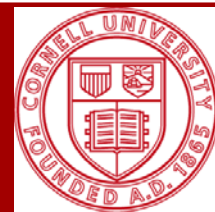




FRUIT NOTES

Lake Ontario Fruit Program



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Pest Management D. Breth



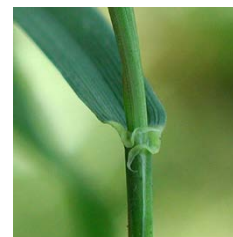
Japanese knotweed

Weed control? Follow up on **Japanese knotweed** control to keep it contained outside of orchards: I have seen some large patches of this weed and it will grow quickly. This is a noxious weed and is a prohibited invasive species in some states. You will need to contain this weed with glyphosate or some other systemic herbicide. If it is growing among a desirable grass species, then 2,4-D would be a better choice. There are other herbicides for use in non-crop situations, but the plants need to be treated soon, before they get too tall; or cut, then grow again to a desirable height, then treat. Be careful not to spread the rhizomes of this weed on cultivation equipment to other sites on your farm.



Tall fescue, with short study auricles
turfgrass.cas.psu.edu, extension.umass.edu

Perennial grasses in young plantings – now is the time to deal with grasses before they get too tall, but they already are in some cases. The perennial grasses you might be looking at include quackgrass, fall fescue, and orchard grass. They can all be clumpy, but quackgrass



Quackgrass with clasp auricles,
www.turf.uiuc.edu

has rhizomes in contrast to the fibrous root systems of tall fescue and orchard grass.

Glyphosate is the herbicide of choice but do not allow glyphosate to contact green bark of tree or foliage! Gramozone will temporarily burn the tops but these grasses will recover and will need to be treated with glyphosate while it is still short (6 inches).



Oriental fruit moth biofix was set on May 2 across the Lake Ontario fruit belt. In stone fruit, first egg hatch will happen very close to petal fall on peaches so an insecticide application in peaches at petal fall is critical to prevent the first generation infestation of shoots. This generation will go on to produce up to 3 more generations threatening fruit and

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.

Orchard grass,
Kallenbach et al. Univ. of MO

Danitol) at petal fall on plums, apricots, and peaches; switch to an insecticide like Assail, Actara, or Avaunt for plum curculio and OFM when the fruit is out of the shucks. For apples, insecticides applied for plum curculio in general will control OFM.



Cornell University
Cooperative Extension

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Building Strong and Vibrant New York Communities

Codling moth traps are set, and we expect first flight soon. Stay tuned for biofix report.

Invasive pests: We are also cooperating with Art Agnello and Peter Jentsch on brown marmorated stink bug monitoring with several traps set using the new USDA lure to attract them. We will keep you posted on any activity that raises concern for these pests. In early June, we will start to monitor berry crops for spotted wing drosophila with Greg Loeb, Art Agnello and Juliet Carroll. Art and Juliet will also be watching cherries for SWD.

Blueberries: Renew fungicide protection for mummyberry on blueberries before the showers using Captan (with low disease pressure), or mix captan with Indar, Orbit, or Switch before wet weather. Bumblebees will improve pollination and berry size in blueberries. They can be especially effective when cooler weather as predicted occurs during bloom.

Strawberries: Bud trusses are coming out of the crown and are susceptible to clipper damage with

the current warm conditions; some early varieties are at first bloom. Prebloom insect issues are typically tarnished plant bug, spittlebug and strawberry clipper. Chlorpyrifos (Lorsban), bifenthrin (Brigade) or Danitol can be used to prevent bud clipping. You can wait until you see >one injured truss per foot of row when scouting. If tarnished plant bug nymphs are noted in 4 of 15 clusters, effective options include Brigade or Danitol, but also Assail or Dibrom are options. Thionex (endosulfan) is still allowed for use on perennial strawberries through 2016 for control of spittlebug which would also control plant bug. Brigade, Danitol, Admire, or Assail are also effective. Read the label restrictions regarding bee toxicity. **Botrytis** fungicide protection on strawberries is best at first bloom, then repeated in full bloom or 7-10 day using Elevate, Captevate, iprodione (1 spray per season), Pristine, Switch or Scala. **Get your overhead irrigation set up for the frosts predicted early next week**

