



## Healthy Fruit, Issue 3, April 15, 2008

### Current DD accumulations

Location	Base 43F	Base 50F
Belchertown, UMass CSO observed (01/01/08 – 04/14/08)	92	30
Belchertown, UMass CSO SkyBit (01/01/08 – 04/14/08)	83	--

### Current bud stages

Location	McIntosh apple	Honeycrisp apple	Bartlett Pear	PF-14 Jersey peach	Cavalier sweet cherry
Belchertown, UMass CSO (04/14/08)					
	early green tip	late dormant	swollen bud	swollen bud	swollen bud

### Upcoming meetings/events

Date	Meeting/event	Location	Time	Information
April 15	Fruit Team Twilight Meeting	<b>Cider Hill Farm</b> , 45 Fern Ave. Amesbury, MA	5:30 PM	Jon Clements 413-478-7219
April 16	Fruit Team Twilight Meeting*	<b>Alyson's Orchard</b> , 615 Wentworth Rd., Walpole, NH	5:30 PM	George Hamilton 413-478-7219
April 17	Fruit Team Twilight Meeting**	<b>Steere Orchard</b> , 150 Austin Ave. Greenville, RI	5:30 PM	Heather Faubert 401-874-2967

Two pesticide re-certification credits offered at each Fruit Team Twilight meeting. You must be on time to receive credit

\* In cooperation with University of New Hampshire and University of Vermont Extension

\*\* In cooperation with University of Rhode Island Extension

## ***The way I see it***

Other than a quick growth spurt last Saturday, fruit buds have not been moving along too fast. Expect that to change this week. Will we be close to tight cluster by the weekend or early next week? If so, the window to apply oil to apples and pears looks like a good one later this week as nighttime low temperatures will be above freezing. You want to use a 1.5 to 2% oil concentration in a dilute spray at this timing (up to early tight cluster). Otherwise, things are pretty quiet, unless you have trees to plant -- this should be a nice week to get them in the ground and I highly recommend early planting for two reasons: first, trees and root systems will be established early, allowing for more growth during the first leaf. More growth equals potentially more fruit and a healthier tree in the 2nd and 3rd leaf. Second -- and this is speculative but it makes common sense -- early planting will result in earlier bloom (if any) on these trees, perhaps reducing the risk of fireblight, which is a *bad* thing on young trees. I am thinking it may be best to remove any bloom by hand anyways on these trees to reduce the risk of them getting infected by fireblight. A copper spray as the buds break on just planted trees would not be a bad idea either. Speaking of copper, it is probably not too late to use copper on apples as long as you don't go beyond 1/4" green tip. Copper is a mighty fungicide, fireblight preventive, and essential nutrient, which is often low in leaf analyses. Finally, Peter Jentsch of Cornell's Hudson Valley Lab has produced a video on early season pear insect pests, particularly pear psylla. You can watch the video here:

<http://hudsonvf.cce.cornell.edu/galleryphotos/video/2008/%2708%20Pre-bloom%20Pear.1.mov>

Hope to see you at this week's twilight meetings. J. Clements.

## ***Sprayer calibration -- do you do it?***

There are many reasons to calibrate your spraying at the start of the season, and I don't intend to provide a complete treatise here, but consider these for a start:

- the price of crop protectants, foliar nutrients, and plant growth regulators continues to rise -- can you afford to apply more chemical per acre than you need? Alternately, can you afford to apply too little and risk a control failure?
- nozzles wear out and flow rates can increase by 10% or more
- plant growth regulators in particular have a narrow recommendation range and must be applied at appropriate concentrations to achieve desired results -- remember, that apple thinning spray is probably the most important spray you apply all year! It helps to get it right...
- drift is BAD -- nozzles need to be patterned and flow-rated to achieve the desired water volume (based on tree row volume, right?) per acre and not have it end up somewhere else, i.e. off-target

Calibrating your spraying is (in my opinion) a three-step process:

1. Calculate dilute gallons per acre based on tree row volume (TRV). This is the basis for applying the correct amount of water plus chemical per acre -- most chemical recommendations in our New England Tree Fruit Management Guide are based on "per 100 gallons dilute" water
2. Adjust sprayer nozzling, including pattern and individual nozzle output to match dilute gallons per acre and minimize drift; verify desired tractor speed is accurate
3. Perform a dry run to make sure actual sprayer output matches what is expected from performing the adjustments prescribed in #2. above

There is an excellent discussion on sprayer calibration and drift reduction in the 2008 New England Tree Fruit Management Guide that was largely authored by Andrew Landers of Cornell University, who is generally considered an expert on sprayer calibration, nozzles, and drift reduction. Also, two web resources you should use to help with your spraying calibration:

- Our own “Block-Specific Sprayer Calibration Worksheet,” which will calculate dilute gallons per acre based on tree row volume, sprayer output when nozzled for a specific block, and block adjustment with known sprayer output:  
<http://www.umass.edu/fruitadvisor/clements/trvcalculator.html>
- “Calibrating Your Orchard Sprayer,” a Utah State University Extension publication, which includes links to an interactive computer spreadsheet to aid in sprayer calibration:  
[http://extension.usu.edu/files/publications/publication/Horticulture\\_Fruit\\_2007-01pr.pdf](http://extension.usu.edu/files/publications/publication/Horticulture_Fruit_2007-01pr.pdf)

I hope you can take the time to properly calibrate your spraying this spring. If you have any questions, or need further help, let me know. J. Clements

### ***Blast from the past***

from *Fruit Notes*, May 15, 1957, <http://www.umass.edu/fruitadvisor/fruitnotes/archive/>

#### “Reasons Why Some Growers Are Not Getting Satisfactory (Sprayer) Performance

1. Sprayer not nozzled properly.
2. Nozzle wear. (nozzles should be checked three times during the spray season.) Some type of nozzles such as the disc type wear more rapidly than the whirl-mist nozzles. The discs wear and will increase the amount of material applied in addition distortion of spray pattern and distribution will occur. Sprayer manufacturers have gauges which can be bought by the grower for checking the disc orifices for wear.
3. A varying speed of travel during the spraying.
4. Failure to have deflectors adjusted properly in order to get thorough coverage (must adjust for wind, direction of wind, tree height, etc.)
5. Voids in the spray patterns. (Gaps in the spray pattern so that one part of the tree is receiving insufficient amount of spray.)

-- W. J. Lord

### ***Reminder -- 2008 New England Tree Fruit Management Guide available to Buy Now***

You can purchase the 2008 New England Tree Fruit Management Guide on-line using a credit card:

- <http://www.umass.edu/fruitadvisor/2008/2008netfmg.html>

The Guide has chemical updates for 2008 and a lot of other useful information, and is highly recommended to Buy Now!

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