



Creating Opportunities by Grafting and Growing the New Cultivar to More than One-Leader per Tree

Mario Miranda Sazo

Over the last three years, progressive growers in the Lake Ontario fruit region have transitioned from the traditional 3-foot in-row to 2- or 2.5-foot in-row planting spacing – using row middles as narrow as 9 ft to 11.5 ft. There have also even been a few multileader plantings and a few on-farm test rows using 9, 18, 20, and 28 inches in the in-row planting spacing. Most of this current transition to higher planting densities has occurred by using one-leader tree per root. There has also been a **significant amount of learning by grafting trees** and growing the new cultivar on two- or three-leader trees instead of a one-leader tree.

Creating opportunities by grafting. After the grafts start growing, use two or three plastic ties (or pieces of bamboo, fiberglass, or wire stabilizers) to quickly train the new shoots to the most vertical position as possible for a multileader system. The basic idea is to produce a two-dimensional planar tree canopy, comprised of several thousand leaders per acre. Ideally, space the leaders every 18–20 inches in the in-row spacing. Carefully place and twist the new shoot to the plastic twine or tape it (preferred) gently as it grows to prevent breakage from wind. If the orchard is not protected with a deer fence, place a piece of soap on each leader tip and reposition it every 7 to 10 days as the terminal tip grows during the season. A well-supported leader will always grow faster and more vertically than one that is unsupported. Always tape the leader 4 to 6 inches below the wire and use a tree clip as the leader passes each successive wire.

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Don't leave too many nurse limbs, because excessive shoot growth will out-compete and weaken the leaders. A nurse limb is one of the main scaffolds temporarily left to reduce the shock and help feed the grafts in the year of grafting. Leave only one or two nurse limbs and prune off the rest. Make sure the new leaders will get full sun exposure during the summer, and if possible, leave only nursing foliage in the opposite side of the row. Maximize the growth of the two or three leaders and remove anything that out-competes each leader. Always leave a longer stub when summer pruning and, if needed, contain any excessive vegetative regrowth with directed Apogee sprays.

Continue supporting the terminal leader as many times as needed during the summer. Summer-prune to influence growth to where it is needed. Make sure the canopy is calm so flower induction and return bloom is secured for the following year. Lastly, because the existing orchard grafted over had a less than ideal support and training system, if any, it will need to be re-engineered by installing a more robust trellis with taller (12-foot or higher posts) in-line posts and more horizontal wires spaced not more than 25 inches apart (use at least five to six wires). Maximize future multileader fruit yields by making sure the two-dimensional canopy is tall enough to get the full benefits of the wider spacing between rows of the old planting.



Making the leaders

If, after grafting in the orchard the first year, you only produced several whips and did not select and train two or three leaders for a multileader system, you can still select them during winter pruning. Later, you can spray Maxcel on the two or three leaders you left per root to stimulate their branching in the orchard at 10 to 14 days after bud-break. Use 500 ppm or 3.2 ounces/gallon of formulated product. Maxcel can be applied with a backpack sprayer using a single nozzle or with a spray tower (direct nozzles to the lower part of the canopy).

Ideally, the closer to the ground you top-work the trees, the better for the multileader system. However, many times the new training of leaders starts approximately at 24 to 28 inches above the ground (based on the lowest positioning of a limb nurse) and the right vertical spacing between

leaders (18 to 20 inches) is seldom achieved until around 3 to 4.5-foot height. I call this the “inverted triangle zone”, which makes canopy management and pruning a bit more challenging in the tight spacing between leaders in this zone.

A better approach to correctly grow well-spaced leaders, more evenly, vertical, and at a lower height, is to graft old trees **below the line of nursing limbs**, as has been done by Eric and Robert Brown III of Orchard Dale Fruit Company, LLC, in Waterport, NY. This grafting technique has also been successful in old Washington apple orchards and is known as a “Notch” or “Beaver” graft (Tom Auvil, WA, personal communication). The Browns made a deep and angled fresh-cut on one side of the trunk, which left a smooth, fresh cambial surface. Old trees were grafted with three sticks inserted on the outer part of the trunk at 6 to 8 inches above the ground in May (Figure 1, below).



