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Tree Fruit News

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Rainfall (inches)			Degree Day Accumulations (through 4/16/15)		
Weather Station	May	June	Location	Base 43F	Base 50F
Chazy	2.72	7.44	Chazy	1300	791
Peru	1.69	8.31	Peru	1327	806
Crown Point	0.36	0.08	Crown Point	1307	808
Clifton Park	2.32	6.50	Clifton Park	1556	1012
Hudson	1.77	6.85	Hudson	1626	1073
Highland HVRL	2.55	7.31	Highland HVRL	1648	1081
Marlboro	2.36	5.01	Marlboro	1589	1023

Recap of the LOF Summer Orchard Tour 2015

A potpourri of the latest in WNY fruit production

By Anna Wallis, Cornell ENYCHP Tree Fruit & Grape Specialist

The Lake Ontario Fruit Team's summer orchard tour took place on June 17. The popular event drew a crowd of over 200 growers, extension personnel, and industry representatives. We toured fruit farms in Wayne County and learned about the latest in fruit production there and across the state.

Stop 1. Windmill Farms, Ontario, NY

Hosts: Bob and Dave Coene

Deer Fencing. The Coene's have installed deer fencing around a majority of their orchard, including several state-of-the-art high density plantings. Dave spoke about the experience of investing and installing the fence. Matt Wells, LOFT economic specialist, has created an [excel spreadsheet to estimate the cost of deer fencing](#). In a well-managed orchard, the payoff can be as rapid as 2-3 years.

Tall Spindle System. The Coene's showed off an immaculately managed high density system of Gala, Fuji, NY1, and Honeycrisp on M.9-337 and Nic29. Choosing the appropriate rootstock for the varieties and planting site, and closely following management recommendations (training, fruit and flower removal, and irrigation) has been critical to the success of this planting so far.

Gala Limb Tying Trial. Mario Miranda Sazo, LOFT specialist, has been working with the Coene's to manage the vigor of the Gala/M.9377 planting at 3x15'. In the 5-year trial, bending branches *below* the horizontal, compared to the natural angle, significantly decreased shoot length and pruning weight, while increasing yield (t/ha), crop load (#/cm³ TCA) and fruit size (g) in the early in the life of the Gala planting. However, this is only a beneficial practice for high vigor varieties—the results did not hold true for Honeycrisp in a similar trial at the NYSAES in Geneva. A set of guidelines for limb bending can be found [here](#).

Crop Load Management. Terence Robinson reviewed precision crop load management, which was extremely successful for Honeycrisp at Windmill Farms.

NY1 Management. It has been a challenge for some growers to manage this low vigor variety in the first years of its availability. This has not been so for the Coene's whose soil is especially vigorous. Terence Robinson recommended a closer planting density on a more vigorous rootstock—trees growing on M.9 or B.9 are turning out to be too low in vigor on most sites. Crop load management is equally as important. Dr. Robinson recommended removing the crop in years one and two. In year three, crop will depend on the tree size: allow a light crop load, ~4-5 fruits per cm² of TCA, on this variety.

Crunch Time Apple Growers. This is the official trademark of New York Apple Growers LLC, the company marketing NY1 and NY2 as Snapdragon and RubyFrost. While the company is not currently increasing their membership, there is pressure from the industry to consider it in the future. It may also still be possible to purchase shares not claimed by current members.

Stop 2. Cherry Lawn Farms, Sodus, NY

Hosts: Ted Furber and Eric Buddinger

Wind Machine. Ted and Eric demonstrated the wind machine used for frost protection on their farm.

Black Stem Borer. A complete update was given about the emerging orchard pest *Xylosandrus germanus*, the ambrosia beetle commonly known as the black stem borer (BSB). This exotic beetle has been present in NY since the 1930s, but was only identified as an orchard pest in the past 5 years by Debbie Breth, LOFT specialist. There are still many questions about the pest, including where it is found and why it is attacking apple trees. Ongoing research efforts led by Art Agnello, Debbie Breth, and John Vandenberg (USDA) are examining the biology of the insect, its distribution across the state, factors contributing to orchard infestations and tree susceptibility, trapping systems, and control measures, as well as the link between this beetle and diseases (including fire blight). More information about the distribution in ENY can be found in [Peter Jentsch's blog post this week](#).

CA Storage Facility. Ted and Todd Furber showed their new CA storage facility, just down the road from the main farm.

