UMass Extension
Healthy Fruit
Volume 20, 2012
Prepared by the University of Massachusetts Fruit Program

Healthy Fruit, Volume 20, Number 5. May 1, 2012

Contents

Current (through April 30) degree day (DD) accumulations

Location: UMass Cold Spring Orchard, Belchertown, MA
Base 43: 456

Current bud stages

Location	**Honeycrisp apple** late bloom	**McIntosh apple** petal fall	**Rainier cherry** fruit set	**BlazingStar peach** petal fall+
UMass Cold Spring Orchard, 30-April 2012				

Upcoming meetings

May 15, 16, 17: Fruit Twilight Meetings, locations TBA

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

The way I see it (J. Clements)

It's a bit of a waiting game now to see "what we got" after the series of frosty mornings this past weekend. My impression is it is all over the place depending on location, but clearly the cold mornings have continued to chip away at the apple crop. At this point most should proceed as normal, i.e., maintain fungicide coverage during period(s) of wet weather and plan on a petal fall insecticide spray (this weekend if not sooner). Be sure to get out there and look at the buds and developing fruitlets. Definite frost injury is obvious with blackened centers (ovules) but we are still concerned about the effect of the prolonged cool weather and frosts on overall viability of buds to set a crop. I think in a week it will be obvious (assuming we get any warm weather), but for now we are still in a bit of a limbo. "It is what it is."

2012 New England Tree Fruit Management Guide available

It's not too late to order your 2012 New England Tree Fruit Management Guide. Attached is an order form. If you feel you can live without the hard copy, feel free to go for it: http://fruit.umext.umass.edu/2012netfmg/

Upcoming pest events (based on current DD accumulations: Base 43 at 456 on 30-April)

European red mite egg hatch complete	368-470
European red mite 1st summer eggs	447-555
Oriental fruit moth 1st flight peak	352-550
Spotted tentiform leafminer sap feeders present	343-601
Lesser appleworm 1st flight peak	355-773
Codling moth 1st catch	400-578
McIntosh petal fall	445-525

Comments on the apple fruit thinning challenge ahead (D. Greene)

Since last week you have accumulated additional information that may be useful in helping you decide as we enter into the thinning season. Flowers should have opened providing more insight into the health and condition of the flowers in individual blocks. You also can make a judgment about how the pollination period was in general and for individual varieties. It also appears that we dodged another bullet in that the freeze warnings forecast for the weekend did not materialize in most places resulting in little if any additional cold damage. Rain is forecast for today but the forecast for the next three days seems favorable for petal fall thinning. Observations that I have made at bloom and an assessment of our pollination period lead me to believe that thinning some blocks and on some varieties may be in order.

I continue to suggest caution but this week I add an asterisk. There are a number of varieties that we grow in New England that tend to be biennial. Being too cautious may come with a very high price tag as far as return bloom is concerned. That should be an important factor in making your decision. We are close to the time to make a petal fall

spray. Carbaryl is a conservative choice which I now think that you should at least consider in blocks that have a history of good to heavy set. In heavy blooming blocks of Macoun, Golden Delicious or Paulared, to mention just a few, the addition of a reduced amount of NAA might be in order, especially where little damage was observed at bloom. With Macoun you may want to consider a low rate of AmidThin.

Next week we will have even more information available to base later thinning suggestions on. Especially important will be the number of fruit that are in the 6 to 7 mm size range and how many seeds these developing fruit contain.

Now is the time indicated on the Apogee label to make the first application. If you plan to use Apogee this year, and you have not done so yet, this is the week. A delay in application will result in reduced growth control. In the past we have encouraged you to use lower rates because of the fear of partially negating thinner response. If you have blocks that did sustain frost damage and you have concerns about fruit set, the use of Apogee now is a strategy you may want to consider as a potential aid to help increase set. I suggest using no more than 6 oz/100 gal which is a rate allowed on the label. The recommendation that we suggest in most years for the initial Apogee application is to use no more than 4 oz/100 gal. Do not use on Empire.

Guest Article: Disease Management Suggestions for Frost Damage Orchards
David Rosenberger, Cornell's Hudson Valley Lab. Reprinted from Scaffolds Fruit Journal, April 30, 2012. http://www.scaffolds.entomology.cornell.edu/index.html

Most of us in New York are still uncertain about the final impact of freeze injury that occurred during the past five days. In the Hudson Valley, initial assessments suggest that injury varies tremendously depending on geographic location, orchard elevation, slope, cultivar, and rootstock, with effects from cultivar and rootstock mostly related to the way those factors impacted the stages of flowering and fruit set that were present when the frosts occurred. The situation is further complicated in orchards where weak spurs or flowers on one-year wood are just now opening, because it is too early to tell if any of those flowers will set fruit that might provide at least a partial crop.

Unfortunately, apple, pear, and some stone fruit trees are still at risk for most of our spring diseases and therefore must be protected with fungicides, even if there is little hope for harvesting a crop this year. Failure to maintain disease control for at least a few more weeks could result in trees with so much foliar disease that they defoliate early, fail to develop fruit buds for next year, are more prone to winter damage next fall, and/or have so much inoculum as to make disease control very difficult during the 2013 season. Here is a quick look at options for various crops.