Figure 1. Old tree top-worked with three sticks to produce a 3-leader tree. Notice that the grafting occurred below the line of nursing limbs. Side shoots for each leader were pinched out later and left with a stub for limb renewal. The old trunk section will be carefully removed this 2018 dormant pruning season.

The new leaders grew from 2 to 4 inches per week, more slowly at first, then more rapidly. A few new shoots were also formed along the existing stock. These were removed as they appeared through the growing season. Side shoots that developed on the three leaders were pinched out by always leaving a long stub (to secure limb renewal) and leader growth was maximized. All leaders were trained with plastic twine and additional wires. Tall in-line posts were installed to secure a robust trellis for future multileader fruit production. The old trunk section will be carefully removed this dormant pruning season.

In other apple-producing regions with less severe and more predictable weather conditions for early top-working (i.e. Washington or Chile), some growers have completely eliminated the need for nursing limbs by grafting old trees with several sticks (40% to 50% more sticks to produce a three-leader or a four-leader tree) early in the spring. This method has also proved successful, as several of the shoots that grew from the sticks helped to absorb the excess vigor. Then, the best-positioned 3 or 4 shoots were successively selected (and the rest eliminated) and these became the leaders of the future multileader system.

Getting the most from weather forecasts

Tess Grasswitz

Many weather sites on the web or on phone apps simply display the output from computer models without any input from meteorologists trained to interpret the model results. As a result, they tend to give a rather 'generalized' view of the regional weather. Different models may also differ in the time intervals at which they are updated.

If you are basing critical management decisions on the weather forecast, you might consider subscribing to a premium (site-specific) weather service. These services employ meteorologists to interpret forecasting models in relation to your particular location, allowing them to provide timely alerts tailored to your specific needs.

The availability of such services is likely to increase in the future, but existing providers include AccuWeather Enterprise Solutions (who provide multiple options, including 'Skyguard' warnings (amongst others) (see <https://enterprisesolutions.accuweather.com/product-index>), Weathertrends360: <https://www.weathertrends360.com/> (who have an agricultural plan for \$399 per year that includes phone access to a meteorologist) and <http://www.weatherguidance.com/Forecasts.html> (who provide custom weather services at various levels; their website also offers access to a free trial).

For enhanced weather information from free sources, try <https://spotwx.com/> (a website that allows you to enter your location and select a range of different forecasts at different spatial resolutions and timescales (18 hr to 10 days), the NOAA website (see <https://www.weather.gov/forecastmaps>), the NEWA site (<http://newa.cornell.edu/>) and <https://www.agweb.com/weather/> (which includes

multiple weather resources, including soil temperature maps, the USDA drought monitor, freeze outlook, etc.).

To get the most out of current short-range forecasting tools, Canadian meteorologist Jerry Shields (of the Ontario Ministry of Natural Resources), offered the following tips in a recent presentation:

(i) 7-10 day forecasts: (E.g. those provided by Weather Underground (<https://www.wunderground.com>). These are best used for 'situational awareness': keep following the weather events predicted for 7-10 days ahead, but don't use them for making critical decisions.

(ii) 4-7 day forecasts: those that provide the best information involve some degree of human interpretation of model outputs (e.g. forecasts provided by local media meteorologists).

(iii) 18-24 hour forecasts: Look for patterns as the models update: as a general guide, predicted events that fluctuate in the forecasts (e.g. in duration, intensity, or timing) may not materialize, while 'spread out' events (e.g. rain events predicted to last several hours) are more likely to occur.

In other weather-related news, new features have recently been added to the daily and hourly summaries provided by NEWA: See <http://blogs.cornell.edu/yourenewa/2018/03/02/hourly-daily-summaries-new-features/> for details. Remember, too, that the NEWA pest and disease forecasts need biofix information from your orchards: make a note of the date(s) when they occur and enter them into the model each time you use the corresponding prediction tool on the website.

Pest Forecast Model	Biofix	2018 Biofix date
Apple Scab	50% McIntosh green tip	
Fire Blight	First blossom open	
Sooty Blotch & Flyspeck	90% petal fall	
Codling Moth	First sustained trap catch	
Oriental Fruit Moth	First sustained trap catch	
Obliquebanded Leafroller	First sustained trap catch	
Plum Curculio	90% petal fall	

Respirator Fit Testing and the WPS

Melissa Horsman

Respirator wearers need to be medically evaluated before they can undergo a fit-test. This is slightly different from a general physical in that if a physical exam is performed instead of completing the OSHA respirator medical evaluation questionnaire (1910.134 Appendix C), then the exam must capture all the same information.