Recap of the LOF Summer Orchard Tour 2015 continued from previous page

Stop 3. VanAcker Farms, Williamson, NY. Hosts: Kathy Orbaker and Dan VanAcker

Rootstock Trial. At this site we observed a 6-yr-old rootstock trial for Honeycrisp. Similar plantings also exist in the Champlain Valley and the Hudson Valley. It may be possible to make arrangements to visit these plantings. Please let Anna and Dan know if you are interested.

New rootstock Releases. Genaro Fazio and Terence Robinson discussed characteristics of the most recent releases and forthcoming selections from the program. More descriptive information is available for [the 2013 Geneva rootstock releases](#).

G.4001	Suitable for Honeycrisp Highest cumulative yield, ~50 ±5 kg/tree Excellent biennial bearing index, ~0.4 ±0.1 (0=annual, 1=biennial) No significant difference in fruit size Wide branch angles, slightly drooping limbs
G.890	Suitable for Honeycrisp High cumulative yield, ~48 ±5 kg/tree Better than average biennial bearing index, ~0.5 ±0.1 (0=annual, 1=biennial) No significant difference in fruit size Slightly larger tree; quickly reaches top wire and fills canopy space in the first 3 years Recommended spacing is 4ft
G.3902	Suitable for Honeycrisp Average cumulative yield, ~34 ±5 kg/tree Excellent biennial bearing index, ~2.5 ±1.5 (0=annual, 1 biennial) No significant difference in fruit size Also a taller tree, suitable for weaker growing cultivars
G. (4)814	Suitable for Gala, to be released this year Average cumulative yield for Honeycrisp, ~33 ±5 kg/tree Average biennial bearing index, ~0.45 ±1.5 (0=annual, 1 biennial) No significant difference in fruit size

Figure. From left to right: Honeycrisp on rootstocks G.4001, G. 890, and G.41



Stop 4. DeFisher Fruit Farms and Apple Country Spirits, Marion, NY

Hosts: Bill and Dave DeFisher

Top-Worked Cider Variety Planting. Bill and Dave showed us several plantings of varieties that had been top-worked to a hard cider varieties. Top working is an especially attractive solution in an orchard in which the existing planting density and system are acceptable, but the varieties have fallen out of favor with the market. [Dave Rosenberger's article](#) discusses the benefits and limitations of top-working. Methods for top-working are [described in a NYFO article](#) by Steve Hoying, Allison DeMarree, and Mario Miranda Sazo. Ian Merwin, Professor Emeritus at Cornell and owner of Black Diamond Farm in Trumansburg, NY, spoke about the hard cider trend across the country and how NY fits in. In general, the demand for high quality cider fruit is high and demand extremely low. It is an exciting time for cider in NY because it is gaining popularity with the public, yet there are no 'boundaries' for fermentation style or flavor, such as in England.

Premier Apple Co-Op and Hard Cider Meetings

*Some Observations on the 2015 Premier Apple Cooperative Forum and
this week's Hard Cider Producer & Apple Grower Network Meeting*

By Dan Donahue, Cornell ENYCHP Tree Fruit Specialist

Two important New York State-wide apple industry meetings have been held in the last several weeks that should be of interest to all Eastern New York producers and marketers. The annual Premier Apple Cooperative Forum (PACF) was held in Syracuse on June 22-23rd, and the first-ever Hard Cider Producer & Apple Grower Network Meeting was held in Interlaken on July 9th. Both events were attended by prominent Eastern New York growers/marketers/cider makers. For those you could not be there, here are a few of my observations of the meetings:

