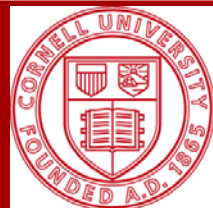




FRUIT NOTES

Lake Ontario Fruit Program



Volume 14 Issue 3

February 14, 2014

2014 Winter Pruning Tour in Wayne County – Thursday February 20

A winter pruning tour will be conducted at 3 farms in Wayne County from **8:30 am until 3:30 pm** on **Thursday, February 20, 2014**. You and your employees are invited to attend this pruning demonstration and tour to continue learning about the benefits of orchard mechanization and proper pruning for high density plantings. This tour is free, does not require a pre-registration, and is open to all Western NY fruit growers interested in improving orchard labor efficiency.

Pruning Demonstrations and Tour Agenda:

Stop 1 - 8:30 AM – 10:30 AM: Mark Hermetet's Orchards (address: 7017 Bear, Swamp Rd, Williamson, NY. Directions: Travel to intersection of Rt. 104 and Pound Rd in Wayne County, Williamson, NY. Follow north on Pound Rd, and travel 0.2 miles, then turn right on Bear Swamp Rd., go for 1.2 miles and look to your left for the Cornell signs). Mark has been planting new high density plantings and just recently invested in a new tractor-mounted, over-the-hood, **expanding deck**, two man orchard platform. See and hear how it has worked after only two weeks of pruning work in 2014. Discussion on orchard mechanization, proper pruning, limb renewal pruning, limb bending, and the correct identification of a floral bud versus a vegetative bud will be led by Dr. Terence Robinson. Mark Arcuri will demonstrate the correct use of fall protection harnesses. Andy Dulude and Ryan Amburg will demonstrate the use of electric shears for pruning of high density orchards.

Stop 2 - 11:00 AM – Noon: D&L Ventures LLC, Doug Fox's Orchards (address: 4959 Fish Farm Rd., Sodus, NY. Directions: Travel to intersection of Rt. 88 and Feiock Rd/Fish Farm Rd in Wayne County. Follow east on Feiock Rd, and travel 0.1 mile, then turn right on Fish Farm Rd., go for 1.5 miles and look to your right for the Cornell signs). Doug will share his successes and challenges while pruning medium-high density orchards on steep slopes with a motorized platform. Last year Doug bought a tractor-mounted, out-front, **elevating-tilting**, two man orchard platform that has worked very well for his pruning crew. See and hear how it has worked! Discussion on general aspects of pruning will be led by Dr. Terence Robinson.

Lunch (on your own)

Stop 3 - 1:00-3:30 PM: Scott VanDeWalle's Orchards (directions: Travel to intersection of Rt. 104 and Rt. 14 in Wayne Co., Alton, NY. Turn north on Rt. 14, and travel 0.3 miles, then turn right on Ridge Rd. and go 50 feet, then turn left on Shaker Rd., go 0.9 miles and look for the Cornell signs). Scott and invited growers, Todd Furber and Eric Budinger, will be sharing their experiences with motorized platforms for pruning. Todd



Cornell University
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Building Strong and Vibrant New York Communities

Cornell Cooperative Extension provides equal program and employment opportunities. NYS College of Agriculture and Life Sciences, NYS College of Human Ecology, and NYS College of Veterinary Medicine at Cornell University, Cooperative Extension associations, county governing bodies, and U.S. Department of Agriculture, cooperating.

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.

and Eric will have for display their platform pulled by a tractor and Scott will have his 2012 tractor-mounted, over-the-hood, two man orchard platform (it does not have an expanding deck as Mark Hermenet's 2014 platform) and the 2013 tractor-mounted, over-the-row, four man orchard platform and self-guided. Discussion on orchard mechanization, the fruiting wall concept, proper pruning, limb renewal pruning, limb

bending, and the correct identification of a floral bud versus a vegetative bud will be led by Dr. Terence Robinson. A second demonstration of use of fall protection harnesses and electric shears will also be demonstrated at this stop.

For more details about the tour call or email Mario at 315-719-1318, mrm67@cornell.edu.

