773
Codling moth 1st flight peak	574-1008
Obliquebanded leafroller pupae present	601-821
Black cherry fruit fly 1st catch	702-934
European red mite summer egg hatch	737-923
Codling moth first flight peak	574-1008
Peachtree borer 1st catch	796-1530

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): 1st generation sustained trap catch biofix date: MAY 2, Wednesday. Codling moth development as of MAY 22: 1st generation adult

emergence at 35% and 1st generation egg hatch at 0%. 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 12, Tuesday.

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 17, Sunday. 2nd generation - first treatment date, if needed: JUNE 26, Tuesday. 2nd generation - second treatment date, if needed: July 9, Monday.

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)

You all saw the note from Dan Cooley last week that we are not out of the woods yet on primary scab season despite what the degree-day model suggests. What I suggest is maintaining fungicide coverage through this week and THEN if it dries out, given the state of the ground-cover vegetation and the fact our season is still a bit earlier than average, we will be out of the woods. (Assuming you had a reasonably clean orchard last year.) Powdery mildew is still a concern in this weather, using an SI fungicide with your protectant fungicide is in order if you are seeing any signs of mildew. Last week during the twilight meetings, it was brought up that mildew seems to be coming more common and will likely need more thought about control in the future.

Again, if you believe the model and you applied an insecticide late last week, plum curculio season is over (in Belchertown). I am betting most of you are not gamblers, and given this week's forecast -- which looks like ideal curculio weather -- more insecticide will be applied for this pest. Although I am going with the model and applied my last insecticide for curculio last Friday.

I am seeing a lot of black cherry aphids in my cherries and will be treating ASAP with Movento 2F.

If you applied thinning spray(s) in the last few days, kudos! You should get good results. See Duane Greene's comments and mine on the MaluSim and Orchard Radar outputs discussion below.

Soil Health Assessment Baseline Survey (S. Schloemann)

UMass Extension is undertaking some training activities over the next 3 years on soil health assessment. This is in response to concerns about soil quality issues and degradation over time.

In order to establish the current extent of knowledge about soil health and how it is assessed, a baseline survey is needed.

Please consider taking a few minutes to fill out a survey that can be found at: <https://www.surveymonkey.com/s/VWTW8RD> to help us establish this baseline. The survey is anonymous and should take only a short time to fill out. Please fill it out regardless of whether you are signed up for any planned trainings.

You may receive this request more than once (sorry!) but please try to only respond one time.

Many thanks!

Again, the survey can be found at: <https://www.surveymonkey.com/s/VWTW8RD>

This weeks comments on late apple fruit thinning (D. Greene)

Monday I visited a number of blocks of trees and made rough measurements of fruit sizes. These ranged from 12-13 mm to as large as 17+ mm. While fruit in the lower size categories are still in a physiological stage that allows for effective chemical thinning, the larger fruit will be more difficult to thin. If you have favorable weather for application in the next day or two it should be possible to thin blocks that are judged to warrant it. There are precautions to consider when using NAA above 15 mm. It is possible to have little size effect even if thinning is achieved if a high rate of NAA is used or it is applied during a period of high temperatures.

Jon has run the carbohydrate model for the next few days and it appears that there will be a deficit that is favorable for thinning, especially for the smaller-sized fruit. The carbon balance model is a very useful tool that serves us very well in thinning decision making. However, when fruit reaches 15 to 16 mm in size and larger other factors start to become involved. The physiology of the fruit is changing and thus it is more difficult to thin, but not impossible.