Fire Blight Shoot Blight Control

D. Breth, edited from article by D. Rosenberger

Apogee (prohexadione-calcium) has been recommended for many years to both reduce terminal shoot growth on vigorous trees and to slow the spread of the shoot blight phase of fire blight. How Apogee makes shoots more resistant to fire blight is still not fully understood. A recent publication by McGrath et al. (2009) provides evidence that Apogee treatment causes thickening of the cell walls in the cortical parenchyma tissue in the mid-veins of newly unfolded leaves. Cell walls in the youngest treated leaves were nearly double the thickness of the cell walls in control plants. The fire blight bacterium, *Erwinia amylovora*, may be unable to cause infections in shoots of Apogee-treated plants due to the thickened cell walls.

The Apogee label indicates that the first application should be made when new shoots are 1 to 3 inches long. Trees may have some shoots with one inch of growth at about the same time that the king flowers are approaching petal fall and while lateral flowers are still in full bloom. It will take about 7-14 days to suppress shoot blight infections. Apogee is NOT a substitute for traditional streptomycin sprays during bloom because Apogee will not control blossom blight. However, it may

be feasible to tank-mix Apogee and streptomycin (or Apogee plus oxytetracycline where strep-resistant blight is present) if the blossom blight models call for an antibiotic application around the same time that king flowers are beginning petal fall.

Apogee: Carefully review the product label where they will find the following warnings and suggestions:

- 1) Do NOT** apply Apogee to Empire or Stayman cultivars because Apogee can cause fruit cracking on these cultivars.
- 2) It may be more difficult** to adjust crop loads on Apogee-treated trees because fruit thinners will be less effective, and this can be especially problematic on Golden Delicious, a cultivar that is sometimes difficult to thin adequately, even under normal conditions.
- 3) Do not tank-mix** Apogee with calcium or boron because these foliar nutrient sprays can inactivate Apogee.
- 4) Finally,** note the label suggestions for including a water conditioner and a nonionic surfactant in the tank when Apogee is being applied.

Precision Thinning Group Effort in Western NY in 2013

T.L. Robinson and M. Miranda Sazo

Several Western NY fruit growers and consultants attended the precision thinning workshop on May 1 at Geneva and have agreed to participate in an improved method of conducting chemical thinning this year called **“Precision Chemical Thinning”**. The new method utilizes both the carbohydrate model and the fruit growth model to apply a series of chemical thinning sprays to achieve a predetermined number of fruit per tree. The 2013 method uses the carbon balance model as a tool for predicting response prior to application and the fruit growth rate model for early assessment of thinning response immediately following application.

A short summary of the method is (1) select a mature orchard of either Gala or Honeycrisp, (2) count flowering clusters on 5 representative trees at pink in Western NY this week, (3) calculate the desired number of fruit per tree based on the number of trees per acre and the yield and fruit

size you expect, (4) tag 15 representative spurs per tree on each of 5 representative trees (75 total spurs) at pink or during bloom, (5) choose one of two spray protocols of thinning sprays (see below Tables 1 and 2), (6) use the carbohydrate model to adjust rates up or down based on model recommendation (model is now online at the NEWA website <http://newa.cornell.edu> and the model results from selected weather stations will be sent via *LOF Fruit Fax*, (7) measure fruit diameters on 75 spurs 6 times (3 and 8 days after petal fall spray, 3 and 8 days after 12mm spray, and 3 and 8 days after 18mm spray), (8) send the data within 24 hours after each 8 day measurement to Dr. Terence Robinson to tlr1@cornell.edu (you also need to get from him or Mario (mrm67@cornell.edu) an Excel worksheet via email this week), and (9) get back an assessment within 24 hours of thinning progress before next spray.

Table 1. Two options in 2013 for Precision Thinning of Gala

Option 1 (more aggressive and recommended for the good bloom expected for this year)	Option 2 (less aggressive)
Apply a Bloom Spray (Maxcel 96oz/acre)	Apply a Petal Fall Spray @6mm (NAA 6oz/acre + Sevin 2pt/acre)
Apply a Petal Fall Spray @6mm (NAA 6oz/acre + Sevin 2pt/acre)	Apply a 12mm Spray (Maxcel 96oz/acre + Sevin 2pt/acre)
Apply a 12mm Spray (Maxcel 96oz/acre + Sevin 2pt/acre)	Apply a 18mm Spray (Maxcel 96oz/acre + Sevin 2pt/acre + Oil 1pt/acre directed to the upper part of the tree)
Apply a 18mm Spray (Maxcel 96oz/acre + Sevin 2pt/acre + Oil 1pt/acre directed to the upper part of the tree)	