The Effect on Fruit of the "Polar Vortex" in Western NY

S. A. Hoying (adapted for WNY by M. Miranda Sazo)

Immediately after being visited by the "Polar Vortex" January 3rd and 4th, everyone in the fruit world was talking about the potential for "winter injury". There is plenty of information and opinion regarding critical temperatures for spring frost, not so much for deep winter cold. Scientists in the colder states (Iowa, Maine, and Minnesota) have worked on this issue for their entire careers.

Despite that there are no hard and fast rules since field research is hard to duplicate from year to year and there are so many factors that can influence the result. These include, but are not limited to, acclimation of the tree, previous season's crop load, the tree age, the rate of temperature drop, the duration of the cold temperature, the presence of snow cover, and the actual minimum temperature. Add to that the sensitivity of the variety and rootstock. Actively growing tissue is the most susceptible to winter injury (thus problems in late fall and early spring), then roots, damaged primarily in open winters without a snow cover and when soils are dry, then pith, mature sapwood, bark, and finally cambium. Hardiness occurs lastly at the collar of a tree at soil line. Winter damage can often resemble collar rot or fire blight girdling and

is seen when trees leaf out in the spring. Young trees are more susceptible than older ones.

The most insidious winter injury occurs when roots are killed. It is root death that is responsible for many winter dormant killing events. It can be significant on gravelly and sandy soils. Years with a heavy blanket of snow protect the roots from freezing. Symptoms of root injury are usually failure to thrive and grow and can appear to be much like nitrogen deficiency initially. These trees finally die during periods of mid-summer drought stress. Root injury is much more commonly seen on young trees with limited roots systems. The best we can do is estimate an average condition based mostly on our experience and others that we trust who have experienced similar events.

The lowest temperatures across the Lake Ontario fruit region according to NEWA ranged from -12°F in Albion, Kendall (Zingler) weather stations to -10.2°F in Appleton (South) and were all registered on January 3rd, 2014 for approximately 1, 1.5, or 2 hours (Table 1).

Table 1. Lowest temperatures (T °F) registered across the Lake Ontario fruit region by 13 NEWA weather stations in January 2014.

Weather Station	Lowest T (°F) registered in the month of January, 2014
Ransomville	-7°F on 1/3, -4.4°F on 1/7, -3.8°F on 1/28
Appleton (North)	-8.1°F on 1/3, -5°F on 1/7, -4°F on 1/28
Appleton (South)	-10.2°F on 1/3, -4.3°F on 1/7, -1.7°F on 1/22, -3.4°F on 1/28
Somerset	-5.6°F on 1/3, -3°F on 1/7, -1.5°F on 1/28
Lyndonville	-7.8°F on 1/3, -3.7°F on 1/7, -2.6°F on 1/28
Knowlesville	-11.3°F on 1/3, -3.7°F on 1/7, -13.2°F on 1/22, -2.3°F on 1/28
Medina	-5.1°F on 1/3, -2.9°F on 1/7, -6.7°F on 1/22, -1.8°F on 1/28
Albion	-12°F on 1/3, -4°F on 1/7, -5°F on 1/22, -2°F on 1/28
Kendall (Zingler)	-12°F on 1/3, -4°F on 1/7
Williamson (DeMarree)	-3.1°F on 1/7
Sodus (Lake)	-3.4°F on 1/7
Sodus	-2.9°F on 1/23, -4°F on 1/7, -1.9°F on 1/22, -4.2°F on 1/28, -4.6°F on 1/29
Wolcott	-2.1°F on 1/7, -7.5°F on 1/22, -4.9°F on 1/28

What does this really mean for the various fruit crops? Our best guess from years of accumulated experience is that apple flower buds are killed from -25 to -32°F, apple wood from -30 to -40°F, peach flower buds -12 to -20°F, peach wood around -20°F, plums depending on variety from -2 to -25°F. Japanese plums are more sensitive. Vinifera grapes are sensitive near 0°F so it is likely that most areas have suffered bud kill and pruning practices should be amended depending on the severity of the injury.