- ◇ Growers & Marketers in attendance at the APCF caucused by state, and the results was a predicted 27.5 million bushel crop for New York, 27.0 million for Michigan, and 156 million for the entire U.S. these numbers were slightly lower **than last year's PACF estimates. Just an anecdotal observation on my part, but it seems that few of the New Yorker's in attendance believed the "official" 2014 crop reached 30 million bushels.**
- ◇ Combining comments and observations from the two meetings, it appears the May 30th freeze in Western New York has reduced that regions crop by approximately 30%, and will result is some quality troubles such as frost ring and related issues. Of course, 30% is highly speculative at this point, but does demonstrate the seriousness of the issue.
- ◇ A statewide Cornell Cooperative Extension team, led by Mario Miranda-Sazo and Matt Wells, and including Anna Wallis, Dan Donahue, and Jesse Strzok, are working on a two-pronged research project to use both survey and quantitative methods to develop a more accurate system of pre-harvest crop estimation. **Stay tuned...**
- ◇ The export market plays a crucial role for Washington State. Mexico takes 60% of their golden delicious crop, and Taiwan 80% of the Fuji. The Russian import ban, the west coast port slowdown earlier in the marketing season, and **Mexico's anti-dumping petition** have complicated the export picture.
- ◇ Washington organic apple production stands at 9.6 million cartons, expected to reach 15 million within three years. Even more interesting, there is a belief among some that low chemical inputs would be a strong selling point **with "millennials". I'm sure they realize that Washington's dry climate gives them an advantage over the East in this regard.** Do they really want to open that can of worms?
- ◇ **There will be some of last year's Washington crop being marketed alongside the new crop.** A result of the port slowdown, large 2014 crop, and the current crop running some 10 days earlier than normal.
- ◇ The buzz in the hard cider industry continues to grow. Ninety + growers, cider makers, industry support professionals, and CCE staff attend the Hard Cider Networking meeting in Interlaken. Attendees arrived from all regions of the state.
- ◇ Boston Beer Company (Angry Orchard Cider) has purchased a 60 acre orchard in northern Orange County, and has **started building a 10,000 square foot facility to house a visitor's center/tasting room, and a small, research-oriented hard cider production plant.** Local farm cideries will have access to **"guest taps" in the tasting room.** The facility is slated to open sometime this October. The company is planning on planting premium cider varieties on site, and is looking into ways to encourage New York State growers to plant apple varieties specifically for use in hard cider. The company is very interested in switching from domestic and European AJC to locally sourced apples, a very welcome development for Eastern New York growers.
- ◇ The dilemma most cideries are currently facing is the minimal availability of traditional, high acid, high tannin cider varieties. Many growers would prefer to develop this new market for the varieties they already grow. There is a place for a few of our current fresh and processing varieties, but pricing in this portion of the market is strongly defined by apple juice concentrate. Farm cideries, and high-quality volume producers like Angry Orchard, are really looking for sources of the premium cider apples. The bottom line is that the financial (i.e. fresh fruit pricing, not juice/processing), horticultural, and juice quality characteristics under New York growing conditions will all need to line up favorably in order to convince New York growers to risk planting premium cider varieties.

Black Stem Borer Infestation in Columbia County

Second Black Stem Borer Infestation in the Hudson Valley. Adults found throughout Eastern New York

By Peter Jentsch, Entomologist, HVRL, Highland, NY

The Black Stem Borer (*Xylosandrus germanus*) (BSB) has been found infesting 3-5 year old slender spindle trees (variety Zestar) in a second Hudson Valley site, this time in Columbia County (observations by Dan Donahue, CCE ENY Horticulture Team – Tree Fruit Specialist). Tree decline with yellowing leaves, discolored bark, 1mm entry holes



and toothpick frass provide indicators of BSB infestation that growers and scouts should be looking for this week.

Infected trees should be removed and burned. Treatments directed to the trees post infection have not been shown to kill the developing larva, however management measures will reduce subsequent infestation in remaining trees. Presently there are no recommendations for management other than the use of labeled insecticides, such as Lambda-cyhalothrin for tree borer species. The tree nursery industries have relied on a two-week scheduled pyrethroid program for control.

Troubling in this particular find is infestation of the beetle 3" below the graft union and 5' above the soil line in lower scaffold limbs. Unlike Dogwood Borer management in which applications are made above the graft union and below the scaffold limbs, treatment of BSB will require graft union drench and canopy applications to limit the adult infestation during emergence.

Thus far, the adult BSB has been found throughout ENY. Two orchards in which trees were dying and or in decline from damage caused by this insect were found this spring, one in each of Ulster and Columbia Counties.

Debbie Breth and Art Agnello have first brought this insect to our attention in a recent [scaffolds article on black stem borer](#). As they have been monitoring populations over the past two years they have found increasing WNY orchards with BSB infestation. Results have shown tree decline and loss of a significant numbers of trees in locations where standing water and conversely, lack of water in non-irrigated blocks, contribute to tree stress and BSB infestation.

