



Healthy Fruit

Volume 13, 2005

Prepared by the University of Massachusetts Fruit Team






Issue 8, May 24, 2005

Current DD Accumulations

Location	Base 32F	Base 43F	Base 50F
Belchertown, UMass CSO observed (01/01/05 – 05/23/05)	--	497	233
Belchertown, SkyBit E-Weather (01/01/05 – 05/23/05)	--	452	--
Belchertown, UMass CSO observed (04/15/05 – 05/23/05)	770 (97*)	--	--
Belchertown, SkyBit E-Weather (04/15/05 – 05/23/05)	(80*)	--	--

• % mature spores

Current Bud Stages

Location	McIntosh apple	Honeycrisp apple	Pear	Redhaven peach	Sweet cherry
Belchertown UMass CSO (05/23/05)					
	fruit set	3-5 mm fruit	5-8 mm fruit	petal fall	5-9 mm fruit

Current bud stages also available on UMass Fruit Advisor, <http://www.umass.edu/fruitadvisor/>

Upcoming Meetings/Events

Date	Meeting/Event	Location	Time	Information
June 14	Fruit Team Twilight Meeting	UMass Cold Spring Orchard, Belchertown	3:00 PM	Jon Clements 413-478-7219
June 15	Fruit Team Twilight Meeting (with UNH Extension)	High Hopes Orchard, Keene, NH	5:30 PM	Jon Clements 413-478-7219 George Hamilton 603-641-6060
June 15	Fruit Team Twilight Meeting (with URI Extension)	Sweet Berry Farm, Middletown, RI	5:30 PM	Jon Clements 413-478-7219

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The way I see it

The cool weather continues. Clearly it has served to keep insect activity at bay, and until recently, disease pressure has been modest. The disease situation will change this week as a long period of cool showers is predicted, so fungicide coverage through this period will be important as primary scab season is not over yet. The insect situation will not change much, but be prepared when it warms up. I would watch fruit and shoot growth carefully during this period of cool, cloudy weather. Obviously the weather is not conducive to applying thinning sprays (at least not until next week at earliest), however, the trees may be doing some self-thinning during this inclement period. Ah, the weather is always our biggest challenge! J. Clements

Entomology

As one grower said today, "This has been a record-setting cool bloom period." Because of this, **plum curculio** isn't moving very much. There was a very small peak of movement at UMASS Cold Spring Orchard (as recorded by pyramid and panel traps) on May 15 and 16, and then another one May 19, but almost no activity again on the 20-23 of May. If we ever get an extended warm spell, there should be a large peak. In a typical year, at least half of the season's curculios would have moved into the orchard blocks by this time in orchards in the central and eastern parts of the state. This year it must be quite a bit less than that. A thinning spray with Sevin should have some impact on the curcs that have taken-up residence, and a full-block spray when the fruitlets are about 6 mm in size should be performed as usual. This year we will have to keep an eye on the accumulated degree days and the trap captures as well as the egg-laying scars once they show up. A. Tuttle and E. Bigurra

Horticulture

We don't see a good thinning window until at least this weekend now. Fruit growth is slow (1/2 mm/day at best) with this cool weather. Our best advice now is to give that petal-fall thinning spray (if you applied one) time to work, and wait until the weather warms and fruit size approaches 10 mm before applying another thinning spray. More next week, as it is a little early to tell exactly what is going on now in terms of fruit set. J. Clements

Diseases

We are nearing the end of primary **apple scab** infection potential, however, the recent wet weather still poses a significant infection risk. Hopefully many of you applied a petal-fall fungicide spray over the weekend. That should cover you (more-or-less, depending on the amount of precipitation) through this week. Another fungicide application will likely be needed by the weekend, which will be near the end of this current predicted wetting period *and* the end of primary scab season. Hopefully it will dry out a little and we can relax then, however, until that time, effective fungicide coverage that includes a protectant and something with kick-back is recommended.

The hard, driving rains predicted are ideal for spread of **bacterial spot** in peaches, nectarines, and plums. Cultivar susceptibility varies greatly, and you probably know if you have a problem with this disease in your orchard. Post-bloom control consists of applications of an anti-biotic. (Mycoshield is typically used.) Fruit and foliage are very susceptible during the month after bloom, so sprays must commence immediately and repeat at 7-day intervals if the weather remains wet. Hot, dry weather inhibits spread of bacterial spot, but we aren't seeing much of that.

Following is an article by David Rosenberger that appeared in this week's Scaffolds Fruit Journal (May 23, Vol. 14, No. 10) on stone fruit fungicides. It sums up the topic nicely. J. Clements

POST-BLOOM FUNGICIDES FOR STONE FRUITS

(Dave Rosenberger, Plant Pathology, Highland)

Reprinted from Scaffolds Fruit Journal, Vol. 14, No. 10, May 23, 2005

Designing fungicide programs for stone fruits is especially difficult for diversified farms that include small acreages of different stone fruit crops. Many growers would like one fungicide program that could be applied to all of their stone fruits (apricots, sweet cherries, tart cherries, peaches, nectarines, plums/prunes). That is often impossible because of label restrictions, differential sensitivity of crops to injury by some fungicides, and variations in diseases that must be targeted on the various crops. The following article discusses considerations for selecting post-bloom fungicides for stone fruits in New York and other northeastern states.