Recent cold temperatures probably had no effect on mature apples but may have affected some young or weak trees; there likely was some flower bud damage to a small proportion of peach, plum, and cherries. This probably had a beneficial effect reducing flower numbers. Snow cover, where present, also likely has protected roots from winter damage.

Cold Injury Symptoms. Normally healthy buds are bright green. Frozen buds appear brown and water-soaked. Buds should be warmed a few days after the freeze before cutting with a very sharp knife. Peach and cherry bouquets can be collected after a freeze and put in water

in a warm room. This will force them to bloom. Assess the health of flowers to determine the presence or absence of winter injury. Winter cold will cause misshapen flowers often with damaged pistil, stamen, and petals. In some cases buds do not develop further than tight-cluster. An accurate estimate of injury in the orchard from these counts is impossible without extensive sampling throughout the orchard on all cultivars.

Internal browning of cambial tissue is a sure sign of injury and is easily seen by cutting through the bark after trees have had a chance to warm up. Look first on the southwest side of the tree where the daily temperature variations are greatest. In the spring, delayed and slow terminal growth followed by tip die back is a common symptom. Winter injury can result in poor fruit set despite what appears to be good flowering and pollination. Shortened fruit stems, misshapen fruit and fruit russet have all been attributed to winter injury.

Lateral cracks along the trunk on apple are not significant but can be a problem on stone fruit since bark tends to separate from the wood and provide canker entry points.

What to do if your orchard is winter injured?

There is not much you can do now except adjust your pruning to preserve more fruit buds for the coming year. If you know you have had winter cold events apply Dr. Warren Stiles's "Spring Tonic" at tight cluster or pink. The "Tonic" is a fertilizer mix that provides nutrients directly to injured tissue. The tonic is a tank mix of 3 lbs. of urea (feed-grade) plus 1 lb. of a sprayable Boron plus 1 quart zinc chelate EDTA per 100 gallons. If winter injury has significantly reduced the crop consider root pruning, chainsaw girdling, or applications of Apogee to reduce tree vigor. Consider significantly reducing crop load to reduce stress on the tree. If severe collar injury occurs, use bridge grafting to connect the lower trunk or roots with the uninjured trunk.

What can you do to Minimize Winter Damage?

It is a little late now but painting tree trunks, especially on the south and west side, will reflect some the extremes in temperature on susceptible tree trunks. This is essential for stone fruit. Prune only after trees have reached sufficient hardiness through lengthy exposure to cold temperature and the risk of rapid temperature drops has abated. Improve orchard drainage. Use a well-balanced nutritional program that encourages neither too little or excess growth and supplies adequate potassium. Maintain quality foliage through the season. Defoliation by insect or disease exacerbates winter injury.

Costs per Bearing Acre Creep Up, Even if the Crop is Down

A. De Marree

Comparison of Accrual Expenses per Bearing Acre: Lake Ontario Region, NY

<i>Avg. yield per bearing acre ></i>	497	786	804
<i>Avg. # of bearing acres ></i>	232	230	222
	2012	2011	2010
	15	18	16
Annual Accrual Expense	farms	farms	farms
Operators Draw	\$ 587	\$ 515	\$ 472
Hired Labor w/ benefits	2,115	2,338	2,016
Orchard expenses (inc. deprec)	883	1,013	828
Crop Storage, Handling, Mktg *	255	208	208
Machinery Expenses (inc. deprec)	989	891	732
Building exp, taxes, rent (inc. deprec)	250	210	249
Overhead	615	562	443
Total Accrual Expenses/Bearing Acre	\$5,694	\$5,737	\$4,948
<i>Avg. # of non-bearing acres ></i>	28	35	31

* lower than actual as most packinghouses pay storage costs and deduct packing & marketing charge from payment

Please note that the accrual expenses are per bearing acre. The average farm carried an additional 28 – 31 nonbearing acres, depending upon the year and group of farms in the study.

Spring 2014 NYSDEC CleanSweepNY planned for Region 9.