Induced tree stress, especially from wet soils, causes trees to undergo anaerobic respiration. This process produces ethanol, highly attractive to the family of ambrosia beetle to which BSB belong. Tree stress reduces tree defense, increasing beetle survival and reproductive success. Once the female beetle bores through bark cambium into the wood, she creates a gallery, brings in fungal spores that grow and plug the vascular tissue of tree, causing decline. The adult lays her eggs, larva hatch and feed on fungus until maturity. The female will then plug the hole with her body and die there.



continued on next page

Black Stem Borer Infestation, continued from previous page

[A link to a powerpoint of the history, biology and WNY perspectives of infestations with excellent imagery can be found here.](#)

Anna Wallis and Dan Donahue, ENYCHP Tree Fruit Specialists, have found BSB in all of the nine northern commercial orchard trap sites, and seven of the ten southern trap sites. All of the captures have been confirmed as BSB. Traps captures indicate adults are present along the wooded edge / orchard borders as well as within the orchard. However, infested apple trees are present in only one of the nineteen trapping sites, and traps at that site were placed immediately after the discovery of the infestation. The second infestation in the Hudson Valley was reported by a grower to Extension has a concern over declining/chlorotic trees. Close inspection in the field and at the Hudson Valley Lab confirmed the presence of BSB. Findings so far indicate that simple presence of the insect does not warrant control measures at this time. However, it does signal the need for monitoring orchard signs of tree stress, and upon a find, requiring increased level of detailed observations. Again, tree decline with yellowing leaves, discolored bark, 1mm entry holes and toothpick frass provide indicators for management.

Black Stem Borer Trap Counts

Wood Line/ Orchard Edge						Within Commer- cial Orchard					
Location	26-May	1-June	8-June	15-June	22-June	Location	26-May	1-June	8-June	15-June	22-June
Schuyler Falls	22	8	1	1	1	Schuyler Falls	0	1	0	0	0
Clifton Park	3	4	0	0	2	Clifton Park	0	0	0	0	0
Peru	0	0	0	0	0	Peru	4	0	0	0	0
Chazy	Present	0	x	x	1	Chazy	Present	0	0	0	1
Granville	0	1	x	1	0	Granville	0	1	x	0	0
Saratoga	1	6	1	10	2	Saratoga	6	0	0	0	0
Peru	0	2	0	0	2	Peru	7	0	0	0	0
Schuylerville	x	1	x	0	0	Schuylerville	0	0	x	3	0
Valcour	0	2	1	4	0	Valcour	10	0	0	0	0
Claverack	x	x	0	0	1	Claverack	x	0	0	0	0
Germantown	x	0	0	0	0	Germantown	x	0	0	0	0
Tivoli	x	0	0	0	0	Tivoli	x	0	0	0	0
Highland	x	1	1	1	1	Highland	x	0	0	0	1
Milton	x	1	0	0	0	Milton	x	1	0	0	0
Marlboro	x	1	0	0	0	Marlboro	x	0	0	0	0
Highland—Lab	x	0	0	0	0	Highland—Lab	x	0	0	0	0
Walden	x	0	2	0	1	Walden	x	0	3	1	0
Fishkill	x	1	0	0	0	Fishkill	x	0	2	0	0
Salt Point	x	x	x	x	1	Salt Point	x	x	x	x	0

Food safety for PYO Operations

Erik-John Schellenberg, Cornell ENYCHP GAPS Post-Harvest Resource Educator

Training staff and laborers to understand and implement food safety procedures can be a difficult task in and of itself, but what about PYO operations? Here are some things to consider when assessing the risks associated with PYO and some suggestions for how to mitigate them.

Many PYO customers like to bring their dogs with them into the strawberry patch or orchard. The risk of pets (dogs, cats, ferrets, parrots, raccoon, etc.) comes from feces. A dog in a strawberry patch is very high risk because the fruit is on the ground and dogs generally are not trained to go off into the woods to do their business. A dog in an orchard presents a lower risk, but there remains a risk of stepping on dog feces, then stepping on a ladder, then touching the ladder and then touching fruit. It is a good idea to post signage that prohibits all pets from entering the production areas including field and greenhouse growing areas as well as any packing, storage or washing facilities.

You cannot assume that customers have washed their hands before entering your picking areas. Patrons may travel significant distances in the car to pick and they may have contaminated hands. It is essential to provide handwashing stations at the entrance of the picking area with a sign encouraging everyone to wash their hands. Include wording to explain that your farm cares about food safety and that workers are always required to wash their hands. Customers are asked that they do the same to ensure a high quality product. Having a hand sanitizer available is not enough in and of itself.