Table 2. Two options in 2013 for Precision Thinning of Honeycrisp

Option 1 (more aggressive and recommended for the good bloom expected for this year)	Option 2 (less aggressive)
Apply a Bloom Spray (Maxcel 48oz/acre)	Apply a Petal Fall Spray @6mm (NAA 8oz/acre + Sevin 2pt/acre)
Apply a Petal Fall Spray @6mm (NAA 8oz/acre + Sevin 2pt/acre)	Apply a 12mm Spray (NAA 6oz/acre + Sevin 2pt/acre)
Apply a 12mm Spray (NAA 6oz/acre + Sevin 2pt/acre)	Apply a 18mm Spray (Sevin 2pt/acre + Oil 1pt/100gallon, directed to the upper part of the tree)
Apply a 18mm Spray (Sevin 2pt/acre + Oil 1pt/100gallon, directed to the upper part of the tree)	

With whichever option chosen, you will use a stepwise thinning program of spraying and then assessing the effect before deciding on the need for the next spray. Before each spray, you will run the carbohydrate model to determine the specific thinner rate for your orchard (start with the base rate listed above in the option you chose and then adjusted up or down depending on the output recommendation from the carbohydrate model). After spraying you will determine the effect of the thinning spray by using the fruit growth rate model which entails measuring the diameter of each fruit

in 75 clusters on day 3 after spraying and day 8 after spraying and using a spreadsheet to calculate the thinning effect of the spray (There is a very precise methodology for these measurements and you must have some training to do this portion of precision thinning). With these results you then decide on the need for the next spray in the protocol and repeat the cycle if another spray is needed. In some cases only the first and second sprays in the protocol will be needed but in other cases 3 or even 4 sprays from the protocol will be needed to achieve the target fruit number.

Pruning Peaches with Damage from Last Winter

T.L. Robinson and M. Miranda Sazo

Peaches are still blooming and significant winter damage has been observed in some Wayne County orchards. Little or no damage has been observed in Orleans and Niagara County or at Geneva. The winter damage likely occurred in the last week of January when some locations in Wayne County had temperatures dip below -10°F. In some cases, almost all of the fruit buds were lost while at other locations a lesser amount of damage occurred. For those growers who had some winter damage, it is critical to make a bud damage assessment now and then adjust pruning severity to match the damage. You only need 10% of the blossoms for a viable crop. We suggest waiting a few days before pruning the sites with damage. Depending on the damage we recommend one of two strategies: (1) If all flower buds were lost then this year is an opportunity to reduce the height of the tree (especially with V-systems) and bring the fruiting zone down. Head each scaffold arm at approximately 10 feet above the ground by cutting

to an upright side shoot. Stub back all lateral limbs that are large to a viable bud near the scaffold arm to develop new fruiting wood near the scaffold arm. Make sure the center of the tree is open by removing all limbs growing into the center. This extra amount of light will rejuvenate your trees and result in new fruiting wood in the lower part of the canopy. (2) Where 10% or more flower buds are alive, do a very light pruning removing only the larger shoots that grow into the center of the V and upright suckers. Leave all fruiting twigs intact. A second step is to make an assessment of how many fruits are needed for a reasonable crop (number of bushels expected per tree X number of fruit per bushel) and then reduce the number of fruiting shoots to provide that number of fruits. Even if a light pruning is done make sure to remove shoots in the upper part of the tree that shade the lower part of the tree or next year there will be no good fruiting wood in the lower part of the tree.

NY1 and NY2 Apple Pollination

Kevin Maloney

With new plantings of apples it is important to plan for optimum cross-pollination. Many edaphic and biotic factors can influence bloom timing. Among them we can mention: (1) geographic location, (2) topography, (3) tree age, (4) variety-rootstock combinations, (5) soil type, (6) pests, and (7) nutrition, just to name a few! These factors are responsible for differences between pollination charts published by nurseries and organizations. On

your farm and in your newly planted orchard these factors may be less variable.

