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

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### ***Pest Management Notes...***

**New/young trees:** The rains have certainly encouraged the weeds to grow in these new plantings and I have seen too much weed pressure stealing the nutrients and water, and then the deer come and steal the leader. The weeds will need to be burned back using paraquat with some Prowl or Surflan but be careful with this heat wave – I have seen some bark “cornflaking” from paraquat applications if there is no bark protection on green bark in new plantings. I have also seen more fire blight in young plantings than I am comfortable with. Be careful when you send workers through to select leaders since any cutting and wounding (including deer feeding) can certainly spread fire blight down the row. If they see a tree with fire blight, give them a roll of flagging tape and mark the tree for removal at the end of the day. These hot, and high humidity conditions are very good conditions if you are a fire blight bacterium. But streptomycin is not the material of choice for protection at this time since multiple shoot blight sprays are the reason why many other fruit growing areas have streptomycin resistance. Use low rates of listed on some copper labels and apply with low water volume especially in young trees. When you think you are getting close to 18-24 inches of shoot growth, I would even try shutting them down with Apogee (6-8 oz./acre) especially if you are already fighting fire blight in the planting. **Potato leafhoppers have arrived and along with aphids can be controlled using imidacloprid, Assail or Calypso. Leafroller sprays will be necessary when we reach about 500-600 DD 43F after biofix in most sites about June 7-10.** If you have fire blight in young trees, please call Debbie and submit a sample for streptomycin resistance. 585-747-6039.

**SCAB!** Maintain captan applications if you can see scab lesions on leaves at this point; although fruit are gradually less susceptible as they mature at 6 weeks after petal fall, you need to protect from secondary infection of fruit and leaves. **Powdery mildew** pressure is high. 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).

**Codling moth egg hatch** is heavy right now and trap numbers hitting the “B” peak for the first flight. For those of you with a heavy population, continue to maintain insecticide coverage for the eggs that are hatching from the June 10 trap numbers (we have accumulated another 250 DD 50F since that flight) and then more eggs hatching from the the “B peak”. If you had high populations last season and trap counts continue to be high this season you will likely need a third spray for first generation of codling moth. Delegate, Altacor, Belt are still the best choices if you have high CM pressure. **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. We have accumulated approximately 350°43F and have first egg hatch, but it is still difficult to find them in terminals until about 400 DDD with high populations. Codling moth sprays will be well timed to coincide with leafroller sprays.

**San Jose Scale crawlers** are emerging. Peter Jentsch suggests control at this time using Centaur 0.7WDG, Esteem 35WP. 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 ready for harvest in early varieties, so brown rot and cherry fruit fly** remain 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 Sevin (3 day PHI), Assail (7 day PHI), or Delegate (7 day PHI).

**Berry rots and bugs!** We have had high pressure for botrytis in brambles getting close to harvest now. These are especially good conditions for **anthracnose in blueberries** which are susceptible to infection even as green fruit

which will remain latent until the sugars start to build in the fruit. Switch (0 days PHI), Pristine (0 days PHI), Quash (7 days PHI), or CaptEvate (0 days PHI) can be used in rotation on a 7-10 days schedule when we have warm, rainy weather. Indar has a **30 day** PHI. The first report of a single spotted winged drosophila female was made in Ontario County, and more reports in the Hudson Valley. Stay tuned.

### **Horticultural notes... (from Mario)**

**Irrigation:** New trees need only small but frequent doses of water for maximum tree growth this year. Don't be afraid to turn on the irrigation in young blocks if rainfall stops at your site this and/or the following week.

**Hand thinning:** Hopefully by now you have finished the hand thinning job for size for Honeycrisp and Macoun and your crews are now hand thinning Gala trees this week. Every Gala block where we worked with this year for the precision chemical thinning project (20 sites around the state) had too much crop after aggressive thinning. So start this task as soon as possible where Gala blocks have a fruit set that is still relatively high. 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/cm<sup>2</sup> TCA on mature HC trees and 4-5 fruits/cm<sup>2</sup> TCA on young HC trees. For annual cropping varieties like Gala use 5 fruits/cm<sup>2</sup> TCA for the first five years and then 7-8 fruits/cm<sup>2</sup> TCA. Look for the hand thinning's article for precision crop load management by Hoying and Robinson in the coming issue of the LOF newsletter this week. Utilize the Cornell University young apple thinning gauge. Call Mario (315-719-1318) if you want a gauge. I have still 30 or so gauges to deliver to interested growers.

**Summer NAA Sprays NOW to Improve Return Bloom Next Spring:** 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.) Don't forget to have enough water available for your hand thinning crews this week.

**Avoid Heat-Induced Injuries** (the following two topics "heat and sunburn" were modified from comments prepared by Mike Fargione from the Hudson Valley Lab. last week): Growers should remember the dangers of working in hot and humid conditions at this time of the year. Please be sure your workers are prepared and well hydrated. If possible, avoid spray applications during the heat of the day and don't apply materials anytime that could cause phyto including some adjuvants like oil and salt-based products like calcium sprays during such heat. Avoid return-bloom sprays of etephon (Ethrel) or NAA if temperatures get in the 90's since application of this material in hot weather or just prior to multi-days of hot weather might they may contribute to leaf yellowing, early ripening, smaller fruit size, and/or yield loss if rates are high.

**Sunburn:** At the 2012 Expo, we heard that research in Washington State predicted sunburn can occur once air temperatures reach 93°F. Some growers are trying "sunblock" materials to reduce sunburn on Honeycrisp, Cameo and other very sunburn-susceptible cultivars. Some material labels suggest first applications be made at around this timing (last week in the Hudson Valley according to Fargione). We have very limited experience in our climate with these materials, but my qualitative observations last year suggested they may delay color development and maturity. My best advice is to read the label and follow directions. Keep an eye on the updated forecasts in case you plan on testing these materials on limited areas this season. In past years, Plant Pathologist Dr. Dave Rosenberger has suggested that heat-related fruit injury can be reduced by the following: (1) Irrigate liberally before heat waves, (2) Use overhead irrigation during heat waves to avoid heat stress damage, (3) Apply Pristine fungicide ahead of heat stress, and (4) Maintain Pristine or Captan (80W, 3-5 lbs./A) after heat waves until harvest. You can listen to Dr. Rosenberger describe this issue at:

<http://hudsonvf.cce.cornell.edu/resources/Tree%20Fruit/fruit%20school%202012/Rosenberger%20roundup%20heat%20injury%20subset%202012FS/Rosenberger%20roundup%20heat%20injury%20subset%202012FS.html>. You will need Adobe Flash Player software on your computer which is available free at (<http://get.adobe.com/flashplayer/>).

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.

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