



Healthy Fruit

Volume 11, 2003

Prepared by the University of Massachusetts Fruit Team

Issue 12 – June 24, 2003

Current Degree-day Accumulations¹

Location	Base 43F	Base 50F
Belchertown, UMass CSO observed (01/01/03 – 06/21/03)	1016	568
Belchertown, UMass CSO, SkyBit™ (01/01/03 – 06/21/03)	975	NA
Belchertown, UMass CSO, observed (05/25/03 petal fall – 06/21/03)		300 ²

¹ Base 43 and Base 50 from January 1 used in insect models.

² 340 Degree Days Base 50 used for plum curculio spray cut-off.

Upcoming Meetings/Events

Date	Meeting/Event	Location	Time	Information
July 15	Pesticide Handling Facility Demonstration	UMass Cold Spring Orchard Belchertown, MA	TBA	William Coli 413-545-1051
TBA	Massachusetts Fruit Growers' Assoc. Summer Meeting	Apex Orchard Shelburne, MA	TBA	Wes Autio 413-545-2963 www.massfruitgrowers.org

Crop Disaster Program Begins At FSA Office

Growers are now eligible to apply for financial assistance at the Farm Service Agency (FSA) for crop losses caused by adverse weather conditions during the 2001 or 2002 growing seasons. To be eligible, crop losses must exceed 35 percent of expected production. Most crops, including apples, are covered. Payments will be made based on 50 percent of the established price for insured crops or for crops which insurance was not available. Note that growers without insurance will have to purchase 'buy-up' insurance for the next two years to be eligible for a payment. Crop insurance is an important aspect of risk management, and growers are encouraged to include it into the cost of their operation.

Calcium Sprays Should Be Underway

Calcium should be included in most cover sprays from now until harvest. It is particularly important to apply it to apple varieties like Cortland, Honeycrisp, Braeburn, and McIntosh that easily exhibit calcium deficiency symptoms such as bitter pit. Calcium chloride (CaCl₂) is the most economical form of calcium, and can be used at 2 – 3 pounds per 100 gallons dilute from now until

These recommendations are not a substitute for pesticide labeling. Read the label before applying any pesticide - it is the legal document.

mid-July, then increased to 3 – 3.5 pounds from late July through August. CaCl₂ is compatible with most chemicals, however, do not apply with Solubor. For more information, see F-119R 'Foliar Calcium Sprays for Apples' on the UMass Fruit Advisor, <http://www.umass.edu/fruitadvisor/factsheets/>.

Increasing Flowering After the Thinning Season

Frequently there are situations where orchardists feel that the potential for return bloom is less than desirable. With poor weather dominating the thinning season, this may be the case this year. An orchardist has two choices for enhancing flower bud formation.

NAA. In general we suggest that application of NAA should begin soon after the thinning window of opportunity has passed, which in most cases is 35 to 40 days after bloom when fruit size approaches 1 inch in diameter. There is no unanimity of opinion in the industry about the concentration to use, time of application, and number of applications that will be necessary to assure return bloom. We suggest using 2 to 4 applications of NAA at 3 to 5 ppm (based on dilute TRV) spaced 7 days apart, (or close to this when a cover or other spray goes on in this relative time period). In some years NAA may have a limited influence on increasing flowering.

Ethrel. This is the most effective plant growth regulator available to increase flower bud formation. This product is not used universally to enhance flower bud formation for two reasons. First, it has the potential to thin, even when fruit is as large as 1 inch in diameter. Second, it can advance fruit ripening, reduce fruit firmness at harvest and following storage, and increase preharvest drop. Some varieties, especially McIntosh, are more sensitive to Ethrel than others. Ethrel at 3/4 pint/100 gal at the end of June drop can advance ripening. If you have not used Ethrel at this time of year we suggest that you take a conservative approach. An entry point would be starting now to make 2 to 3 applications of Ethrel at the 1/4 to 1/3 pint/100 gal rate (based on dilute TRV), spaced 7 to 10 days apart. It would be a good idea to check starch levels in fruit near harvest to determine if ripening was advanced by Ethrel.

So far this season, fruit have not been stressed by hot weather. Therefore some additional thinning may be possible even at this late date. If you would like to avoid any possibility of thinning we suggest that you delay your application until early next week.

Thinning this Late?

Most are painfully aware of the unfavorable weather conditions that we have experienced to get good thinning. Under ordinary conditions with fruit size at 1 inch and growing, it is well past the "thinning window of opportunity". However, fruit have not yet been exposed to hot temperatures yet so the possibility may exist for the next 3 days to get additional thinning. The weather forecast suggests that we may have temperatures approaching or in the 90's to the end of the week. If there is size differential in clusters at this point (and the weather forecast is correct!), we believe additional thinning may be possible this

These recommendations are not a substitute for pesticide labeling. Read the label before applying any pesticide - it is the legal document.

week. If you desire additional thinning we suggest an application of carbaryl IMMEDIATELY. The alternative choice for thinning this time of year is Ethrel. Although potentially very effective, we are reluctant to recommend an application of Ethrel as we enter a period where temperatures are forecast to be in the 90's.

Plum Curculio

This is still a critical time for PC management. PC adults were still immigrating in the past few days, and fresh injury could be found on block borders on Monday (June 23). Degree day models suggest that the 340 Degree Day cutoff for the end of immigration should be reached in most parts of the state today (6/24). However, we're not sure yet that we are completely out of the woods based on our monitoring trap data. Couple this with the recent heavy rains which likely washed off pesticide residue, and growers are advised to check their own PC "hot spots" closely for fresh injury. With a period of hot weather forecasted, a border row spray may be good and inexpensive insurance.

Leafminer

LM are in late tissue feeding stages, and no sign of first summer generation adults as yet. This is a good time to look at mines in blocks that may have not been heavily sprayed to estimate percentage of parasitism. One needs to actually open the mines to see if the larvae or pupae have been parasitized.

White Apple Leafhopper

WAL have been seen in relatively high numbers in a couple of blocks that did not receive carbaryl for thinning. If you examine 10 interior fruit cluster leaves per tree on 10 trees per acre, and find more than 3 WAL (or rose leaf hopper) nymphs per leaf, a treatment of this generation is probably advisable. Should leafhoppers not be controlled now, second generation numbers can reach explosive levels. Agri-Mek has good effectiveness and Provado has excellent effectiveness against leafhoppers, and both are relatively safe to beneficials. Other labeled options for leafhoppers include lannate, Danitol and Thiodan.

Potato leafhopper has not yet been found in Mass. commercial orchards, although this southern migrant has been found in the Hudson valley. PAL should be looked for on the exterior of the tree canopy.

These recommendations are not a substitute for pesticide labeling. Read the label before applying any pesticide - it is the legal document.