

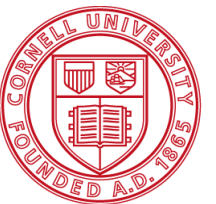
Western NY 10-13 mm Thinning Spray Recommendations

June 5th, 2020, Noon – 1:00 PM

- **Welcome-** Craig Kahlke, Team Leader, CCE Lake Ontario Fruit Program
- **Zoom Basics**
- **Today's Sponsor**
- **10-13mm Thinning Recs -** Dr. Terence Robinson, Cornell AgriTech
- **Q & A** for Terence and Mario Miranda Sazo – CCE-LOF, Cultural Practices



Cornell Cooperative Extension | **Lake Ontario Fruit Program**



Zoom Basics

Please be sure you are muted.

You can ask questions at any time during the presentation in the Q+A window. We will address all your questions at the end of the presentation.

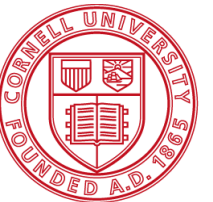


Our Sponsor for Today's Webinar

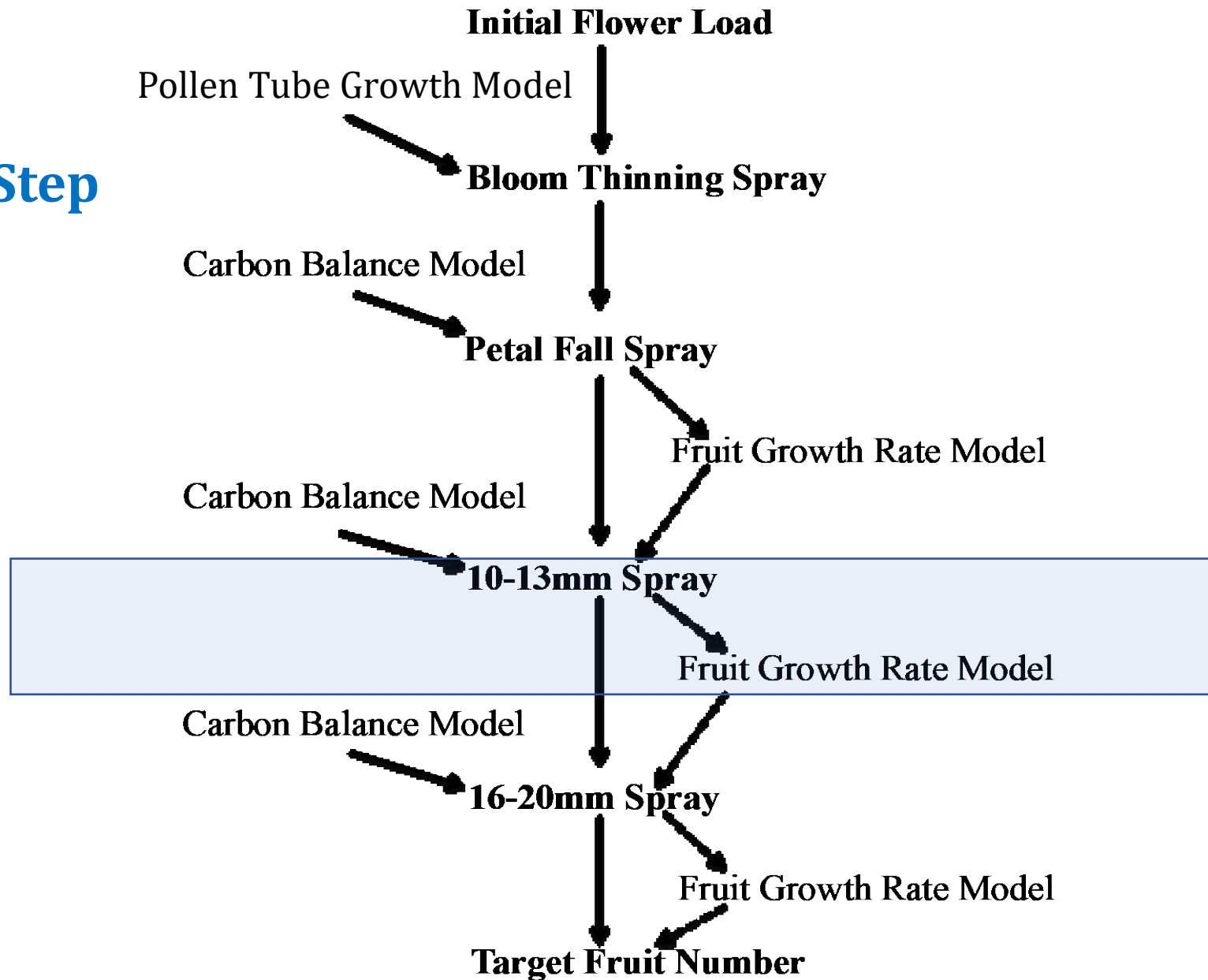
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The Next Step