When training laborers, you know to keep break and work areas separate. Eating, drinking, and smoking should always be done away from areas where fresh produce is being handled. This can be very difficult to enforce in PYO situations, but it is a good idea to add a statement to your sign that goes something like “Please no eating, drinking, or smoking in the picking areas. Picnic tables are provided next to the barn.”

Traceability is difficult in PYO operations, but you can at least record the date and the blocks that are being picked and a rough guess at the number of customers. Larger operations might want to try a rough count of patrons based on parking or by using a clicker at the register. Knowing the volume of product sold from PYO on a given day and where it was picked from is the most important information so if you can think of any easy ways to estimate and record this information, you should.

You should write up a visitor policy that takes these things and any other concerns you have into account. This can be kept on file with your food safety plan, and your sign by the entrance of the u-pick field can provide customers with the pertinent information at a glance.

Time for Foliar Nutrition Analysis

By Emily Cook, (formerly) CCE Ulster County. Compiled from Agro One Soils Laboratory.

Is your fertility program working? Now (about 60-70 days after petalfall) is the time to take leaf tissue samples. Leaf tissue analysis is the best tool we have to get a picture of macro- and micronutrient levels in trees.

What to Sample: Select at least 60-100 leaves from the middle of this current season terminal shoots. If sampling is done later than 60 to 70 days after petal fall select the first full-sized mature leaf behind the shoot tip. Select 1 or 2 leaves/shoot from several shoots on each of several trees located throughout the area being sampled. A minimum of 50 grams (~ 2 oz) fresh weight is needed. Select shoots that are well exposed to light. Shoots sampled should be of average vigor (length and diameter) from the trees in the planting.

Large trees: sample 5 to 7 feet above ground level.

Small trees (young, trellised or slender spindle plantings): 3 to 6 feet above ground level.

Avoid excessively strong shoots (near pruning cuts) and extremely weak shoots.

Time for Foliar Nutrition Analysis, continued from previous page

Do not include spur leaves.

Do not include leaves that are damaged by: diseases; insects; weather or mechanical injury.

Do not mix leaves from trees of different varieties.

Do not mix leaves from trees of different ages.

Trees sampled should represent the average condition within the orchard unless special samples are being taken to determine cause(s) of a distinct problem.

Collecting and Preparing Samples: Remove leaves by pulling downward so the petiole remains attached to the leaf. Place leaves in a dry paper bag or perforated plastic bag and immediately label the bag for identification. Wash the leaf samples while still fresh, before they wilt. If a large number of samples are involved they may be stored overnight in cold storage, refrigerator or ice chest to keep them from drying out. Use distilled water, available at most drug stores, for washing and rinsing the sample. Change the water if it becomes dirty or after 8 to 10 samples (whichever occurs first). Gently and lightly scrub the leaves together in distilled water. Shake to remove excess water and immediately rinse the sample in clean distilled water. Again shake to remove excess water. Spread out sample on clean paper towels until leaf surfaces are dry. Transfer sample to paper bag, with top open and dry at room temperature until the leaves are brittle.

NOTE: DO NOT let leaves to stand in water –complete the washing and rinsing process in one minute or less. Sample submission forms can be found at <http://dairyone.com/analytical-services/agronomy-services/plant-tissue-testing-services/>

Welcome New Eastern New York Technicians!

Sarah Rohwer (pictured right) is our newly hired ENYCHP technician based at the Hudson Valley Lab in Highland, NY. She will be assisting educators with research and extension programs in fruits and vegetables around the Hudson Valley. Sarah grew up in Ulster County and got her Biology degree at Binghamton University where she assisted in research on the effects of deer in local forests. Sarah is currently monitoring our many traps for Brown Marmorated Stink Bug, Black Stem Borer, and Spotted Wing Drosophila, as well as helping out with Precision Thinning data collection and team newsletter production. Say hello if you see her out on your farm!



Anne Mills (pictured left) is a new addition to the team and will be working as a technician in counties around the Capital Region of New York. She recently graduated from Cornell University with a major in Agricultural Science and a minor in entomology. Over the next season her duties will include insect pest monitoring, assistance with horticultural varieties trials, and helping with the newsletter, along a variety of other tasks. Annie is originally from Schoharie County and is very thankful for the opportunity to work with growers here in eastern New York during the upcoming season!