Common Post-bloom Diseases

Brown rot infections can occur on green fruit after shuck split, especially on sweet cherry. Other stone fruits, though less susceptible to green fruit infections than cherries, sometimes develop green fruit infections in high inoculum blocks or in years with extended warm periods shortly after shuck split.

Black knot infections occur mostly during a 4 to 6-week period that begins just prior to bloom. Japanese plums and tart cherries are generally less susceptible to black knot than European prune-type plums, but they still need fungicide protection if grown where inoculum is present.

Cherry leaf spot can defoliate both sweet and tart cherries. Fungicide protection should begin at petal fall and continue through summer. Fungicide sprays may be needed at 7 to 14-day intervals during May, June, and early July, especially where inoculum is abundant. A postharvest spray is essential in wet years to prevent trees from defoliating prematurely.

Peach scab is only a sporadic problem in New York. One or two sprays beginning at shuck split usually suffice to control this disease.

Rusty spot on peach is a mildew disease caused by the same fungus that causes apple powdery mildew. One or two mildewcide sprays may be needed after shuck split to keep fruit from developing this disorder.

Fungicides and Their Limitations

Chlorothalonil (Bravo, Echo) is labeled on all stone fruits. It provides fair control of brown rot blossom blight, although brown rot is no longer listed on the Bravo label. Chlorothalonil is excellent against black knot, cherry leaf spot, and peach scab, but it cannot be applied after shuck split except in postharvest applications to control cherry leaf spot or autumn sprays to control peach leaf curl. The Bravo label specifies a minimum of 10 days between treatments, and both labels imply a maximum of three sprays during the bloom to shuck split period. A shuck split spray can provide extended control of brown rot (green fruit infections), black knot, cherry leaf spot and peach scab due to the excellent retention and redistribution capabilities of this fungicide.

Captan is labeled on all stone fruits and provides good control of brown rot, black knot, cherry leaf spot, and peach scab. However, on some plum and cherry varieties, it can cause severe shot-holing or tattering of leaves, and it sometimes damages peach foliage when applied with a surfactant that enhances uptake into the plant tissue. Captan is an economical choice for brown rot control on peaches and nectarines during bloom, petal fall, shuck split, and first cover.

SI fungicides include Orbit, Elite, Indar, Nova, Procure, and Rubigan. Label restrictions and spectrum of diseases controlled by these fungicides vary greatly! Nova, Procure, and Rubigan are relatively ineffective against brown rot, whereas Orbit, Elite, and Indar are among the best brown rot fungicides. All six of these fungicides have provided good to excellent control of cherry leaf spot and mildew diseases on stone fruits. However, fungicide resistance problems are emerging in other states. The SI fungicides are losing effectiveness against brown rot in some orchards in the southeastern United States and against cherry leaf spot in some orchards in Michigan. The SIs have never been very effective against black knot, and only Indar is labeled for peach scab. Specific considerations for the three products that control brown rot include the following:

- Orbit is labeled on all stone fruits, but a maximum of 5 applications per year are allowed when it is used at the labeled rate of 4 fl oz/A. The label contains additional restrictions on when those sprays may be applied.
- Elite is labeled only on cherries, peaches, and nectarines. The labeled maximum of 3 lb/A/season allows only six applications per season when applied at the maximum label rate.
- Indar is labeled on all stone fruits except plums/prunes. The label allows a maximum of eight applications per season and label wording allows considerable freedom on spray timing. Work by Wilcox showed that Indar is hard to beat for brown rot control on tart cherries, especially if applied with a spreader-sticker.

Strobilurin fungicides include Abound, Flint, and Pristine. All three products are labeled on all stone fruit crops.

Abound is not recommended for stone fruit in NY because of its phytotoxicity to apples: Even a slight amount of drift or residue left in sprayers can severely damage fruit and leaves of susceptible apple cultivars.

- Flint is very effective for controlling cherry leaf spot and provides an effective alternative to SI fungicides for leaf spot control during the interval after the last Bravo spray at shuck split and before SI sprays or brown rot sprays are initiated during the preharvest period. Flint is not very effective for brown rot, nor is it labeled for brown rot.
- Pristine is actually a package mix of a strobilurin and another fungicide chemistry. It is very effective on brown rot, cherry leaf spot, and mildew diseases. Only two back-to-back applications are permitted, with a maximum of five applications per season. Where growers have different varieties of peaches or plums that mature over an 8-12 week period, Pristine should be used at least once or twice during the summer as part of a resistance management strategy for breaking up the string of SI fungicides that are otherwise applied to successive cultivars as they ripen.

Sulfur sprays can control rusty spot on peach and mildew on cherry, and sulfur provides good suppression of peach scab. However, sulfur can be phytotoxic to apricots, and most sulfur fungicides are therefore not labeled for apricots.

Apple scab infection period(s) at UMass Cold Spring Orchard, Belchertown