The Spring 2014 NYSDEC CleanSweepNY planned for pesticide collection and disposal program will take place the week of April 28th.

PRE-REGISTRATION IS REQUIRED

<http://www.cleansweepny.org/>

Return Completed Registration forms to NYSDEC by these deadlines:

- April 4, 2014 for participants with unknown products and gas cylinders.
- April 25, 2014 for all other participants.

To obtain more information and to request a registration packet from NYSDEC, telephone 877-793-3769 or contact CleanSweepNY by email at info@cleansweepny.org.

The CleanSweepNY program is a collaborative effort that would only be possible with the cooperation of our various partners such as the NYSDOT and DEC Region 9 staff. NYSDOT staff will help with the staging of this event by providing drive-thru garage bays at three highway maintenance facilities located in various towns in DEC's Region 9. The DEC's Region 9 staff will provide local assistance and help at the collection sites and the various on-site visits to individual locations.

NOTE: *This CleanSweepNY event will only be available to those counties in NYS DEC Region 9: Allegany, Cattaraugus, Chautauqua, Erie, Niagara and Wyoming.*

Both Registrations Open for Final Farm Food Safety Workshops for the Season Feb 27-28 in Bath & March 6-7 in Geneva

Craig Kahlke

In recent years, several food borne illness outbreaks in produce have made national news. Both the produce industry and the federal government have stepped up demands for fruit and vegetable farms to meet food safety practice standards. These standards are known as GAPs (Good Agricultural Practices).

A new program, Harmonized GAPs, has been developed to combine several food safety certifications into one program. New York's retail produce buyers, such as Wegmans, are asking growers to adopt Harmonized GAPs certification in many cases.

In response, Cornell Cooperative Extension, the Cornell Vegetable Program, the Cornell Lake Ontario Fruit Team, the Produce Safety Alliance, the Cornell National GAPs Program, and NOFA-NY with assistance from NY Ag & Markets, will be presenting a training for farm food safety or GAPs, including Harmonized GAPs. The training is open to all produce farms and related industry people. *This workshop is partially funded through a grant from the Genesee Valley Regional Market Authority, and A Risk Management Grant from USDA.*

Farm Food Safety Training with GAPs February 27 & 28, 2014

8:30 am Registration & Refreshments; 9:00 am - 4:00 pm Training
Location: Civil Defense Center, 7220 State Rte. 54, Bath, NY 14810

Thursday, February 27

What is GAPs?

How does GAPs work?

What does it mean for my farming operations?

Friday, February 28

Write a food safety plan for your farm*

Optional supplemental session: Mock audit (at a participant's farm during the growing season)

\$60.00 per person registration includes educational materials, lunch and refreshments. Add \$15.00 each for additional attendee from the same farm. Space is limited! **Pre-register by February 24, 2014.** Mail in with your payment, or register and pay online here:

Register Online here:

<http://cvp.cce.cornell.edu/event.php?id=165>

***Note:** Although this program is geared towards the USDA Harmonized Food Safety Standards and Audit, the food safety template and curriculum covers most major 3rd-party audit requirements, including*

the basic USDA GAP/GHP audit, Global Gap, etc.
For questions, please contact Craig Kahlke at 585-735-5448 or cjk37@cornell.edu

** A laptop computer is required for the second day. If you need to borrow a computer, please let us know in advance. If you are not computer savvy, please bring a person with you that has computer skills.*

March 6-7. The Last Workshop of the

Season: Identical program listed above!

Location: NYS Agriculture Experiment Station, Food Research Lab, Rm 251
630 West North Street, Geneva, NY 14456

To register for on line for the Geneva GAPS workshop or for more info:

<http://cvp.cce.cornell.edu/event.php?id=161>

Mail in Registration form for GAPS Geneva

(the Bath GAPS mail-in registration form is in the last Fruit Notes issue)

REGISTRATION -Farm Food Safety Training with GAPS

March 6-7, 2014

8:30 am Registration & Refreshments; 9:00 am - 4 pm Training

NYSAES, Food Research Lab, Rm 251, 630 West North St., Geneva, NY 14456

Name _____ \$60.00

Farm/Business Name _____

Additional Attendee(s) (from the same farm) (\$15 each)

_____ \$15.00

_____ \$15.00

Total Due \$ _____

Address : _____

Phone _____ FAX _____

Email(s) _____

A laptop computer is required on March 7. Check here if you would like to borrow a laptop _____

Pre-register by Monday, March 3, 2014. Space is limited!