The physician or licensed healthcare provider must have knowledge of the working environment, the hazards that the worker may encounter, and an understanding of the physiological burden that will be placed on the worker by the respirator and any additional PPE. The worker must also receive documentation from their provider that they have been medically evaluated for, and approved to use, the specific type of respirator they will be wearing (*see final paragraph).

There are websites that provide medical evaluations that meet the OSHA and EPA standards; both 3M and Honeywell offer this service. Most websites charge \$25 per evaluation. Essentially the websites have workers complete the OSHA questionnaire and it is then reviewed. If any 'red flags' are raised, the worker is referred for additional medical follow-up prior to the final determination of medical clearance being made. **All medical evaluation costs (fees for online services, co-pays, etc.) must be paid for by the employer and the exam must occur during paid worktime.**

There are qualitative fit-testing kits available through Gemplers, Northern Safety, Grainger, etc. The most common kits are manufactured by 3M and Allegro, and they start at around \$150 per kit. The kits contain either bitter or sweet testing and sensitivity solutions, as well as hoods and nebulizers. Irritant smoke or banana oil kits are advised against, as there are additional safety concerns for each of those testing methods. Approved fit-testing procedures can be found in OSHA 1910.134 Appendix A.

Qualitative fit testing can only be used with filtering face piece or half-face respirators. If workers are using full-face respirators they must be tested quantitatively, the most common method of which is performed by a Portacount. Portacount units cost around \$10,000, although they are available to rent from places such as Dival Safety. However, unless a farm has someone with previous experience using a Portacount, performing this type of fit-testing in-house is NOT recommended, as the equipment and troubleshooting can be quite tricky.

There are some other requirements for fit-testing providers that can be a hurdle for growers wanting to perform the tests in-house. Growers who are interested in performing the testing themselves should contact Melissa.Horsman@bassett.org to review the relevant regulations.

***Documentation of the fit-testing must include the following:**

- Name/id of the employee being fit-tested
- Type of fit test performed
- Make, model, style, and size of respirator tested

- Date of test
- Pass/fail for qualitative fit-tests
- Printed report or card for quantitative fit-tests

Fit-testing records must be kept by the employer until the next fit-test is performed.

Selected NYCAMH Respirator Fit Clinics for 2018

DEC Region 8, Finger Lakes: Counties served: Chemung, Genesee, Livingston, Monroe, Ontario, Orleans, Schuyler, Seneca, Steuben, Wayne, and Yates

Dates: Tuesday-Thursday, May 15th-17th, 2018

Location: CCE Ontario County, 480 North Main St, Canandaigua, NY 14424

Accepting appointments: Monday, April 16th-Friday, May 11th, 2018

DEC Region 9, Western New York

Counties served: Allegany, Cattaraugus, Chautauqua, Erie, Niagara, and Wyoming

Dates: August, 2018 **Location:** TBD

Accepting appointments: Monday, July 23rd-Friday, August 17th, 2018

To schedule an appointment please call the NYCAMH office during the date range listed above for the clinic

you would like to attend, and ask to speak with the farm respirator clinic scheduler. Call either 607-547-6023, or toll-free at 800-343-7527, Monday-Friday, 8:00 AM-4:30 PM. When calling to schedule an appointment please have the following information available: (i) Total number of people attending from your farm (ii) Name of each person being scheduled (iii) Language spoken by each attendee (iv) Make and model of each respirator to be tested. If a worker wears more than one style of respirator, including filtering face-pieces, they must be fit-tested for each one. **Please keep in mind that a clean-shaven face is a necessity for masks to be effective and for fit-testing to be possible.**

NOTE: A list of alternative fit-testing providers will be posted shortly on the LOF Website:

[\(https://lof.cce.cornell.edu/\)](https://lof.cce.cornell.edu/)

Pest Management Considerations at Dormant/Delayed Dormant

Tess Grasswitz

As winter gradually draws to a close, it is time to consider some early pest management options to get a jump start on the season.

