

# MaluSim Carbohydrate Model\*

**Simulation location: Winchester, VA**  
**Simulation date: May 20, 2013 12:00PM**

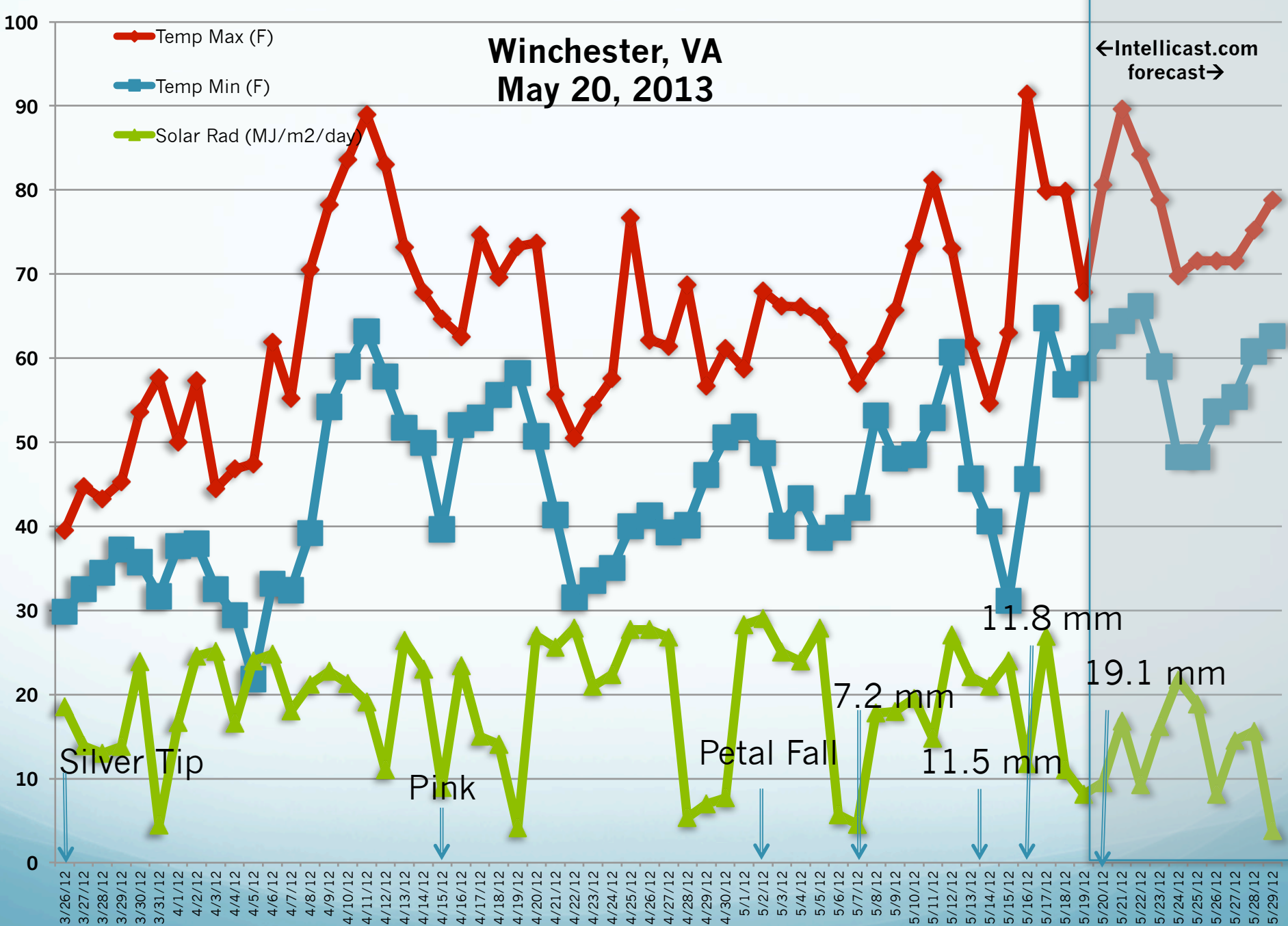
**Greg Peck**

\*Developed by Drs. Alan Lakso and  
Terence Robinson, Cornell University

# Winchester, VA May 20, 2013

←Intellicast.com  
forecast→

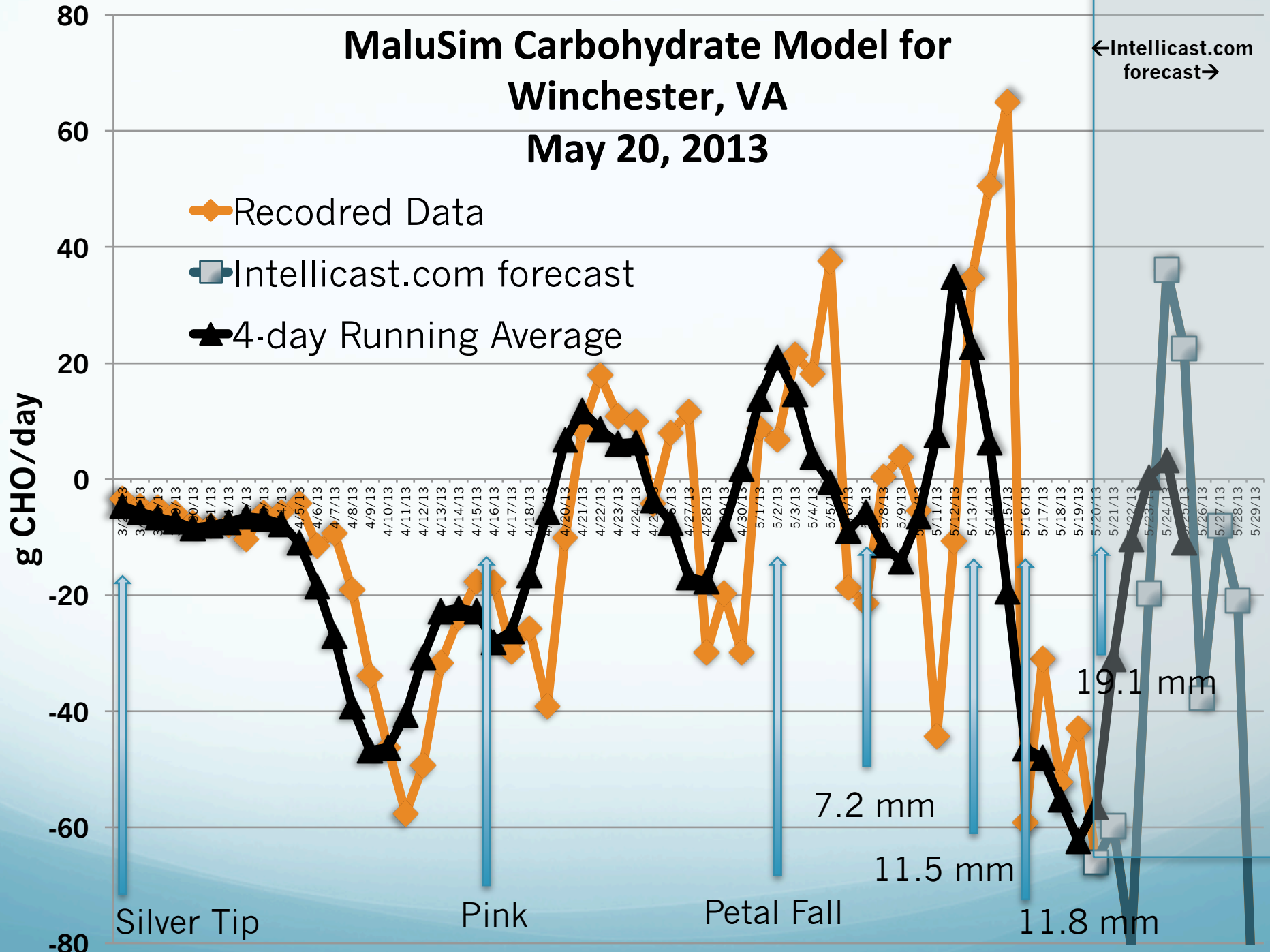
- Temp Max (F)
- Temp Min (F)
- Solar Rad (MJ/m2/day)



# MaluSim Carbohydrate Model for Winchester, VA

## May 20, 2013

←Intellicast.com forecast→



# Interpreting the MaluSim Model: look for three-to four-day trends

Thinning Index	Recommendation
>20 g/day	Expect little or no response to normal rates of chemical thinners. You will need to thin more aggressively than normal
+ 20 to -20 g/day	Expect normal thinning responses to standard rates of chemical thinners
-20 to -40 g/day	Expect normal to slightly aggressive responses to standard rates of chemical thinners
-40 to -60 g/day	Expect aggressive responses to standard rates of chemical thinners. Consider reducing rates to avoid over thinning
-60 to -80 g/day	Expect very aggressive responses to standard rates of chemical thinners. Reduce rates to avoid over thinning
< -80 g/day	Standard rates of thinners will result in severe over-thinning. Reduce rates by at least 50 percent.

