



Horticultural and Pest Management Notes,
produced by Lake Ontario Fruit Program, CCE

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Petal Fall/Thinning Meetings

Times and Locations:

May 22, 1:00 PM - Lynoaken Fruit Farm, 1872 Greenman Road, Lyndonville, NY 14098. 1/4 Mile North of Platten Rd.

May 23, 1:00 PM - Ridgeview Farms, 4715 Congdon Road, Williamson, NY 14589 (from Route 104 – turn south onto E. Townline Road, Congdon Rd. is approximately one mile south of Route 104.

Look for Cornell Fruit Event Signs.

Cornell faculty and the LOF team members will be present to answer questions. Come to hear updates on insects and diseases, and of course, thinning recommendations by Terence Robinson.

Pest management notes...

Fire Blight! There is a region wide **high to extreme risk of blossom blight** for today through Friday with high temperatures in the mid-80s inland and mid-70's along the lakeshore. Showers and thunderstorms are likely this morning as we hear the thunder out on Lake Ontario, and for later this afternoon. If you treated with streptomycin on Saturday or Sunday, the risk is back to **extreme** today; if you treated yesterday, it will be **extreme** risk again on Wednesday. We only get about 2 days of protection with the predicted temperatures. The Maryblyt model is approaching 500 degree hours, an EIP of 240 (threshold is 100 EIP) so this really is getting serious over the next 2 days. Evaluate your orchards carefully for lingering bloom especially in inland sites, even on "less susceptible" varieties at this point if they have not been treated with strep this season. I always suggest that you look at the few blossoms left in the trees and imagine them turning brown with fire blight. Then decide if you need to treat with strep... Symptoms of the first infections back on May 8 will show up in a day or 2, and canker blight symptoms will be obvious. Shoots are about 5-6 inches long at this point, but if no Apogee applied in high risk orchards, it would be wise (not on Empire or Stayman) but it will take about 7-10 days to impact the susceptibility of shoot infection.

If you are working on your petal fall insecticides, include streptomycin. If orchards are at petal fall and have had no streptomycin applied yet during bloom, it would be good to treat all varieties now because of the shoot blight and lingering blossom protection it will provide. We always get a wind storm in the petal fall timing, this will help prevent that. For those orchards where streptomycin resistant FB has been documented, include oxytetracycline (Fireline or Mycoshield). Mycoshield now has a new label on PIMS, <http://128.253.223.36/ppds/535234.pdf>, to allow for apples and pears for fire blight and stone fruit for bacterial spot. The restriction against using animal feed from crops where this product has been used has been removed from the new label.

Don't forget about your new plantings that are just coming into bloom. They are at extreme risk of blossom blight and an infection in these trees means you remove the tree!

We are still in peak apple scab ascospore maturity. With the presence of primary scab lesions in the orchards, now we will have to fight off secondary spread where we did not control scab so far. There is a new class of chemistry available if you are stuck, Fontelis, but if you have resistance to every other fungicide, review your practices before you start using this fungicide because it will be easier to develop resistance to this one than others: Good spray coverage, protectant timing, and tank mix with captan or mancozeb.

Petal fall insects: Obliquebanded leafrollers are present in orchards where control was cut back last season. Research and experience has shown that controlling this generation will help to prevent a larger generation in July and then again in August. The best insecticides where OBLR are present include Proclaim or Intrepid at petal fall. Delegate, Altacor, and Belt all offer very good efficacy against not only OBLR, but also the internal leps. But you will need to include Imidan, Calypso, Avaunt, or Actara for plum curculio and European apple sawfly. If rosy apple aphids

have not been controlled, Actara or Calypso will also control this pest. Codling moth were flying high over the weekend – one of my traps had 69 moths and we are setting biofix now.

Horticultural notes...