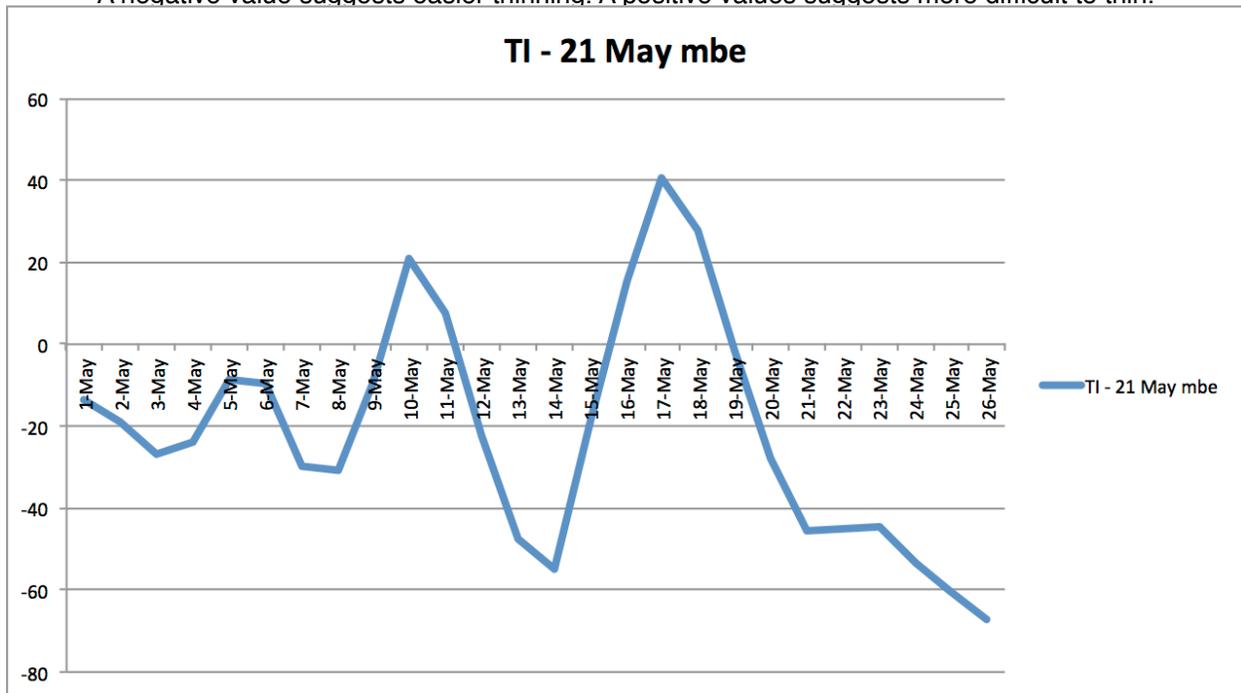
Briefly, MaluSim and Orchard Radar apple thinning outputs/predictions (J. Clements)

Without going into a lot of discussion, I thought it would be useful to share a couple of the decision support tools we have been using to make apple thinning decisions.

The first is the MaluSim output, which is based on the carbohydrate status (surplus/deficit) of apple trees as modeled by Alan Lakso at Cornell. The graph below is a

Thinning Index which presents 3-day averages of carbohydrate surplus/deficit in the apple tree. Bottom line, if there is a negative TI, expect trees to be easier to thin, and conversely, if positive, trees are going to be more difficult to thin. The graph shows that thinners applied app. May 12 and/or May 20 should give good results. Note that it uses forecast data beginning May 21.

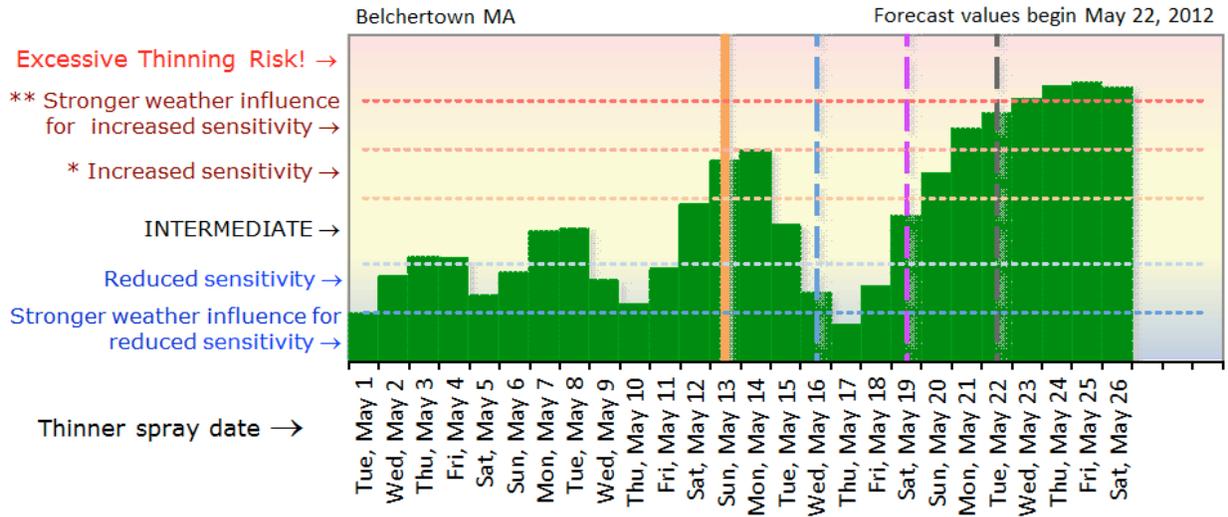
MaluSim output from May 21, 2012, Belchertown, MA.
 A negative value suggests easier thinning. A positive values suggests more difficult to thin.



Second is the Orchard Radar output from Glen Koehler. The bar chart should be pretty self-explanatory. Again, it suggests good results from thinners applied app. May 12 and/or May 20.

Orchard Radar output from May 22, 2012, Belchertown, MA.

3-day weather influence on apple sensitivity to postbloom thinner



Essentially, the two methods give similar insight into what to expect from thinning applications. Keep in mind both of these are based on weather data (max/min temperature and sunlight level) from Belchertown and your situation may be different.

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, May 29 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.