MaluSim Carbohydrate Model*

Simulation location: Winchester AREC
Simulation date: May 4, 2012 10:30AM

Greg Peck

*Developed by Drs. Alan Lakso and Terence Robinson, Cornell University
MaluSim Carbohydrate Model for Winchester, VA
May 4, 2012

- Recorded Data
- Intellicast.com forecast

Silver Tip
March 27 Frost
Petal Fall

4.9 mm
6.5 mm
10.1 mm
11.7 mm
13.3 mm
## Interpreting the MaluSim Model: look for three-day trends

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

(Table developed by Dr. Steve McArtney (NCSU). Additional input from Drs. Alan Lakso and Greg Peck)
Frost Damage
Posted on March 27, 2012 by gmppek

At our lab in Winchester, we got down to 28°F for 2 hours this morning between 6 and 8 AM. I’m seeing damage to king bloom in early blooming apples, but side blooms look like they’ll fair much better. However, I’ve been hearing reports down to 25°F in some orchards, with much worse damage. Sweet cherries were in full bloom, and many petals are showing damage. Peaches were past petal fall, and the trees in the lowest area on our farm are probably going to lose some fruit.

It’s going to be a difficult thinning year if we lose a large percent of the king bloom...Unfortunately, we still have about a month where we can potentially have another frost...