UMassAmherst EXTENSION

Healthy Fruit

Volume 12, 2004

Prepared by the University of Massachusetts Fruit Team

Issue 8, May 11, 2004

Current DD accumulations

Location	Base 32 F	Base 43 F	Base 50 F
Belchertown, UMass CSO observed (01/01/04 – 05/10/04)	--	487	283
Belchertown, SkyBit E-Weather (01/01/04 – 05/10/04)	--	379	--
Belchertown, UMass CSO observed (04/13/04 – 05/10/04)	587 (75*)	--	--
Belchertown, SkyBit E-Weather (04/13/04– 05/10/04)	-- (41*)	--	--

`* % mature scab spores`

Current bud stages

Location	McIntosh apple	Honeycrisp apple	Pear	Redhaven peach	Regina sweet cherry
Belchertown UMass CSO (05/10/04)	 full bloom	 king bloom+	 full bloom++	 early petal-fall	 bloom

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

Upcoming meetings/events

Date	Meeting/Event	Location	Time	Information
May 11	Fruit Twilight Meeting	UMass Cold Spring Orchard, Belchertown, MA	5:30 P.M.	Jon Clements 413-478-7219
May 12	Fruit Twilight Meeting	Highland Farm, Holliston, MA	5:30 P.M.	Jon Clements 413-478-7219
May 25	New Hampshire Fruit Twilight Meeting	Gould Hill Orchard, Contoocook, NH	5:00 P.M.	George Hamilton 603-641-6060

Insects *R. Prokopy and J. Clements*

At petal-fall you can start looking for **leafminer** mines on fruit cluster leaves. A magnifying lens helps when looking for the earliest sap-feeding mines. Sample 5 mid-aged cluster leaves per tree on 20 trees per block. Provado, Actara, or Assail are all good choices for a petal-fall spray in orchards with a history of leafminer problems. Bees should be out of the orchard before insecticides are applied.

European apple sawfly numbers appear to be low. If this is the case in your orchard, then petal-fall insecticide sprays can be delayed somewhat.

Speaking of petal-fall sprays, Sevin XLR is a good choice at this time both to start the thinning process and as a bit of control for **plum curculio** that may be hanging around the orchard. Curculio numbers appear to be abundant this year, with at least 4 major migrations into orchards to date. Remember that curculio do not significantly bother the fruit until they reach 6 mm size or above, however, that petal-fall spray of Sevin for thinning is a good bit of insurance for the 5 to 6 days it takes fruit to reach that size. The petal-fall spray should cover the entire orchard, i.e. no perimeter-row sprays, yet. Follow-up with Guthion, Imidan, Avaunt, Actara, or Assail when fruitlets reach 6 mm. Do not apply Sevin XLR when bees are still in the orchard, and sometimes phytotoxicity is an issue with the XLR formulation, but that is the only Sevin with proven efficacy against curculio. (Now would be a good time to revisit the March Message -- http://www.umass.edu/fruitadvisor/march_message/index.html -- for more information on curculio and management.)

Petal-fall is also a good time to control **European red mite** if scouting dictates. Other sign(s) you might have mite problems are: if eggs were observed in the calyx of 2003 harvested fruit (and/or pickers hands got covered); over-wintering eggs are observed and you did not get 2 oil spray on this spring. (Or coverage was dubious.) If scouting, look at fruit cluster leaves (app. 100) deeper within the canopy, and if on average one motile mite per leaf and/or 30% of leaves sampled have motile mites, treatment with Agri-mek, Apollo, or Savey is advised.

Finally, now is a good time to treat trunks and burr-knots for **dogwood borer**. This pest has become problematic, and it is now on advised all apple plantings on dwarf rootstocks receive a Lorsban spray directed at the trunk. Lorsban-4E has a supplemental label allowing application to trunks of apple trees for borers post-bloom.

Diseases *D. Cooley and J. Clements*

Fireblight should be taken very seriously now that we are in apple and pear bloom. Following the MaryBlyt and CougarBlight models, we are at a stage where infection is possible if enough heat and any kind of rain coincides with bloom over the next few days. It's a bit of a dynamic situation but, you should be ready to spray susceptible cultivars such as Braeburn, Fuji, Gala, Ginger Gold, Honeycrisp, and Paulared on M.9 or M.26 rootstocks with streptomycin if warm weather and precipitation conditions are met during bloom. Streptomycin can be applied up to 48 hours before and within 24 hours after any wetting period to work. Also, only intact bloom is susceptible to infection, so keep that in mind.

Apple scab ascospore maturity has likely reached 50 – 75% depending on location. You are still at high risk for scab if not covered with fungicide(s) during almost any significant wetting event. Now is a good time to incorporate an SI fungicide (Nova, Rubigan, Procure) into your fungicide spray for added protection and to also control mildew.

A reminder to growers who had **Fabraea leaf spot** last year to keep pears covered with a fungicide from petal-fall until mid-July. Ziram is economical and effective.

Horticulture *W. Autio, D. Greene, and J. Clements*

An interesting short article by M. Kushad on use of **calcium nitrate** as a foliar spray to enhance fruit size appeared in the Illinois Fruit and Vegetable News (May 7, 2004) and is worth repeating here:

> Unlike flower buds that depend heavily on reserve carbohydrates from the tree, young fruitlets depend to a large extent on the young leaves for food. Any damage to these leaves will likely affect the growth of fruitlets. The first two to three weeks of fruit development are very critical in that during this period the cells are actively dividing. The more cells the fruit has the more likely it is that it will be larger, and so final fruit size is determined in part during the first two to three weeks of fruit growth. In order to enhance active cell division and ensure that fruits will grow to their largest size, the leaves must stay healthy. Multiple applications of low doses of nitrogen during the early stages of fruit growth will keep the leaves healthy and increase fruit size. Application of 5 pounds per acre of calcium nitrate with each cover spray up to the fourth cover will enhance fruit growth and the health of the leaves. Avoid using ammonium nitrate or urea, because they encourage leaf growth but they cause a dilution of the calcium, which is badly needed to build the cell walls. Avoid adding nitrogen after the fourth cover so you will allow fruits to develop color. However, continue to add calcium in the form of either calcium chloride or other formulations on the market. I would also like to recommend adding 1/2 pint of ethrel or ethephon per acre during the first four cover sprays to slow down the growth of the tree and encourage return bloom.

A reminder that, if good growth control is to be achieved, **Apogee** should go on as soon as new shoot growth is 1 – 3 inches long. For details on Apogee application, see F-127R Apogee – a New Growth Retardant for Apples (http://www.umass.edu/fruitadvisor/factsheets/factsheets.html).

Finally, as already mentioned, a petal-fall spray of **Sevin XLR** is a good time to start the thinning ball rolling. Bloom has generally been strong (with a few exceptions, particularly Honeycrisp) and the weather has been good with lots of bee activity observed. That petal-fall spray of Sevin XLR (1 quart per 100 gallons dilute) is a safe bet. (Remember to make sure bees are out of the orchard.)