



UMassAmherst Outreach UMass Extension

Healthy Fruit

Volume 15, 2007

Prepared by the University of Massachusetts Fruit Program

Healthy Fruit, Issue 8, May 22, 2007

http://www.umass.edu/fruitadvisor/healthy_fruit/

Current DD accumulations

Location	Base 33F	Base 43F	Base 50F
Belchertown, UMass CSO observed (01/01/07 – 05/21/07)		615	373
Belchertown, UMass CSO SkyBit (01/01/07 – 05/21/07)		492	
Belchertown, UMass CSO observed (04/20/07 [GT] -- 05/21/07)	759 [96]*		

*[96] = % mature apple scab spores

Upcoming meetings/events

Date	Meeting/event	Location	Time	Information
June 12-14	Fruit Team Twilight Meetings	TBA	5:30 PM	Jon Clements 413-478-7219

The way I see it

We are entering a time when fruit thinning ought to be in the front of your mind. (Well, some of you may be worried about curculio too!) Every indication is that fruit set is good, *and* the weather has been good, *and* the weather forecast is good for thinning. So, as fruit size approaches 8-10 mm later this week, you ought to be applying a thinning spray. Some may be just at a petal fall timing, others farther along, so a fairly safe universal recommendation (if there is any such thing) is one quart of Sevin XLR (per 100 gallons dilute) plus 7.5 ppm NAA (3-1/2 oz. Fruitone-N per 100 gallons dilute), certainly on all hard to thin varieties like Fuji, Gala, Macoun, etc. Even Macs and Honeycrisp probably need this. (Consider the fact most Honeycrisp orchards are 'on' this year, so unless you thin good, they will be 'off' next year.) Save the BA (Maxcel) for a little later when fruit size gets to be greater than 10-12 mm and still more thinning is needed. Bottom line, is this appears to be a year when somewhat aggressive thinning action will be needed to insure you won't be hand thinning until August and you will have good return bloom in 2008. J. Clements.

Cultivar-specific thinning recommendations in 2007 NETFPMG

A reminder that the 2007 New England Tree Fruit Pest Management Guide has an extensive table with cultivar-specific thinning (and return bloom enhancement) recommendations. A portion of the table is reprinted here, but you should buy the NETFPMG for the complete set. (Can be purchased on-line at <http://www.umass.edu/fruitadvisor/2007netfpmg.html>)

Recommendations for thinning specific apple varieties in New England. (Reprinted from 2007 NETFPMG)

The chemicals and rates suggested in this table are the “best suggestion” of the authors for mature trees with a heavy fruit set and “normal” fruit thinning weather. Our rates should be adjusted up or down by 50% depending on weather conditions, pollination, fruit set and tree sensitivity. Other chemicals, rates, timings and combinations may also work.

VARIETY	APPLICATION TIMING			
	50% Full Bloom	Petal Fall (1 week after bloom)	8-14 mm fruit size (2-3 weeks after bloom)	Return Bloom Enhancer (4-6 weeks after bloom)
<i>Rates are per 100 gallons based on a full dilute trv application*</i>				
Cameo		1 pt Sevin	3 oz Fruitone-N plus 1 pt Sevin	
Cortland			2 oz Fruitone-N	
Gala	2 gal ATS	1 pt Sevin	64 oz 6-BA plus 1 pt Sevin	
Honeycrisp	2 gal ATS	2 oz Fruitone-N plus 1 pt Sevin	3 oz Fruitone-N plus 1 pt Sevin	2 oz Fruitone-N (3 weekly sprays)
McIntosh (Non-Spur Type)			2 oz Fruitone-N plus 1 pt Sevin OR 40 oz 6-BA plus 1 pt Sevin	

All rates are amounts per 100 gal assuming a full dilute tree row volume (TRV) spray. Rate per acre = amount/hundred gallons X hundreds of gallons per acre TRV dilute. Tree Row Volume dilute gallonage (TRV) = (Tree Height X Tree Width X 43560 X 0.7) / (Between Row Spacing X 1000). The rate per acre may safely be concentrated up to 3X.

Some petal fall to first cover entomology issues on apples and stone fruit

Plum curculio (PC) are already present in the orchard, however, do not pose a significant threat until fruit reaches about 7 mm in size. A petal fall application of Sevin XLR for thinning at the 1 qt. per 100 gallons dilute rate will control PC for about one week. When fruit reaches 7 mm and up, better control options include Imidan, Avaunt, or Calypso and are a good IPM fit. PC like warm, humid weather with showers. All the above insecticides will also control codling moth (CM) and oriental fruit moth (OFM) at this timing.