1. DORMANT/DELAYED DORMANT SPRAY

APPLICATIONS

DORMANT OILS

Dormant or delayed dormant oil applications can help suppress certain pests that overwinter on their host trees, including various **mites** and **scales** (e.g. **San Jose scale**, **white peach/prunicola scale**), **pear psylla**, and the egg stages of **rosy** and **green apple aphids**. For the most part, oils act by blocking the pest's spiracles (breathing pores), or by penetrating and disrupting the outer cuticle or surface cells. In the case of pear psylla, they act mainly by deterring egg-laying by adult females (see below).

While dormant oils have the benefit of being relatively safe to beneficial insects, humans, and other non-target organisms, there are a few things to keep in mind regarding their use:

(i) Coverage

Since many of the target pest stages may be partially protected within cracks and crevices in the bark, good coverage ('to the point of drip') is essential. The generally recommended rate of oil for most dormant applications is 2% (2 gallons per 100 gallons of water), but if multiple applications are planned, the rate is generally dropped the closer an application is made to bloom to reduce the risk of phytotoxicity (see below). As always, read and follow the label directions for the specific product(s) being applied. Keep in mind, too, that while commercial formulations typically contain an emulsifier to

facilitate mixing with water, it may still be necessary to agitate the oil-water mixture while spraying: again, follow the label directions.

(ii) Phytotoxicity

To avoid potential problems with phytotoxicity, dormant oils should only be applied when temperatures are predicted to stay above freezing for at least 24 hours; ideally, they should not be applied when temperatures are expected to drop below freezing within 48 hours before or after application. Keep in mind, too, that stressed plants are more susceptible to phytotoxicity. Extreme temperatures, sudden changes in temperature after spraying, prolonged winds, or pre-existing disease or insect problems may all increase the risk of phytotoxicity. In addition, sulfur and Captan are not compatible with the use of oil: neither should be applied within several days of an oil application (suggested intervals may vary from 10-14 days: consult product labels).

Dormant oil and pear psylla management

Overwintering pear psylla adults become active when the temperature rises above 40 °F. Depending on weather conditions, females may begin laying eggs from mid/late March onwards, continuing through the white bud stage; peak egg production typically occurs from green tip to green cluster.

Dormant oil applications contribute to psylla management primarily by deterring females from laying eggs on the oil-coated plant tissue. Such applications can delay egg-laying until green tissue appears on developing buds, helping to synchronize egg hatch. 'Concentrating' the population in this way makes later sprays more effective. A second application at the delayed dormant stage should contain oil plus an adulticide such as one of the synthetic pyrethroids. Kaolin clay (Surround®) also deters oviposition and may be applied at a rate of 50lb/acre in the delayed dormant stages.

The early season oil application should be made when weather and soil conditions permit. Peter Jentsch, of Cornell's Hudson Valley Lab, has suggested applying a 3% solution of oil (3 gallons/100 gallons of water) in the dormant stage, or two applications of a 2% spray to green cluster. These rates should also reduce overwintering populations of San Jose scale, European red mite, pear leaf blister mite, and Comstock mealybug. Alternatively, if beginning at swollen bud, one spray at 2%, or two sprays at 1% up

to white bud should be sufficient. As with all psylla sprays, good coverage is essential.

Insect growth regulators such as Esteem® can be used pre-bloom to kill the egg stage of psylla and reduce the viability of eggs laid by treated adults. Esteem 35 WP may be applied as a single application during the delayed dormant to pink stage of growth at 5 oz/Acre (or two applications from delayed dormant through petal fall at 4 to 5 oz/Acre).

DORMANT SEASON COPPER APPLICATIONS

Dormant copper sprays can be applied to peaches (just prior to bud swell) for **peach leaf curl** and **bacterial spot** in susceptible cultivars. Materials registered in New York for the latter two diseases include Kocide 3000 and C-O-C-S WDG (amongst others). Keep in mind any incompatible products listed on the labels, and be aware of the risk of phytotoxicity in relation to pH. Read and follow all label directions.

DORMANT/DELAYED DORMANT LIME SULFUR (CALCIUM POLYSULFIDE) APPLICATION FOR SMALL FRUIT

Used on brambles to help manage anthracnose, spur blight, and cane blight, and on blueberries for *Phomopsis* canker and twig blight. Keep in mind potential phytotoxicity of sulfur and oil: consult product labels for guidance.