The Beginning Apple Grower Page

How to select a rootstock

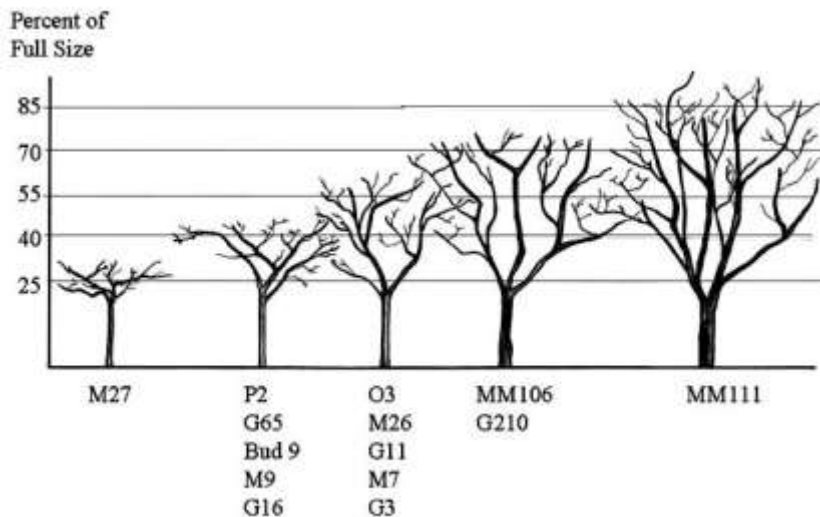
By Anna Wallis, Cornell ENYCHP Tree Fruit & Grape Specialist

Rootstocks are primarily used to provide size control and pest resistance. Much like the breeding programs for apple varieties (scions), rootstocks have been selected for desirable characteristics they can offer to an orchard such as specific insect or disease resistance, strong graft union, growth habit of the tree, yield and fruit size, biennial bearing etc. Several organized breeding efforts since the early 1900s have produced the rootstocks available today:

The key to successful rootstock selection is choosing the appropriate rootstock for planting density and system and matching rootstock to variety.

Rootstocks can be classified as full dwarf, semi-dwarf, and standard, based on the percent of size reduction compared to a standard tree. Each is designed for a certain spacing and planting system.

For instance, standard size trees on ‘seedling rootstock’ or M.111 should be planted on a 40x40’ spacing and are free-standing trees. Fully dwarfing rootstocks (M.27 through G16)) may be planted as close together as 2’ within the row, but are not very strong, so they require additional trellising to support their crop. Between row spacing must be wide enough to accommodate equipment, but not so wide as to unduly reduce bearing volume/acre. Most recently, the Geneva rootstocks [G.16](#), [G.202](#), [G.935](#), and [G.41](#) were released for use in high density plantings (i.e. the tall spindle system). A [chart](#) is available for size comparison to the other series. The Geneva rootstock series also has increased resistance to a number of biotic and abiotic diseases, also described in the link above.



East Malling (EM later M)	1912, R. Wellington, director of the East Malling Research Station in Kent, England, brought together 71 collections of existing apple rootstocks.
Malling-Merton (MM101-115)	1928 began a breeding program primarily motivated by a search for woolly apple aphid resistant rootstock. Fifteen selections were released in 1952.
East Malling Long Ashton (EMLA)	This was primarily an effort to eliminate viruses through ‘meristem culturing’ of EM and MM rootstock selections.
Budagovsky (Bud)	Cold hardy rootstocks were developed by crossing M8 and several cold hardy domestic apples from the Soviet Union
Geneva (G)	Breeding program initiated in 1968 by Dr. James Cummins to develop rootstock better adapted to biotic and abiotic stressors such as soil, climate, Phytophthora, and fire blight.

When planting an especially vigorous variety like Gala or Cortland, especially in a warmer climate zone where trees experience more growth during the season, it is important account for extra growth with larger spacing or a more dwarfing rootstock. The opposite is true for low vigor varieties and has been and especially important in making management decisions for honey crisp and the new releases from the Cornell breeding program (NY 1&2). Thorough research has led to [specific recommendations](#) for planting these trees.

The best way to understand how rootstocks affect trees is to see them in the orchard. Several experimental rootstock plantings exist in different regions of NY State: in Geneva, the Hudson Valley and the Champlain Valley. These plantings include rootstocks that have not yet been released, and feature a variety of planting systems. It may be possible to view these trees. Please contact Dan or Anna if you would like more information.

