UMASS EXTENSION

Healthy Fruit

Volume 11, 2003

Prepared by the University of Massachusetts Fruit Team

Issue 7 – May 20, 2003

Current Degree Day Accumulations*

Location	Base 32F	Base 43F	Base 50F
Belchertown, UMass CSO observed (01/01/03 – 05/19/03)		601	384
Belchertown, UMass CSO, SkyBit™ (01/01/03 – 05/19/03)		443	NA
Belchertown, UMass CSO, observed (04/15/03 green-tip – 05/19/03)	758		

*Base 32 from green-tip used for scab ascospore maturity; Base 43 and Base 50 from January 1 used in insect models.

Current Bud Stages

Location	McIntosh	Gala	Pear	Peach	Sweet Cherry
Belchertown UMass CSO (05/19/03)	 fruit set	 full bloom +	 fruit set	 fruit set	 fruit set

Note: This will be the last week of Current Bud Stages published in *Healthy Fruit*.

Upcoming Meetings/Events

Date	Meeting/Event	Location	Time	Information
June 10-12	UMass Fruit Team Twilight Meetings	TBA	5:30 PM	Jon Clements 413-478-7219 Wes Autio 413-545-2963

Petal Fall Musings

Many Massachusetts apple orchards are in full petal fall to fruit set after a somewhat prolonged bloom period. Orchards in the 'hills' west of the Connecticut Valley and north of Route 2 are in bloom this week. Most have had (or will have) at least a couple good days of pollination weather. This, combined with a moderate to heavy bloom and no frost, leads to the conclusion that fruit set ought to be decent. Therefore, a petal fall thinning spray of carbaryl – with SevinXLR being the preferred formulation – is recommended. Carbaryl is a mild thinner and will get the thinning process started. Then, you can follow-up with a thinning spray at the more traditional timing of 8-10 mm fruitlet size,

which will likely come sometime next week. (Hopefully along with a return of good weather.) Carbaryl at petal fall will also give some insecticidal control of curculio, plant bug, etc. for a few days.

Petal fall in apples is also the time for the first Apogee application. Apogee gives good growth control as well as possible fire blight suppression. Use it only in blocks where excessive growth is a problem. Apply at 3-4 ounces per 100 gallons dilute when new growth is 1-2 inches; include a non-ionic surfactant and water conditioner; and repeat the application in 2-3 weeks for season-long growth control.

Nitrogen Fertilization Guidelines

Rapidly growing apples and peaches require a shot of ground-applied nitrogen now. The only exception is full-bearing, vigorous apple trees, which usually need none or minimal additional nitrogen during the growing season. A good rule of thumb for apples is one to ten-year-old trees should get one to four ounces actual nitrogen per tree depending on tree age and vigor. This equates to approximately 1/4 to 3/4 pound ammonium nitrate (34% actual nitrogen) per tree. At maturity, apples can get up to 50 pounds actual nitrogen per acres. On the other end, the year of planting, calcium nitrate (15% actual nitrogen) should be used at 4 to 6 ounces per tree.

Peaches need more nitrogen than apples. The guideline is to apply one ounce of actual nitrogen per year of tree age up to maturity (10 years) at which point a half-pound (+/-) actual nitrogen per tree is required.

As with all fertilizer applications a banded application near the root zone or within the tree drip-line is best. Take care on young trees using ammonium nitrate or urea to not concentrate the fertilizer in the root zone – calcium nitrate is far safer on trees one and two years in the orchard. Finally, leaf and soil analyses are recommended on a regular basis to help determine your orchard fertilization needs.

Disease Notes

Although the risk of **fire blight** has been low during most of bloom, the recent warm weather combined with the precipitation forecast for Wednesday or Thursday of this week notches up the risk quite a bit. If you have a history of blight in your apple orchard during the past few years, and have some open bloom still, you may want to apply streptomycin before the next rain event, particularly if the weather stays warm preceding the rain. The application should be made only to younger blocks of 'problem' varieties including Paulared, GingerGold, Gala, and Honeycrisp.

The **apple scab** season is still going strong. Squash mounts from leaves collected in and near Amherst on 5/20 show very high spore maturity (around 90%). The number of spores yet to be released is also very high (around 50%). These averages will be higher in areas to the south and east and lower in the hill-towns, but big primary infections are still possible with the next wetting period, and secondary infections could also be a problem in blocks where infections occurred earlier. The day degree accumulation at Belchertown is now at 730 degrees, which indicates we are entering the final phase of primary scab, but be aware that there may still be allot of inoculum left in the old leaf litter in or near your apple blocks.

Those of you with concerns about powdery mildew and blister spot might want to read this week's issue of *Scaffolds*, which can be viewed at: http://www.nysaes.cornell.edu/ent/scaffolds.

Insects and Mites

What a difference day makes, as temperatures have risen from light frosts in some portions of the hill towns on last Saturday morning, to temperatures in the 70's now. Later parts of the state are in full bloom as this is written, with excellent pollination weather.

New England Apple Pest Management Guide Update

The 2003-2004 Guide is at the binder's now. We anticipate that bulk shipments should go out to the various New England Extension representatives later this week. We appreciate your patience in waiting for the hard copy version. We hope the online version has been useful to you during the past 10 weeks since it was put on line in PDF format.

Plum Curculio

Given temperatures in the 70's or even higher in some spots, Ron has seen a recent flush of new PC immigrants on his interception traps.

European Apple Sawfly

Although some individual sticky traps have capture up to 20 EAS, by and large, numbers are low in monitored blocks.

Leafminers

No sap feeding mines have been spotted as yet, but growers should continue to monitor fruit cluster leaves to determine if LM treatment is needed.

European Red Mites

Mites are hard to find in monitored blocks that were well oiled or received Apollo or Savey.

Click Beetles

We have received a report of a private consultant observing click beetles apparently feeding in apple buds. Larvae of the Click beetles (family Elateridae), are predators of wood boring insects and can often be found on apple trees. While adults are reported to feed on pollen and nectar, they are also thought to feed very little, so should not be considered a pest.

Putting It All Together

With most growers applying whole orchards thinning sprays of carbaryl (which is effective against PC even at the lower rates used in thinning), no additional sprays of Guthion, Imidan or Avaunt should be needed against PC for 4-5 days after the thinning spray. This is also a safe call since fruit in most cases are still too small to be susceptible to egglaying. Sevin should also provide adequate control of Codling moth and European apple sawfly at this time. Bear in mind that Sevin is highly toxic to bees.

When a subsequent PC spray is needed, a whole orchard cover is advisable to account for PC that have invaded beyond the orchard perimeter or that might have over wintered within orchards. See last week's Healthy Fruit for a discussion about possible use of Avaunt against PC, EAS, CM and leafrollers at this time. As noted, Avaunt has good effectiveness against adults, eggs and newly hatched leafminer larvae as well. However, if mines are present in large numbers (i.e., 14 sap feeding mines per 100 leaves), Agri-mek, Assail, Intrepid, Provado, and Spintor are better choices against sap-feeding larvae. Agri-mek would be a good choice against LM if mites have not been previously controlled. If leafhoppers are building, Provado will control both leafhoppers and LM in the sap feeding stage.