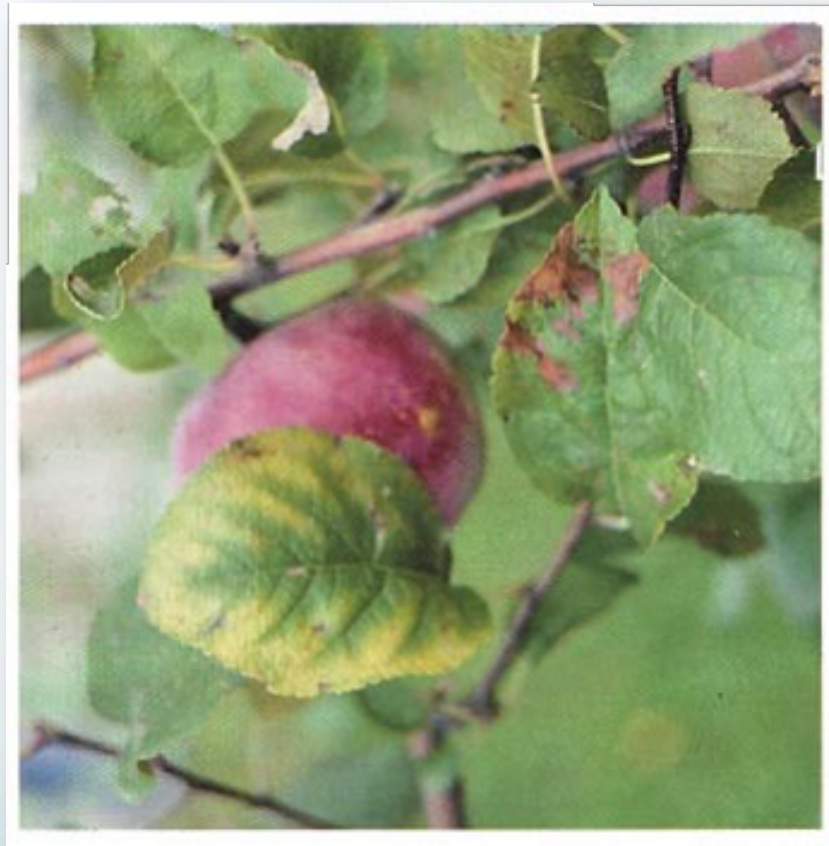
(Table developed by Dr. Steve McArtney (NCSU). Additional input from Drs. Alan Lakso and Greg Peck)

# Calcium Recommendations

- Season long, want 20-50 lbs  $\text{CaCl}_2$ 
  - 2-8 lbs  $\text{CaCl}_2$  spray
  - For calcium disorder prone cultivars, need higher range
- With greater heat and water stress, increase chance of disorders, as well as phytotoxicity
- Calcium moves into the soil by mass flow
  - Dry soil conditions reduce calcium uptake

