



# Healthy Fruit

Volume 10, 2002

Prepared by the University of Massachusetts Fruit Team

## Issue 4 - April 23, 2002

### Current DD Accumulations

Location	32	43	50
Belchertown	-	337	178
UMass Cold Spring Orchard (CSO) (01/01/02 – 04/021/02)			
(04/04/02 – 04/21/02, 04/04 Green Tip date)	390	-	-

### Current Bud Stages

Location	McIntosh Apple	Gala Apple	Pear	Peach	Sweet Cherry	Plum
Belchertown	Late Pink –	Late	Full	Late	Late Full	Late
UMass CSO	First King	Pink	Bloom +	Bloom –	Bloom	Bloom –
(04/22/02)	Bloom			Petal Fall		Petal Fall

### 2000 Apple Market Loss Assistance Program Sign-up

Sign-up for the 2000 Apple Market Loss Assistance Program (AMLAP-II) will begin April 29, 2002 according to USDA Farm Service Agency. Growers can receive a payment-per-pound for their 2000 apple crop to help offset economic losses due to low prices in the U.S. apple market. Contact your local USDA/FSA office for more information.

### Critical Bud Stage Temperatures

Overnight low temperatures Wednesday morning are predicted to be in the mid-upper 20's to near 32 degrees F. Most apple orchards are in the pink bud stage or approaching bloom. At 28 F, you could expect 10% damage to blossoms, and at 25 F you could expect 90% damage. A maximum/minimum thermometer is a good way to monitor low temperatures in the orchard canopy. If a frost/freeze does occur – but we'll keep our fingers crossed it does not -- it's handy to know the minimum temperature so you can estimate the degree of bud injury.

### UMass Cold Spring Orchard Weather Data and Disease Models

Thanks to the Massachusetts Fruit Growers Association Horticultural Research Fund, a weather station (Watchdog Model 900ET, Spectrum Technologies, [www.specmeters.com](http://www.specmeters.com)) was purchased and installed last year at the UMass Cold Spring Orchard in Belchertown. Using weather data collected by the station, apple scab and fireblight disease models are being computed daily. (Except perhaps weekends.) The model results are available on the U M a s s F r u i t A d v i s o r ([www.umass.edu/fruitadvisor/hrcweather/](http://www.umass.edu/fruitadvisor/hrcweather/)) web site, and may be of interest. Keep in mind, however, the model information is site-specific, and of course may not be valid for your orchard.

### Oil

The weather moved things along so rapidly last week that some orchards were past the ideal treatment window in the course of a few days. Mite eggs generally hatch in close

association with tree phenology - hatch begins at tight cluster and peaks at mid-pink, so the goal is to have some coverage on by tight cluster and a good cover definitely by pink. If growers were able to apply oil before that mid-summer-like weather struck, they would probably have been well covered through the peak of egg hatch, although if an opportunity presents itself for a final, low-rate (1% or less) oil application, that still wouldn't be a bad idea. If they were able to get something on in the few... hours?... (seemingly) between tight cluster and pink, they still would have caught the majority of egg hatch. If that window was missed, however, it may be advisable to apply a miticide, such as Apollo or Savey, along with, or instead of, a light rate of oil at pink. Growers in later-developing areas still have an opportunity to get a useful oil spray on, as soon as the night-time temperatures are out of the danger zone (<38F). If in doubt about the effectiveness, of your oil treatment, monitor older fruit cluster leaves closely for the next several weeks.

### ***Plant Bugs***

Tarnished plant bug trap captures have been somewhat higher this past week, though, so far, not as dramatically high as last year. Some growers have reached the threshold of 8 plant bugs per trap by pink for retail operations (the wholesale threshold is 5 per trap). During the warm weather, it was fairly easy to find bugs on fruit clusters, though little injury was evident. Use the white traps as the primary monitoring tool for this insect.

### ***Leafminers***

Leafminer captures were also on the increase last week. It was fairly common to find that most of the traps in an orchard had only a few moths, but one or two traps had large numbers. This obviously makes decision-making difficult! The best course in such a case is probably to withhold a decision until petal fall, and use egg counts and mine counts to determine exactly whether and where a treatment may be needed.

### ***Green Pug Moth***

Some chewing of fruit buds has been evident this week, but there is much less pug moth activity in most orchards than usual. They seem to be a little behind the tree phenology - not too surprising, given the rapid development last week. We don't have a set threshold for this insect, but if you examine bud clusters and see feeding injury, look for the larvae, which are 1/4" to 1/2" at this time. Early instar

larvae are whitish green, and darken to medium green as they grow. Low rates of organophosphate insecticide have given excellent control for the past several years.

### ***Pear Thrips***

Very little activity has been seen so far. Watch for these tiny insects in the flower clusters when the weather warms up, especially in locations which still are several (normal) days away from bloom; long pre-bloom periods are more favorable for them than brief, warm pre-bloom periods. Most insecticides directed against other pests will also control pear thrips.

### ***Sawfly Traps***

No sawfly flight has been seen thus far in monitored orchards. Pink is the time to put out the white visual traps, at head height on the south side of the tree, one trap per three acres.

### ***Plum Curculio***

Ron Prokopy reports that a sizeable immigration of curculio occurred during the warm weather last week. From his recent research, it appears that curculio move into the orchard during warm, dry weather, but will not begin feeding and egg-laying activity until 1) fruit of a suitable size are available, and 2) the weather is warm and very humid. Generally they seem to move into the orchard around bloom, so this early movement is very interesting but not necessarily a cause for widespread panic.

### ***The Blab on Scab***

Squash mounts performed on apples leaves collected in the Connecticut river valley on 23 April showed 15 % mature spores. No empty asci were seen, but with 15 % maturity, some spore release is likely. Eastern MA apple scab should be at or slightly ahead of this in development. Western hilltowns will be about a week behind. The day degree model predicted that scab spores in Belchertown would be about 33% mature on 22 April, but the actual development appears to be somewhat behind the predicted value. This is most likely due to the long-term dry conditions. We are now in primary scab season and with so much susceptible tissue exposed and a long rain at most orchards on 21-23 April, conservative coverage is recommended.