2. LATE WINTER CULTURAL CONTROLS

Apple scab

If it was not done last fall, there is still time to try to reduce scab inoculum levels through sanitation practices such as shredding any remaining leaf litter with a flail mower, or applying urea at rate of 40 lb per 100 gallons of water per acre. Both practices help speed up decomposition. Urea can be applied with an airblast sprayer with the nozzles directed at the ground cover, but is best done before bud break. Applications made later in the spring should be made with a boom sprayer to reduce drift onto green tissue. Keep in mind that if urea is applied, spring nitrogen applications should be reduced accordingly.

Bramble diseases

Removing and burning diseased canes before the emergence of new ones can help reduce the incidence of anthracnose, spur blight, and cane blight/spot.



Blueberry stem gall wasp

The grey, kidney-shaped galls (left) caused by this minute wasp are easy to see at this time of year: prune out, remove and destroy galls to prevent adult emergence later.

Brown rot in stone fruit

If possible, reduce inoculum by removing and destroying any mummified fruit remaining in the trees.

Resource Round-Up

1. 2018 On-Farm Housing Grants available from PathStone Corporation: Apply Now!

This program offers a matching grant of up to \$2000 to repair and upgrade existing farm labor housing. Examples of eligible repairs include, but are not limited to: bathrooms, plumbing, laundry facilities, recreation rooms, upgrading kitchens and appliances, heating, floors, walls, windows, ceilings, doors and other major structural components. Special consideration will be given to projects that positively impact the quality of life for farmworkers during off-work hours.

Farm Owners must agree to provide \$1 for every \$1 provided by PathStone Corporation. **This grant is available in Monroe, Wayne, Ontario, Orleans and Genesee counties.** If interested, or if you have questions, please contact Susan Lerch at 585-546-3700 Ext 3020 for an application. The **application deadline is currently March 15, 2018** and the work will need to be completed by June 7, 2018. Please spread the word: we want to assist as many farms as possible!

2. WPS Training Materials from the Pesticide Educational Resources Collaborative (PERC)

PERC's WPS Compliance Assistance Library (WPS CAL) is a web-based guide to help growers comply with the revised Worker Protection Standard. The material and content has been reviewed by federal regulators, farmworker advocacy organizations, university experts, and state agriculture officials. However, users are cautioned not to rely on any one resource for compliance information. Please refer to the

official "How-to-Comply" Manual and the regulation, then contact your state regulatory agency (NY-DEC) with questions regarding compliance with the WPS.

If you have any questions about the WPS-Compliance Assistance Library, please direct them to PERCSupport@ucdavis.edu. See below for links:

- [WPS Compliance Assistance Library](#)
- WPS - [Does It Apply To You?](#)
- WPS - [Contacts](#) WPS - [Definitions](#)
- WPS - [Site Map](#)

Guides:

[Protections for Workers](#) [Protections for Handlers](#)
[Exceptions and Exemptions](#)
[Posting Warning Signs](#) [Respiratory Protection Guide](#)
[Hazard Communication](#)
[Training Requirements](#) [Decontamination](#)
[Requirements](#) [Personal Protective Equipment](#)
[Application Exclusion Zone \(AEZ\)](#)

Just for You:

- [What are my responsibilities as an agricultural employer?](#)
- [What are my responsibilities as a commercial pesticide handler employer?](#)
- [What are my responsibilities as a trainer of workers?](#)
- [What are my responsibilities as a trainer of handlers?](#)
- [What are my responsibilities as a labor contractor?](#)
- [What are my responsibilities as a crop advisor?](#)

- [What are my responsibilities as a worker?](#)
- [What are my responsibilities as a handler?](#)

3. New EPA-Approved WPS Worker/Handler videos In English/Spanish available now

The Pennsylvania Office of Rural Health at Penn State University has produced the following new training resources: **Safety in the Orchard: Understanding and Applying the Worker Protection Standard EPA Worker PST 00026 and EPA Handler PST 00027.**

WPS Training videos for agricultural workers:

- [English: YouTube](#)
- [Spanish: YouTube](#)

To download, right-click on "link" and save the file.