Current Fruit Size in WNY

- Gala= Largest kings 15mm
 - Most laterals are 10-11mm
- There is substantial bloom on 1-year wood and a significant number of those are setting. However their fruit size is much smaller Kings=9-10 and laterals 5-6
- Fruit from bloom on 1-year wood is susceptible to thinners now.
- Conclusion: We are entering the optimum window for thinning
- Thinning now will help remove fruit from one year wood.

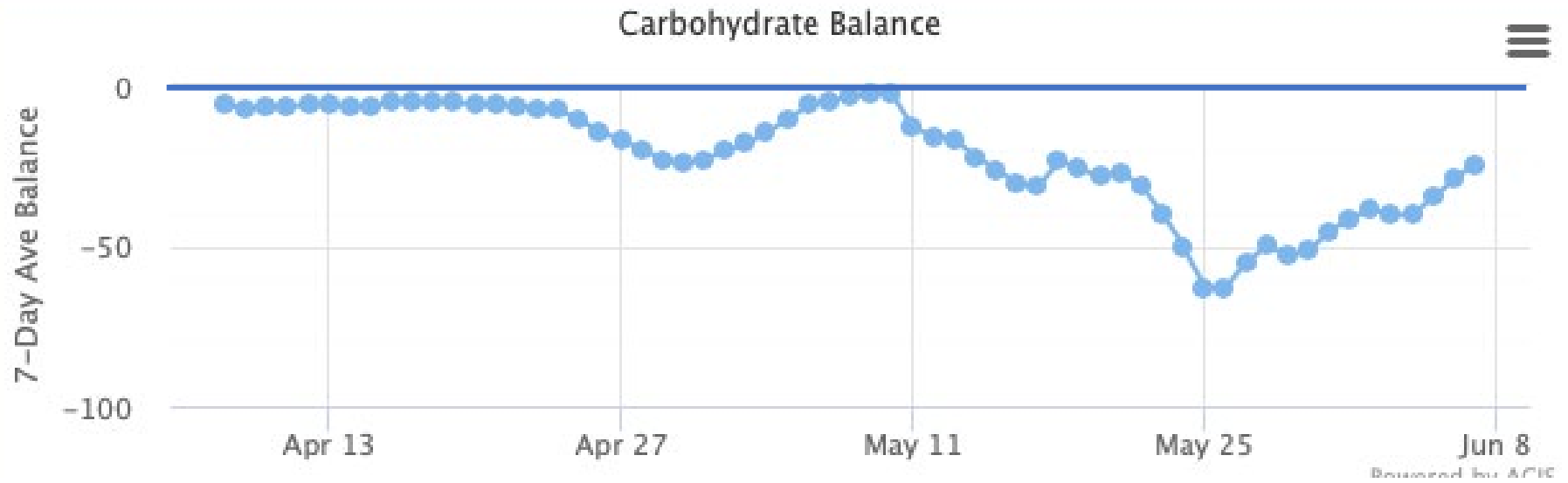
Chemical Thinning Options

- Bloom
 - Ammonium Thiosulfate (ATS) 2.5%=2.5 gallons/100 gallons
 - Lime Sulfur and Oil
 - Promalin
 - Maxcel
 - NAA (10ppm=4 oz/100 gallons)
 - Amide-Thin
 - Regalia
- Petal Fall (fruits at 5-6mm)
 - Sevin
 - AmideThin
 - Maxcel + Sevin
 - NAA + Sevin
 - Maxcel + NAA
- Fruits at 11-13 mm
 - NAA + Sevin
 - Maxcel + Sevin
 - Maxcel + NAA
- Fruits at 15-20 mm
 - NAA + Sevin
 - Maxcel + Sevin + Oil
 - Ethrel + Oil

12mm Thinning for 2020:

- Use the carbohydrate model to avoid over-thinning
 - Both a Web-based version and a mobile phone version (MaluSim) are available
 - Don't spray when carbohydrate deficits are -60 or less
- Use the degree day calculator in the carbohydrate model to target the best time for thinning.
 - Spray the 12mm thinners when $DD=200-250$ DD