You should be watching for signs of oblique-banded leafroller (OBLR) at petal fall, particularly if present last year in your orchard. Look at terminals for signs of feeding and the greenish larvae. More than likely, if you have had a problem in the past, you will continue to have a problem. OBLR may be resistant to OP insecticides (Guthion, Imidan). Use of Intrepid or Entrust at late petal fall or first cover has given generally good control of OBLR.

Peaches are still attractive to tarnished plant bug (TPB). Blocks adjacent to un-mowed fields and/or with broadleaf weeds in the orchard floor are more likely to suffer from significant TPB injury. Imidan or Guthion (can't be used on peaches or plums) do not provide good control of TPB in both stone fruit and apples. The pyrethroids such as Asana, Danitol, and Pounce are recommended in stone fruit, where

mites are less of a problem than in apples.

Borers. If you have not already applied a trunk spray of Lorsban for dogwood borer in apples, you should do it now. Apple trees on dwarf rootstocks that form burrknots (M.9, M.26) and have grass and/or unmaintained mouse guards at the base of the tree can get serious dogwood borer infestations that will result in tree death. Use of mating disruption for peach tree borers (greater and lesser) works very well and is recommended as an alternative to trunk sprays of Lorsban. Hang 100 twist ties -- (available from Great Lakes IPM, <http://www.greatlakesipm.com> -- per acre.

Healthy Fruit Disease Elements

The Disease Calendar

End of scab season – not quite yet. But the next rain should be the last significant infection period.

Secondary scab visible. Lesions from the late April infection period should be visible if there are any.

Shuck-split and later applications for brown rot and bacterial spot on stone fruit. These are key sprays.

Fire blight risk back down – bloom nearly done but be aware that late blooms can get infected if blight weather returns early next week.

Scab retrospective. Actually, it's a little early to call and end to scab season, with about 20% of the season's inoculum load of ascospores left to be released. (Note that if you follow the degree-day accumulations at the top of Healthy Fruit, that says we have released about 95% of this season's ascospore/inoculum dose. That is because we are using two different ways to record degree-days, hence the discrepancy. In the real world, the actual value is probably somewhere between.) According to the weather forecasts, the last significant scab infection period should happen in about 5 to 7 days, with the next significant rain.

The next rain will also spread secondary infections in those places where early infections happened. Infections from the rains at the end of April are spotty. In some places, it may have been too early, and inoculum levels too low to lead to infections. The next infection period after that was May 12. Lesions from this should appear by this weekend.

Shucks. As peaches and nectarines move into shuck split, it's a critical time for managing two diseases, the old nemesis brown rot and a problem that has been increasingly important, bacterial spot.

Shuck-split is the last chance for chlorothalonil (Bravo and Echo) sprays – they should not be applied after shuck split. For later sprays, the best materials are Indar, Elevate, Orbit or Pristine. Captan and sulfur are also options.

Bacterial spot is a disease that shows up in wet weather. It has shown up in New England in the last few years. Incidence is much higher on susceptible varieties, and these should be sprayed in blocks that have a history of the disease. The most effective spray material is the antibiotic oxytetracycline (Mycoshield or Flameout). Apply 0.75 lb/A at 75% shuck-split to early shuck fall. Repeat the application 7 to 10 days later, before rains.

Copper (Kocide, Tenn-cop) may also be used, but there is a risk of phytotoxicity. Phytotoxicity increases if the copper spray becomes acidic, so using it with sulfur or phosphites can be lead to damage.

Right: Early lesions on leaf from bacterial spot.
Hold leaves up to light or the sky to see early
water-soaked spots.



Left: Older leaf infections from bacterial spot.
Centers are brown, and fall out leaving a shot-
hole symptom.

Right: Early bacterial spot infections on peach
fruit.



Pictures from University of Georgia, [Peach Handbook](http://www.ent.uga.edu/Peach/peach_handbook/bacterial_spot.htm) web site, the article “Bacterial Spot”, by Dave Ritchie, North Carolina State University.

http://www.ent.uga.edu/Peach/peach_handbook/bacterial_spot.htm

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