Make checks payable to: "Cornell Cooperative Extension"

Return registration form and payment to:

Cornell Cooperative Extension,

Attn: Angela Parr

480 North Main Street

Canandaigua, NY 14424

CCE - Orleans County Pre-Exam Training to Become a Certified Pesticide Applicator Offered by LOF and NWNY teams, and DEC

Mike Stanyard, NWNY team, and Debbie Breth, LOF, will review core concepts and commodity specific items in preparation for the Pesticide Applicator exam. This is not a 30-hour course. No DEC recertification credits.

Training Classes are:

When: Fri., March 7 & Tues., March 11, 2014

8:00 am—12:00pm

Registration begins at 7:45 am.

Where: Orleans CCE, 12690 Rt. 31, Albion, NY

**PRE-REGISTRATION is REQUIRED by
February 28, 2014**

Cost is: \$50.00

(Additional cost for manuals and exam)

Call 585-798-4265 ext. 26.

THE CERTIFICATION EXAM

**Will be administered on March 13th, 1:00 pm by
the DEC to Qualified Applicants.**

**Fee for the exam is \$100, bring a check payable to
NYSDEC the day of the exam.**

You must register with DEC to take the exam.

**To register for the exam or if you have questions
regarding the Certification Process, please contact
Mike Searles, Avon DEC office @585-226-5424.**

All participants will need to have the most recent Core Manual (3rd Edition) and Category Manuals.

All participants must have experience working on their own farm, or through employment on another farm.

Please bring a notarized letter signed by yourself or your supervisor attesting to your experience. Participants must register directly with DEC to take the Exam and have any questions on exam eligibility answered by DEC representatives. **This training does not qualify for the 30-hour pre-test training.**

CCE-Orleans Pesticide Certification Training Registration.

ALL RESERVATIONS MUST BE IN BY FEBRUARY 28, 2014 TO INSURE MANUALS ARE ORDERED IN TIME

Name: _____ **Farm Name:** _____

Address: _____

City: _____ **State:** _____ **Zip:** _____

Phone: _____ **Email:** _____

Registering # of people _____ **@ \$50 ea. =** _____

of Core Manuals _____ **@ \$44 ea.=** _____

of Category 21 manuals (Field & Forage) _____ **@ \$40 ea.=** _____

of Category 22 manuals (Fruit) _____ **@ \$40 ea.=** _____

of Category 23 manuals (Vegetable) _____ **@ \$40 ea.=** _____

Please make checks payable to: CCE, and send to: Attn: Kim Hazel, 12690 Rt. 31, Albion, NY 14411

**Lake Ontario Fruit Program
Cornell Cooperative Extension
12690 NYS Rt. 31
Albion, NY 14411**

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- Mark These Dates on Your Calendar

Mark These Dates on Your Calendar Now:

Feb 20	Winter Pruning Tour in Wayne Co. Details inside!
Feb 22–23	IFTA Cherry Short Course. More info: www.ifruittree.org
Feb 23-26	International Fruit Tree Association Annual Meeting, Kelowna, British Columbia. More info: www.ifruittree.org
Feb 27- Mar 1	IFTA Post-Conference Tour – northern Washington Orchards
Feb 27 - 28	GAP Training: Bath, Steuben Co., NY (details and registration inside)
March 6-7	GAP Training: Geneva, NY (details and registration inside)
March 7, 11	Pesticide core training to prep for DEC exam (details inside)
Mar 25	Horticultural Symposium for Fruit Growers in Geneva – details Issue 2
April 8	DEC Special Permit Training, CCE Wayne Co., Newark – details in next issue
April 9	DEC Special Permit Training, CCE Orleans Co., Knowlesville