Petal Fall Thinning Sprays @ 5-6mm fruit diameter for Gala, Empire, Fuji, Honeycrisp, and Macoun: Several growers began applying petal fall thinning sprays with the warmer weather we had during the weekend and yesterday. In some areas, we had favorable fruit growth conditions of around $\frac{3}{4}$ mm per day. Gala, Empire, and Fuji fruits located in inland sites averaged 4.78-5.12mm diameter. Macoun and Honeycrisp were smaller and averaged 4.21mm. Five important varieties to begin thinning at petal fall are Gala, Empire, Honeycrisp, Macoun and Fuji. Terence's suggestion for Gala and Empire is to spray @ 5-6mm fruit diameter (two to three days after petal fall) with NAA 6oz/acre + Sevin 2pt/acre. For Honeycrisp and Macoun use a higher rate of NAA 8oz/acre + Sevin 2pt/acre at the same timing. For Fuji use Maxcel 96oz/acre + Sevin 2pt/acre. Many other varieties will also benefit from a petal fall spray of either Sevin alone or a combination of NAA+Sevin or Maxcel+Sevin.

Other important reminders about chemical thinning: (1) Optimum application timing for a second chemical thinning spray is when fruit size is 10-11 mm in warm years and 12-15 mm in cool years. Growers should attempt to time the second chemical thinner applications according to a suitable weather window within the desired fruit size range. (2) High rates of NAA reduce fruit growth rate and should be avoided on small-fruited varieties such as Empire, Jonamac and Gala. (3) BA alone is a mild thinner and should always be used in combination with carbaryl when thinning is desired. The best response is obtained when temperatures are warm (>70° F) and the spray is applied as a fine mist in 50-100 gallons of water. (4) Avoid the use of 6BA and NAA in the same season on Fuji and Red Delicious. Using both will result in pygmy fruit. Instead use Maxcel. (5) Do not mix Sevin with Urea, calcium or Captan at petal fall thinning applications since fruit damage may occur in some years from the Sevin. (6) Mancozeb is okay in the petal fall tank. (7) There is a new NAA formulation from Valent called PoMaxxa which has received a NY label. It uses the same rates as Fruitone-L. (8) The use of Apogee increases fruit set and makes it harder to achieve good chemical thinning. Increase the rate of thinner or the number of thinning applications to counteract this effect. Avoid Apogee applications within 10 days of thinner applications, and (9) If you do not achieve the desired thinning with the petal fall and the 10-12mm thinning spray a third spray can be made when fruits are 18-20mm. In this case add 1pt of oil for every 100 gallons in the spray tank as a penetrant to increase uptake of thinners into leaves.

How to evaluate your orchard for chemical thinning: (1) Determine how many spurs bloomed per variety this year. If you get numbers higher than 80%, you had a strong bloom this year. In general, we had a strong bloom and strong initial fruit set without almost any frost damage in Western NY, (2) Check average number of fruits in each cluster in the upper, middle, and lower parts of your trees. Is the king fruit present? How many lateral fruitlets are present? If you count two or three fruitlets in addition to the king fruit, you should consider a more aggressive thinning program. Varieties such as Empire, Cortland, and McIntosh can produce high quality fruits from the largest lateral fruitlets (same quality than the king fruit). Red Delicious clusters have a strong and dominant king and lateral fruitlets are not as good as the king, (3) Check spur foliage conditions of your trees. Do spur leaves look okay? Any damage or yellowing? If spur leaves do not look okay, thinning rates should be reduced, and (4) Any possible frost damage at your site this year? I doubt it! In any case, check especially the lower part of your trees and the lower portions of the orchard. Do you see petals killed in your clusters? Cut king fruits and lateral fruitlets and evaluate seed numbers and filling (if seed numbers are less than 5, thinning rates should be reduced). Look for white-rounded seeds. If you find brown seeds inside the cavities, frost damage has occurred in your orchard site and you should consider a less aggressive thinning program.

Rain showers after a chemical thinner application. Remember that uptake by the leaves is decreased if a rain event occurs after application of thinners. Geneva research has shown a 50% reduction in uptake with rains occurred two hours after application. Good uptake will occur if you let the foliage dry for at least 6-8 hours. Other researchers have measured uptake for as long as 16 hours after application.

Removal of blossoms for NY1 years 1-2: Now is the time to manually remove all flowers on 1st and 2nd year NY1 trees. A high rate of Maxcel (100ppm=64oz/100gal) plus 2pt Sevin/100gal +1pt oil/100 gallons can also be used to "defruit" young trees. Pick a warm day for this spray.