Most apple cultivars are self-incompatible and require cross-pollinating with pollen from another cultivar. We have done controlled crosses with NY1 and NY2 to check for compatibility. We know that NY1 will pollinate NY2, NY2 will pollinate NY1, and their bloom periods overlap. Royal Empire will pollinate NY1 and their bloom periods also overlap.

NY2 will pollinate Gala. We have conducted many other controlled and successful crosses of NY1 and NY2 with various selections in our breeding program. More controlled crosses are planned for this year to check compatibility with other important varieties.

Bloom timing and bloom overlap are also important when planning a new orchard. The following Table 1 of bloom times is not extensive but will provide you with a bench mark to compare with other known variety bloom times on your farm when planning for optimum pollination.

Table 1. Apple bloom times of NY 1, NY 2, and several other apple cultivars grown in the Northeast.

Apple Cultivars	BLOOM TIME (NY fruit production regions)				
	Early Bloom	Mid-Season Bloom			Late Bloom
Zestar, Ruby McIntosh, Marshall McIntosh	X				
Cortland		X			
Royal Empire		X			
Sansa			X		
NY2			X		
Autumn Crisp			X		
Smoothie				X	
NY1				X	
Cameo				X	
Honeycrisp					X
Goldrush, Rome, Northern Spy					X

FSMA Updates & Comment Period Extensions

Gretchen Wall, Produce Safety Alliance, edited by C. Kahlke

On April 24, The FDA issued Federal Register notices today to extend the comment periods on the proposed rules for Standards for the Growing, Harvesting, Packing, and Holding of Produce for Human Consumption (the Produce Safety proposed rule), along with the Current Good Manufacturing Practice and Hazard Analysis and Risk-Based Preventive Controls for Human Food (the Preventive Controls proposed rule) until **September 16, 2013**.

The comment period for the Draft Qualitative Risk Assessment of Risk of Activity/Food Combinations for Activities (Outside the Farm Definition) Conducted in a Facility Co-Located on a Farm is also extended.

To view these notices, please visit the links below:

- Federal Register Notice: [Current Good Manufacturing Practice and Hazard Analysis and Risk-Based Preventive Controls for Human Food: Extension of Comment Period](https://www.federalregister.gov/articles/2013/04/26/2013-09763/current-goo)

<https://www.federalregister.gov/articles/2013/04/26/2013-09763/current-goo>

- Federal Register Notice: [Standards for Growing, Harvesting, Packing, and Holding of Produce for Human Consumption: Extension of Comment Period](https://www.federalregister.gov/articles/2013/04/26/2013-09761/standards-for-the-growing-harvesting-packing-and-holding-of-produce-for-human-consumption-extension)
- Federal Register Notice: [Draft Qualitative Risk Assessment of Risk of Activity/Food Combinations for Activities \(Outside the Farm Definition\) Conducted in Facility Co-Located on Farm; Availability: Extension of Comment Period](https://www.federalregister.gov/articles/2013/04/26/2013-09762/draft-qualitative-risk-assessment-of-risk-of-activityfood-combinations-for-activities-outside-th)

**Lake Ontario Fruit Program
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As a reminder, there are two ways to comment:

1.) Comment electronically at

<http://www.regulations.gov/#!docketDetail;D=FDA-2011-N-0921>

2.) Written comments may be faxed to the FDA at 301-827-6870 or you may mail them

to: Division of Dockets Management (HFA-305)
Food and Drug Administration
5630 Fishers Lane, Room 1061
Rockville, MD 20852

PSA-FDA Question & Answer Series

Gretchen Wall, Produce Safety Alliance, edited by C. Kahlke

The Produce Safety Alliance, in collaboration with the FDA, will be hosting a series of Q & A teleconferences to discuss specific sections of the Food Safety Modernization Act (FSMA) Proposed Produce Safety Rule.

The recordings & slide sets from past Q&A webinars are archived on the PSA website. The final 2 live webinars are:

May 10, 2013	11 AM	Health, Hygiene, & Training of Workers
May 13, 2013	11 AM	Recordkeeping, Compliance, & Enforcement

To register for the final webinars or to see past webinars/slide sets/or for more information on all things produce safety, go to: <http://producesafetyalliance.cornell.edu/news.html>

Save the Dates

August 1 – Summer Fruit Tour, NYSAES, Geneva- more info TBA

August 6 – Storage Workshop, Cornell University, Ithaca-more info TBA