- [English: Download link](#)
- [Spanish: Download link](#)

WPS Training videos for pesticide handlers:

- [English: YouTube](#)
- [Spanish: YouTube](#)

To download, right-click on "link" and save the file.

- [English: Download link](#)
- [Spanish: Download link](#)

You can find these, and other WPS training materials on the [PERC website](#):
(<http://pesticideresources.org/wps/training/index.html>)

4. On-line Webinar Opportunities for the Farmers' Market Nutrition Programs offered by the Nutrition Program of the NYS Department of Agriculture & Markets

The New York State Department of Agriculture and Markets has announced their second round of on-line training webinars for the Farmers' Market Nutrition Programs (FMNP), the Women, Infants and Children Vegetables and Fruits Checks Program (WIC VF) and the NYS FreshConnect Checks Program (FCC). Farmers new to the FMNP and all farmers participating in the WIC VF program must undergo a formal training offered by the Department. Market Coordinators are also highly encouraged to attend a webinar as this is a

great way to learn more about each program. These free, live, on-line training webinars are available in March and April. You will need a high speed internet connection and a computer or mobile device that meets the software requirements. Pre-registration is required to attend the live webinars. Navigate to the program webinar and click the hyperlink for the date you wish to attend and fill in the requested information. A registration acceptance e-mail will be sent to you within 24 hours.

These webinar opportunities are frequently updated online at www.agriculture.ny.gov Check by selecting 'Agricultural Promotion and Protection' > 'Running a Farmers' Market' > 'Training Webinars'. If you don't see an opportunity that fits your schedule, please check the website again at a later date.

New this year is a **pre-recorded** webinar for the **Farmers' Market Nutrition Program**. This makes training for the FMNP available any day, any time for your convenience. You will receive an e-mail confirmation of the training once it is completed. To start, click [here](#). For questions, please contact Nutrition Unit, NYS Department of Agriculture and Markets: (518) 457-7076 Ext. 1, or see www.agriculture.ny.gov

Additional Webinar Resources for farmers and market coordinators are provided by the Farmers' Market Federation. These webinars address questions regarding farmers' market development, how to participate in the NYS Wireless SNAP EBT Program, and other related topics. Please see: <http://www.nyfarmersmarket.com/webinars/>

5. Apple Crop Insurance Plan: Information Collection Listening Sessions for Growers & Insurance Staff

Agralytica of Alexandria, Virginia is conducting a review of the apple insurance plan on behalf of the USDA's Risk Management Agency (RMA). As part of the review, Agralytica staff will be holding listening sessions with **growers, insurance staff and other interested parties** in several states. In New York, sessions will be held on March 21st in Rochester and

March 23rd in Highland. The aim is to get feedback on how the program is working and how it can be improved. A central focus of the research is experience with, and alternatives to, the Fresh Fruit Quality Option, but Agralytica is also charged with reviewing current production and marketing practices in New York and identifying other issues that growers face with the current apple program. **This is an opportunity for producers, insurance staff and agents to communicate any concerns and possible improvements for consideration in the development of future apple crop insurance policy.** The Rochester listening session will be held from 1:30 to 3.30 pm on Wednesday March 21st at Irondequoit Public Library, 1290 Titus Ave., Rochester, NY 14617. Tel: 585-336-6060. If anyone would like an individual meeting, Agralytica staff will be available at this location. To arrange a time, please contact Tom Earley by cell phone at 703-981-6004 or by e-mail at tearley@agralytica.com Alternatively, anyone who cannot attend can submit comments by e-mail. Please use “Apple policy” as your subject line.

6. Commercial testing for apple viruses

For apple growers interested in having potential propagation material tested for viruses, A & L

Biologicals, a commercial laboratory in Ontario, Canada, is able to test for Apple chlorotic leaf spot virus (ACLSV), Apple stem pitting virus (ASPV), Apple stem grooving virus (ASGV), and Tomato ringspot virus (ToRSV). Fresh leaf material is needed for the tests, so this is a spring activity. The company has all the necessary permits etc., for growers to send material for testing from the US to Canada, but sample collection and submission would be the growers' responsibility. Contact: A & L Biologicals, 2140 Jetstream Rd, London, ON, N5V 3P5 Canada. Tel: 1-(519) 457-2575 www.albiologicals.com

The price will depend on the number of samples submitted and the number of viruses to be screened: the lab will prepare a quote based on those factors. Since there are discounts for volume, it may be worth partnering with another grower or two who may also be interested in getting their material tested, and perhaps getting a combined quote. (If you don't know of other interested growers, but are willing to share your details, Tess will try to put you in touch with other growers. Contact Tess Grasswitz at tg359@cornell.edu or by phone at 585-261-0125).