Apples: It is important to maintain fungicide coverage through at least second cover so as to control scab, mildew, and rust diseases and prevent severe leaf damage and defoliation. However, one can afford to take a few more chances on "marginal" fungicide programs in blocks where there is little hope for having a harvestable crop. Where DMI fungicides are still working, they probably provide the best control option for the full disease complex. If combined with a mancozeb fungicide application at 3 lb/A, two more DMI applications at 10–14-day intervals may suffice where orchards are already at or near petal fall. Alternatively, applications of mancozeb alone at 3 lb/A or Captan-80 alone at 2 lb/A on a 10-day interval may suffice to keep scab in check. Add sulfur at 3–5

lb/A to the mancozeb, or alternate captan and sulfur (with sulfur 10–20 lb/A) in blocks where mildew is a problem. Sulfur alone at 10–20 lb/A can be used to control scab and mildew if the sulfur sprays are applied often enough. However, sulfur will not control rust diseases, and sulfur is very prone to wash-off during rains. Copper, as described below, has much better residual activity than sulfur.

I suggest that apple growers avoid using Flint, Sovran, Cabrio, or Pristine in orchards where there is no crop and where spray intervals will therefore be extended. Many orchards already have a scab population that is already shifted toward stroby resistance, and using any of these stroby fungicides on an extended interval may push the scab population into full-blown stroby resistance. We really need to preserve activity of the strobies as long as possible, so it will be safer to focus on other chemistries (DMIs, mancozeb, captan, ziram, sulfur, or copper) for disease management in frozen-out blocks.

Where there is an absolute certainty that the crop is totally lost, copper fungicides that are labeled for scab control could be used at 10–14-day intervals, with shorter intervals during periods of rapid shoot growth. Copper applied at petal fall and first cover will almost certainly damage fruit, so do not consider applying copper if there is any chance that a harvestable crop may still develop on frost-damaged trees. The copper fungicides may prove less expensive than either mancozeb or captan, and copper should suppress all of the major diseases. However, copper will act only as a protectant, so the fungicide must be present ahead of infection periods. Copper will cause the least amount of phytotoxicity to fruit and foliage if it is applied under rapid drying conditions and with relatively low volumes of water per acre (i.e, less that 50% of the water per acre that would constitute a full dilute application).

Unfortunately, labels for copper products vary tremendously in their listing of when the product can be applied and the diseases for which the product is labeled. For example, the Kocide labels specify low-rate copper applications for scab and fire blight can be made only between green tip and first cover. The Cuprofix Ultra40 label specifies that sprays for summer diseases should not be initiated before third cover. Some other products make no allowances for sprays after bloom. Where copper is applied to control scab, be certain that the rate applied is the lower rate that is specified for in-season sprays, because the high rates that are used for delayed dormant sprays may cause a lot of leaf burn.

Where Apogee is available, applying Apogee ASAP on trees that have lost their crop will help to keep trees from outgrowing their spaces while also shortening the period of peak susceptibility to those fungal diseases and insects that require new leaves for their continued development.

Pears: Where Fabraea leaf spot has been a problem in the past, a full program of fungicides will be needed to keep trees from defoliating in midsummer. If Fabraea is allowed to get started, it is almost impossible to arrest the epidemic. Thus, weekly applications of mancozeb should be continued until the season maximum of mancozeb has been applied. Alternatively, mancozeb sprays can be applied just ahead of predicted rains, thereby preserving some mancozeb applications for later in summer on trees that have no crop.

Stone fruits: Plum trees and tart cherry trees are still near peak susceptibility for black knot, and cherry trees will need continued protection against cherry leaf spot.

Normally, chlorothalonil (Bravo and generics) cannot be used after shuck split, but the label limitations become fuzzy for trees that have no fruit (and therefore no shuck split). Bravo has better retention/redistribution characteristics than any of the other brown rot fungicides, so this product is by far the best choice for stone fruit orchards that have not yet passed shuck split. Note that even on non-cropping trees, label limits on the total number of acre per year will still apply. Indar is the only other product that has provided reasonable suppression of black knot. Except for those growers who are experienced in using low rates of copper during summer to suppress bacterial spot, copper should not be applied to peaches because it can cause severe shot-holing and leaf drop. Cherries and other stone fruits can also be damaged by copper, although tart cherries are more tolerant than most other stone fruits.

Brown rot should not be an issue for trees with no viable flowers or fruitlets, but maintain brown rot coverage if there is any possibility that part of the crop will survive. In southeastern NY, growers should also be applying a fungicide that will control peach scab on peaches, apricots, and plums if trees have a viable crop. Peach cultivars that are susceptible to rusty spot must also be protected with a mildewcide for several weeks after shuck split. In orchards where no fruit will be harvested, no fungicide should be needed on peaches for the rest of the season with the exception of a leaf curl spray next fall.

Oxytetracycline sprays (Fire Line or Mycoshield) should be initiated at shuck split on peaches and nectarines where bacterial spot is a concern and where trees still have a crop. Our mild winter favored survival of this pathogen in regions where colder winters may have limited its survival in the past, so I anticipate that bacterial spot could be more severe this year than in the recent past. It is difficult if not impossible to arrest bacterial spot later in the season if the shuck split and first cover sprays have been omitted.

Useful links

- UMass Fruit Advisor: http://umassfruit.com
- Scaffolds Fruit Journal: http://www.nysaes.cornell.edu/ent/scafolds/
- 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 8 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.

Fruit Publications Order Form

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