# Magnesium Recommendation

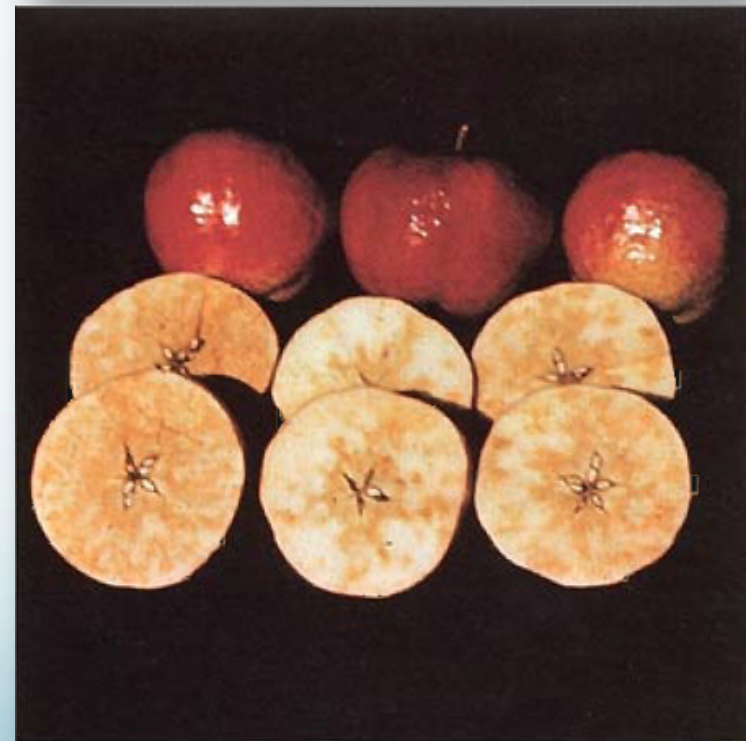
- 1-3 applications of Epsom Salts at 15 lbs/100 gal at petal fall, 1st and 3rd cover
- Epsom salts can be tank mixed with Solubor but not with calcium chloride



# Boron Recommendations

## Foliar Applications

- Many Virginia orchard soils are low in boron
- Foliar application of 3-4 lbs of Solubor at petal fall or first cover usually helps to correct low boron levels
- You can also split the Solubor applications into two sprays, e.g., petal fall and 2nd cover or 1st and 3rd cover
- Boron may precipitate out of solution when mixed with calcium chloride



Boron deficiency—apple

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blogs.ext.vt.edu

Past updates: disease | entomology | horticulture

Commercial tree fruit production updates

05/01/2013  
Apple scab/rust infection period Apr 29-30, and fire blight update

**From: Tree Fruit Disease Update**

We recorded our third apple scab infection period Apr 29-30, with 18 hr wetting at 50-56°. This was also a likely quince rust and cedar-apple rust infection period.

FIRE BLIGHT: Below is the updated graphic from the...

04/29/2013  
Apple scab infection period April 28-29

**From: Tree Fruit Disease Update**

At our AREC we recorded split wetting periods totalling 18 hours starting at 54° at 11 AM Apr 28 and

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2013 Spray Bulletin for Commercial Tree Fruit Growers

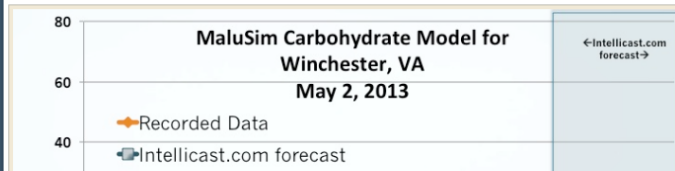
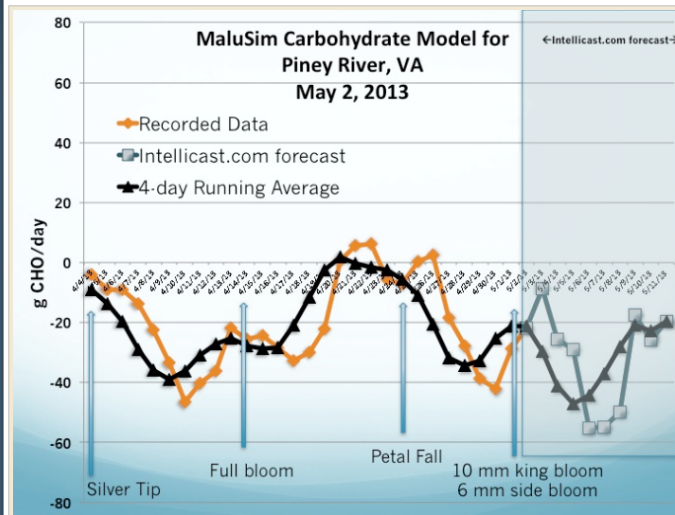


The Mid-Atlantic Regional Fruit Loop:  
The Virginia Fruit Page



MaluSim Carbohydrate Models for May 2: Winchester and Central Virginia

Posted on May 2, 2013 by gmpeck



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http://blogs.ext.vt.edu/tree-fruit-horticulture/

Email: greg.peck@vt.edu

Twitter: http://twitter.com/VTechPeck

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