



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

From FAX: 585-798-5191 D. Breth & M. Miranda S. Jun 18, 2013

Pest Management Notes.... The rains have subsided and the wind will die down soon, so you can catch up with crop protection for insects and diseases.

SCAB! Maintain captan or mancozeb (77 days to harvest up to 21 lb per season) applications if you can see scab lesions on leaves at this point; you need to protect from secondary infection of fruit and leaves. The high relative humidity has increased the **powdery mildew** pressure. Maintain fungicide protection for powdery mildew **through terminal bud set** – Rally at 8 oz./acre, Topguard, Fontelis, or sulfur (when temperatures are not exceeding 85F). If you are looking for another fungicide to mix with Fontelis to minimize the phyto risk with captan, perhaps Ziram will be an option for summer disease control. But try it on a limited scale since this combination may not have been tested for efficacy or phyto.

Codling moth egg hatch is heavy right now and trap numbers are starting to increase again, likely the “B” peak for the first flight. For those of you with a heavy population, it is time for the second spray (I know the first 2 might have gotten washed off in the rain, and hopefully you replaced it.) So if you have had over an inch of rain since the last spray, you will need to put out another insecticide for CM – Delegate, Altacor, Belt. In low pressure sites where biofix was set for May 20 we have generated 370 dd50°F, a couple days past when the first spray should have been applied.

Obliquebanded leafrollers are flying and biofix for the degree-day timing model in early sites was Jun 6, and the rest of the flights started between Jun 6 and June 10. Our Hilton trap had first trap catch on Jun 12. For the earliest site, we have accumulated 225°43F and are coming up on first egg hatch. So your codling moth sprays will be well timed to coincide with leafroller sprays. **Potato leafhopper:** I saw a nymph yesterday, watch new trees!

Fire Blight! If you have fire blight in young trees, please call Debbie and submit a sample for streptomycin resistance. 585-747-6039.

San Jose Scale crawlers are expected to emerge late this week. Here are some notes from Peter Jentsch on control at this time. Centaur 0.7WDG, working as an insect growth regulator (IGR; IRAC Class 16), acts to inhibit the synthesis of chitin. Esteem 35WP, also an IGR (Class 7), functions as a juvenile hormone mimic, inhibiting metamorphosis from one stage to another. These insecticides are most effective when directed against the first appearance of crawlers, yet have no contact toxicity and tend to act very slowly. Assail (Class 4) is one of the more effective insecticides when directed against emerging crawlers. The efficacy of these materials is improved by the addition of oil; however, Esteem 35WP and Assail can be used effectively without the use of oil, whereas Centaur requires oil to be effective, so watch out for Captan.

Sweet cherries are beginning to turn red, so too are tart cherries – so **brown rot** and **cherry fruit fly** become concerns. It is time for the expensive, strongest fungicides for brown rot including Indar or Quash where not resistant to DMI's, rotating with Pristine. Cherry fruit fly can be controlled with pyrethroids (watch PHI), or Assail (7 day PHI), or Delegate (7 day PHI, Sevin (3 day PHI), Actara or thiamethoxam in premixes (14 day PHI).

Berry rots and bugs! We have had high pressure for botrytis and other fruit rots in strawberries at harvest, botrytis in red raspberries and blackberries in bloom, and mummyberry and anthracnose in blueberries. The first report of a single spotted winged drosophila female was made in Ontario County last week. Stay tuned.

Horticultural notes... (from Terence and Mario)

Summer NAA Sprays NOW to Improve Return Bloom Next Spring: Where crop load is good or high we recommend the applications of 4 weekly sprays of low doses of either NAA or Ethrel starting this week (4-6 weeks after full bloom) on biennial bearing apple cultivars which include Honeycrisp, Fuji, Golden Delicious, Fortune, Jonagold, Braeburn, Mutsu, Macoun, Northern Spy, and Cameo) to promote return bloom (There is no need for this series of

summer sprays where crop load is low this year). Once fruits are 1" (25 mm) in diameter there is little risk of thinning from low doses of NAA or Ethrel but these growth regulator treatments can help induce flower bud initiation when applied in late June and early July (next 30 days). These sprays are very safe since during mid-summer, trees are very resistant to NAA or low doses of Ethrel and there are no adverse effects to the trees or crop. However treatments during extremely hot temperatures (above 95°F) should be avoided since they may cause leaf yellowing, early ripening, smaller fruit size, and/or yield loss if rates are high.