Mark Your Calendars

Meeting Title	2018 Hispanic Fruit Schools in Wayne and Orleans Counties
Date	Friday, March 16 th (Wayne) Saturday, March 17 th (Orleans)
Time	8:30 am–4 pm – Same program both days
Location	Wayne: Hosted by Our Lady of Guadalupe-Roman Catholic Church, 3799 Union St., Marion, NY 14505 Orleans: Hosted by Orchard Dale Fruit Farm, 1287 Oak Orchard River Rd., Waterport, NY 14571
Cost	\$10 (includes lunch)
Brief description of meeting	There will be an educational morning program covering entomology, horticulture, leadership, and human resource topics. The pm program will facilitate roundtable discussions to gather feedback from Hispanic employees, to conduct employee skill assessments, and more (USDA Latino project).
Registration/ Contact for information	Via CCE LOF website https://lof.cce.cornell.edu/ Mario Miranda Sazo, cell 315-719-1318, mrm67@cornell.edu

Meeting Title	FSMA PSA Grower Training Courses
Date	Friday, March 16 th – Last of the season in Western NY!
Time	All Day
Location	CCE-Wayne County, 1581 NY-88, Newark, NY 14513
Cost	\$70, maximum of 2 people per farm/organization
Brief Description of Meeting	Federal requirement for most fruit and vegetable growers. Those with more than \$500,000 per year food sales averaged over the past 3 years (adjusted for inflation) need to be in compliance as of 1-26-18. Is your farm covered under FSMA? See flow chart here
Registration/Contact for Information	Register online here: https://lof.cce.cornell.edu/event_preregistration.php?event=879 For questions, contact Craig Kahlke at 585-735-5448, or cjk37@cornell.edu

Meeting Title	2018 Pruning Workshop of Apple Orchards in Oswego
Date	Wednesday, March 21 st
Time	1:30–4 pm
Location	Meeting hosted by Steve and Craig Simpelaar, Simpelaar Fruit Farm, 6018 State Route 3, Mexico, NY 13114
Cost	Free
Brief description of meeting	Modern pruning techniques of young and mature high density plantings, how to correct/improve “bushy” canopies. Send your employees!
Registration/Contact for information	Via CCE LOF website https://lof.cce.cornell.edu/ Mario Miranda Sazo, cell 315-719-1318, mrm67@cornell.edu

Meeting Title	Postharvest Fruit School in Washington
Date	March 20 th –22 nd
Time	All day
Location	Wenatchee & Prosser
Cost	\$90-\$220
Brief Description of Meeting	Biennial postharvest school in WA that includes tours of modern packinghouses. Two-day workshop live-streamed between Wenatchee & Prosser, WA + special berry session live-streamed to Lynden, WA.
Registration/Contact for Information	http://treefruit.wsu.edu/postharvest-fruit-school-2018/

For additional information about upcoming events and registrations visit
our website at

<http://lof.cce.cornell.edu>

WORKER PROTECTION STANDARD TRAINING and DEC SPECIAL PERMIT TRAINING

For non-certified applicators and handlers of federally restricted-use pesticides

<p>April 4, 2018: WAYNE COUNTY English 8:30 AM registration; 9:00 AM–12:30 PM Spanish 1:00 PM registration; 1:30 PM–5:00 PM Cornell Cooperative Extension Wayne County 1581 Route 88N, Newark, NY 14513</p>	<p>April 5, 2018: ORLEANS COUNTY English & Spanish 8:00 AM Registration 8:30 AM–12:00 Noon Orleans County Cooperative Extension Fairgrounds, Trolley Building, 12690 Route 31, Albion, NY 14411</p>
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Certified Supervisors are required to attend the first 30 minutes of training. Workers in need of special permits vs general pesticide training will need to be identified.