Carbohydrate Balance – Williamson NY, June 5, 2020



Carbohydrate Balance – Williamson NY, June 5, 2020

Max. Min. Radiation Daily Deficit Av Deficit DD

5/27	88	65	20.8	-82.3	-54.87	90.2	Apply Standard Chemical Thinning Rate
5/28	81	67	13.9	-99.44	-49.89	109.4	Apply Standard Chemical Thinning Rate
5/29	84	61	11.4	-104.73	-53.05	127.8	Apply Standard Chemical Thinning Rate
5/30	65	52	14.5	-34.66	-51.51	138.6	Apply Standard Chemical Thinning Rate
5/31	55	39	22.5	30.04	-45.21	143.1	Apply Standard Chemical Thinning Rate
6/1	69	42	22.5	-1.1	-41.27	152.3	Decrease Chemical Thinning Rate by 30%
6/2	70	58	10.1	-79.13	-38.62	166.1	Decrease Chemical Thinning Rate by 15%
6/3	75	57	14.9	-71.52	-40.17	181.1	Decrease Chemical Thinning Rate by 30%
6/4	85	53	26.4	-55.37	-40.25	197.7	Decrease Chemical Thinning Rate by 30%
6/5	80	61	19.7	-77.17	-34.53	215.1	Decrease Chemical Thinning Rate by 15%
6/6	72	52	22.1	-16.11	-28.88	227.8	Decrease Chemical Thinning Rate by 15%
6/7	63	51	25.9	19.2	-24.41	237.7	Decrease Chemical Thinning Rate by 15%
6/8	69	56	25.7	-1.62	-	250.6	-
6/9	85	58	26.0	-39.15	-	268.6	-
6/10	81	63	23.9	-31.95	-	286.8	-
6/11	72	65	17.2	-24.08	-	303.1	-

Suggestions for 12 mm thinning in 2020:

- The optimum time for the 12mm spray is Friday (June 5) –Monday(June 7)
- Good daytime temperatures, moderately high night time temperatures with significant carbohydrate deficit, thus thinning expected to be strong and some chance of overthinning if sprayed today but less risk later in the period
- If you need substantial thinning spray full dose
 - For Gala and Snapdragon, Empire and Red Delicious spray a full dose of 64 oz Maxcel/100 gal Dilute TRV equivalent + 1pt Sevin/100 gal (For a mature tall spindle orchard with a dilute TRV=200 that is a 128 oz Maxcel =1gallon per acre and 1pt Sevin per acre)
 - For Honeycrisp spray a full dose of 3oz NAA/100 gal Dilute TRV equivalent + 1 pt Sevin/100 gal (For a mature tall spindle orchard with a dilute TRV=200 that is a 6 oz NAA per acre and 1pt Sevin per acre)
 - For McIntosh, Idared and other easy to thin varieties spray a full dose of 2oz NAA/100 gal Dilute TRV equivalent + 1 pt Sevin/100 gal (For a mature tall spindle orchard with a dilute TRV=200 that is a 4 oz NAA per acre and 1pt Sevin per acre)

Suggestions for 12 mm thinning in 2020 (cont.):

- If you **do not** need substantial thinning spray full dose
 - For Gala and Snapdragon, Empire and Red Delicious spray a partial dose of 48 oz Maxcel/100 gal Dilute TRV equivalent + 1pt Sevin/100 gal (For a mature tall spindle orchard with a dilute TRV=200 that is a 96 oz =1gallon per acre and 1pt Sevin per acre)
 - For Honeycrisp spray a partial dose of 2oz NAA/100 gal Dilute TRV equivalent + 1 pt Sevin/100 gal (For a mature tall spindle orchard with a dilute TRV=200 that is a 4 oz NAA per acre and 1pt Sevin per acre)
 - For McIntosh Idared and other easy to thin varieties spray a full dose of 1oz NAA/100 gal Dilute TRV equivalent + 1 pt Sevin/100 gal (For a mature tall spindle orchard with a dilute TRV=200 that is a 2 oz NAA per acre and 1pt Sevin per acre)

Other Suggestions for 12mm sprays 2020:

1. Where there has been frost damage, apply no thinner to the bottom half of tree.
2. Where there was little frost damage apply no thinner to the bottom 1/3 of the tree
3. Don't use surfactants like Regulaid or Oil.

To know how good of a thinning job you did with Bloom and Petal Fall Sprays and 12mm Sprays ----

- Measure fruitlets 3 days after the 12mm application and 8 days after the 12mm application and use the Fruit Growth Rate Model
- Enter the data in the fruit growth model at Malusim.org and then send me your username and password and I will help interpret and give you further suggestions.



Thank You for Your Attention

Questions?