Sources

http://www.thenewfruitgrower.com/new_page_1.htm

<http://www.ctl.cornell.edu/plants/GENEVA-Apple-Rootstocks-Comparison-Chart.pdf>

<http://www.nyshs.org/pdf/NYFO%20Summer%202011.cmc/Pages%2010-16%20NYFO%20Summer%202011.cmc-4.pdf>

Calendar of Events

July 14th - A Young Grower Gathering 5:30pm at Bad Seed Cidery (The Wilklows). Farm Credit East is buying the pizza and people are welcome to bring a side or dessert if they wish (but it is not required). The address is: 43 Baileys Gap Rd in Highland, 12528. There are signs that lead the way!

July 21st – Blueberry Variety Review Field Day, 3-5pm at **Winney’s Farm, 113 Winney Road, Schuyler-ville, NY 12871**. Byron Winney has one of the largest plantings of blueberries in the state. Look at and taste more than a dozen different varieties and learn about winter hardiness, plant form, fruiting characteristics, plant longevity and pest tolerance first hand. There is no charge for this workshop, but please help us plan and register by calling Marcie at 518-272-4210. If you have questions, give Laura a call at 518-791-5038. The workshop is a rain or shine event.

July 20-21 - Produce Safety Alliance Grower Training Course & Farm Food Safety Plan Writing Workshop, St. **Agustine’s Parish 3035 Main St, Peru, NY 12972**. This two-day training will walk growers through the basics of food safety during day one and will help them write a food safety plan during day two. This training course will result in receiving the certificate which satisfies the training requirement for the FSMA Produce Safety Rule which states “At least one supervisor from the farm must complete food safety training at least equivalent to the standardized curriculum recognized by the FDA.” For more information contact Anna Wallis 443 421-7970 or aew232@cornell.edu Registration is required and will be on a first come first serve basis. Registration costs **\$110 per** participant. Costs include: PSA manual (\$50), AFDO certificate (\$35), coffee & lunch both days. [Click her for full program details](#)

July 25th - **The First Annual Eastern NY Equipment Demonstration Day: This Year’s Focus: New and Innovative Cultivation Tools**, 1:00—5:00 pm (rain or shine) at the Hudson Valley Farm Hub, 1875 Hurley Mountain Road, Hurley, NY 12443. Come and see some of the most innovative cultivation tools being produced by the world’s leading manufacturers in action on a variety of vegetables and field crops! Find out if these tools are right for your operation before you purchase them. Not only will we be looking at these units for vegetables, but also field corn and soybeans- so there is something for everyone. There is no fee or registration for this meeting. [Click here for full program details.](#)

July 27th - Wash Station and Food Safety Workshop, 10:00am -2:00pm at Free Bird Farm, 497 Mckinley Rd. Palatine Bridge, NY 13428. Join the Eastern New York Commercial Vegetable Program and Robert Hadad from the Cornell Vegetable Program on Monday, July 27th to learn about the process of designing, building, and operating a small-scale, post-harvest handling system. This workshop will focus on proper washing and handling practices, as well as food safety. The wash system we will examine is designed to work best for new and small growers. The workshop will start with a discussion and hands-on demonstration about designing and setting up your wash line, tables, and packing shed and will cover efficient standard operating practices and a range of methods for washing produce. Dunking, spraying, and aerating will all be discussed along with using organic sanitizers. The session will finish with an examination of clean-up procedures and post-harvest handling considerations, including re-cooling, packing, and storage. Cost for this program (includes lunch) is \$10.00 for ENYCHP enrolled members and \$15.00 for non-enrolled. [Click here for full program details](#)

August 19th - Limiting Bird Damage in Fruit: State-of-the-Art Pest Management Tactics (A Vertebrate Damage Management Workshop), 4H Training Center, 556 Middleline Rd, Ballston Spa, NY 12020. This comprehensive class will feature results and speakers from a multi-year, multi-state project that looked at several different fruit crops. Registration details to follow.

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 possible. These recommendations are not a substitute for pesticide labelling. Please read the label before applying any pesticide. This material is based upon work supported by Smith Lever funds from the Cooperative State Research, Education, and Extension. **Diversity and Inclusion are a part of Cornell University’s heritage. We are a recognized employer and educator valuing AA/EEO, Protected Veterans, and Individuals with Disabilities.**