As last year, **Special Permits (SP) will only be issued for 11 specific pesticide labels and SP trainees will have to pass a test.** This will relieve the certified pesticide applicator from “on-site within voice contact” supervision of non-certified pesticide applicators when they are handling federally-restricted-use pesticides for which they hold a Special Permit. The labels that will be covered include **Lorsban Advanced, Endigo ZC, Warrior II with Zeon Technology, Agri-Mek SC, Besiege, Gramoxone SL 2.0, Leverage 360, Danitol 2.4EC, Mustang Maxx, Asana XL, and Lannate LV.**

New York DEC notes that the **Special Permit process is intended for farm workers with English language skills that are not adequate to pass the DEC private applicators exam.** All others are encouraged to apply for their private applicators license via taking the certification exam.

Workers requiring **general pesticide training/Agricultural Worker Protection Standard Handler training who do not need special permits are welcome to take the class;** they will not be tested and will receive a course participation certificate.

\$20 per DEC Special Permit / General Pesticide Training

Pre-registration required by March 30, 2018. After March 30, a late fee of \$20 will be required for each registrant. REGISTER BY MAIL using the form below or CALL Kim Hazel, 585-798-4265 Ext 26, with all details and pay at the door. Make check payable to: Cornell Cooperative Extension. Mail registration form and payment to: Cornell Cooperative Extension, Attn: Kim Hazel, 12690 NYS Route 31, Albion, NY 14411

WORKER PROTECTION STANDARD TRAINING and DEC SPECIAL PERMIT TRAINING

This training is being offered in 2 locations.

Wayne Co.

Orleans Co.

CHOOSE THE LOCATION you wish to attend ==>

Farm Name: _____

Farm Address: _____

Name of Supervising Pesticide Applicator: _____

Supervisor's DEC Pesticide Applicator ID No.: _____

Name of non-certified applicator(s): \$20 each, choose sessions (i.e., Special Permit as opposed to general pesticide training):

_____	<input type="checkbox"/> English	<input type="checkbox"/> Spanish	<input type="checkbox"/> Special Permit
_____	<input type="checkbox"/> English	<input type="checkbox"/> Spanish	<input type="checkbox"/> Special Permit
_____	<input type="checkbox"/> English	<input type="checkbox"/> Spanish	<input type="checkbox"/> Special Permit
_____	<input type="checkbox"/> English	<input type="checkbox"/> Spanish	<input type="checkbox"/> Special Permit
_____	<input type="checkbox"/> English	<input type="checkbox"/> Spanish	<input type="checkbox"/> Special Permit
_____	<input type="checkbox"/> English	<input type="checkbox"/> Spanish	<input type="checkbox"/> Special Permit

TOTAL AMOUNT DUE: No. applicators/handlers _____ X \$20 = \$ _____

Cornell Cooperative Extension

Lake Ontario Fruit Program

12690 Rt. 31

Albion, NY 14411

Fruit Notes

YOUR TRUSTED SOURCE FOR RESEARCH-BASED KNOWLEDGE

Fruit Specialists



Craig Kahlke | 585-735-5448 | cjk37@cornell.edu

Team Leader, Fruit Quality Management

Areas of Interest: Fruit Quality and factors that affect fruit quality before, during, and after storage,

Crops: Blueberries, Raspberries / Blackberries, Strawberries, Apples, Apricots, Cherries, Nectarines, Peaches, Pears, Plums



Mario Miranda Sazo | 315-719-1318 | mrm67@cornell.edu

Cultural Practices

Crops: Blueberries, Raspberries / Blackberries, Strawberries, Apples, Apricots, Asian Pears, Cherries, Currants,

Gooseberries, Nectarines, Peaches, Pears, Plums



Tessa Grasswitz | 585-261-0125 | tg359@cornell.edu

Integrated Pest Management (IPM)

Areas of Interest: IPM of tree fruit and berry pests, biological control, pollinators, and impact of climate change.

Crops: Blueberries, Raspberries / Blackberries, Strawberries, Apples, Apricots, Asian Pears, Cherries, Currants, Gooseberries, Nectarines, Peaches, Pears, Plum

For more information about our program visit us at lof.cce.cornell.edu