We recommend 7.5 ppm NAA (3 ounces per 100 gal or 6 ounces per acre) or 150 ppm Ethrel (0.5 pints per 100 gal or 1 pint per acre). Do not use Ethrel on early-ripening cultivars including Honeycrisp and Macoun because it may stimulate early ripening. Instead use NAA on these varieties. For late ripening varieties, Ethrel and NAA seems to perform similarly. You can also alternate Ethrel and NAA sprays or spray 1 or 2 sprays of Ethrel followed by 2-3 sprays of NAA.

With pears we also suggest 4 applications of 5-7.5 ppm NAA starting in mid June to stimulate flower bud initiation. (We have not tested Ethrel on pears but it is likely to stimulate pre-mature ripening with Bartlett.)

Early Hand Thinning: Early hand thinning of biennial bearing varieties is also critical for increased return bloom next year. You well know that Honeycrisp can be a very profitable apple cultivar. Unfortunately, this variety is highly biennial with trees cycling between low crop load and high crop loads. With either high or low crop loads fruit quality is not optimal. If crop load is too high then fruit size is reduced, and fruit taste and quality is poor. If crop load is too low then yield is low, fruit size is too big, bitter pit and storage disorders are increased. When doing hand thinning we suggest using **precision crop load management** techniques. This includes counting the number of fruits of 5 representative trees per block before hand thinning and then determining the number of fruits to remove via hand thinning. We suggest strict crop load management of 6-7 fruits/cm² TCA on mature HC trees and 4-5 fruits/cm² TCA on young HC trees. For annual cropping varieties like Gala use 5 fruits/cm² TCA for the first five years and then 7-8 fruits/cm² TCA). **Hand thinning will be critical this year especially for Gala and Honeycrisp blocks.** We are seeing that most Gala blocks have a final fruit set that is still relatively high. Please remember that **early hand thinning** is especially critical for Honeycrisp (this past weekend Honeycrisp fruitlets averaged 27-28mm), so start this task as soon as possible!

Use the Cornell Young Apple Thinning Gauge this Year: With young trees it is critical to keep crop load at moderate levels to achieve good tree growth. The Young Tree Apple Thinning Gauge can be easily used to determine the maximum number of apples to leave on young trees (up to year 5). Call Mario (315-719-1318) if you want a Cornell thinning gauge. I have still 50 or so gauges to deliver to interested growers.

Peaches: Don't wait any longer and hand thin peaches as soon as you have the time and labor.

Time to Apply Gibberellic Acid on Sweet Cherries: Consider the use of Pro-Gibb (gibberellic acid) to delay harvest and increase firmness and size of sweet cherries this year. The best time for this application is when fruit is light green to straw color (about 3-4 weeks before harvest). Use Pro-Gib 4% at 10-20ppm or 16-32 fl oz/acre.

Tree Training/Care: Critical early summer tree training tasks are: (1) singling down the leader by removing the 2nd, 3rd and 4th buds below the leader and (2) tying down feathers of newly planted trees. On Fuji and Macoun trees also tie down lateral branches on second and third year Tall Spindle plantings. Now is also the time for a second application of ¼ lb of calcium nitrate to newly planted apple trees in a doughnut shaped band around each tree. During the early season encourage strong leader growth and fill the vertical space. Leader growth during the early years should be at least 18-24 inches of growth. Steve's research has also found that there is no difference in leader growth between blossom and small fruit removal suggesting that there is still time to remove fruitlets on newly planted trees without interfering with tree growth. **Tree support/trellis:** Please support your newly planted trees (also second and third year plantings). Build the proper trellis for your trees as soon as you have the time/labor this week. **Did you install your deer Fence or other protection from deer feeding in young orchards?**

Irrigation and Nitrogen Fertilization: For many blocks, soils are saturated with water. You can delay nitrogen fertigation until the soil gets a little drier, but you don't want to wait for too long. N fertigation needs to be done by mid-July to avoid high excess N levels in fruit. A good thing about having plenty of rainfall is that mineralization of soil organic matter is enhanced, releasing more N, and therefore less N fertilization is needed. As we move into late June and then July, please check the Cornell Irrigation Model on the NEWA website.

Every effort has been made to provide correct, complete, and up-to-date pesticide recommendations. Nevertheless, changes in pesticide regulations occur constantly, and human errors are still possible. These recommendations are not a substitute for pesticide labeling. Please read the label before applying any pesticide. Copyright 2013. All rights reserved. No part of this material may be reproduced or redistributed by any means without permission. Cornell Cooperative Extension provides equal program and employment opportunities.

-END-