Cornell Cooperative Extension Eatern NY Commercial Horticulture Program Treee Frace Anderson Buggust 2019 Bolume 7, Issue 6

# **Storage Workshop Key Takeaways** *Mike Basedow and Dan Donahue, CCE Eastern NY Commercial Horticulture*

We both attended the storage workshop in Ithaca on August 8th, and thought we would share the main takeaways. We've included some recent recommendations for Honeycrisp, Gala, NY-1, NY-2, Mac, Cortland, and Empire, along with a quick comparison of utilizing dynamic controlled atmosphere (DCA) storage and 1-MCP.

# Honeycrisp

For fruit stored in air, fruit should be stored at 38°F, with or without conditioning for 7 days at 50°F. Conditioning Honeycrisp will help reduce soft scald, but will likely exacerbate bitter pit. The decision to condition or not should be determined by your block history. If a block is very vulnerable to bitter pit, it is likely best to skip conditioning. However, if you rarely get bitter pit and often have issues with soft scald, conditioning would be warranted. Air stored fruit can be treated with 1-MCP, as it will help fruit retain acceptable levels of acidity. 1-MCP may also increase core breakdown, but may decrease the incidence of bitter pit and senescent breakdown.

An increasing number of growers are using Harvista to manage their Honeycrisp harvest. Chris's recent work found that Harvista decreased soft scald, but increased bitter pit incidence on stored fruit. Fruit treated with a combination of Harvista and 1-MCP also had a greater incidence of leather blotch.



For fruit destined for CA storage, CO2 injury can be problematic, and is generally worse further south in the state. CO2 injury can be controlled with diphenylamine (DPA), or by delaying CA storage by up to 4 weeks. In Chris's studies, fruit that were delayed CA storage for up to 4 weeks and treated with 1-MCP had very little loss of fruit quality, but greasiness and core browning did increase to a small extent.

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Chris's overall recommendation for Honeycrisp currently is air storage with 1-MCP to avoid CA related injuries.

#### Gala

A major concern for Gala right now is stem end flesh browning (SEFB). So far we know that:

- Harvista decreases the incidence of SEFB.
- CA in general is very helpful for maintain Gala quality, though differing the values of CO2 concentration in CA storage showed inconsistent effects on SEFB.
- DCA at .5% O2 will help to further delay browning development, but will not completely prevent it. DCA may also prevent core browning.
- 1-MCP in storage appears to not have an effect on SEFB.

Washington State and Ontario studies suggest delayed cooling, paired with early CA storage, may help to reduce some browning disorders. This approach needs more study in New York conditions.

Regardless of storage treatment, being on top of harvest date (erring earlier than later) and planting high-coloring strains like Brookfield that can be picked earlier are two of the best strategies for successful long-term storage of Gala.

#### NY-1

For successful long-term CA storage of NY-1, the current recommendation is to focus on your harvest management. NY-1 should be picked as early as possible to avoid fruit with high internal ethylene, though this may require compromising between ethylene and fruit color. Fruit should be stored at 38°F like Honeycrisp to reduce stem end flesh browning. Chris does not currently recommend 1-MCP for NY-1, as it aggravated flesh browning in his CA storage trial.

### NY-2

Similar to NY-1, Chris suggests early harvest timing is key to maintaining good quality for long term CA storage. NY-2 should also be stored at 38°F. 1-MCP is recommended for NY-2. In Chris's studies, 1-MCP helped retain firmness, and reduced superficial scald and stem end flesh browning. It did, however, lead to some additional general flesh browning.

Some of Chris's future work will determine how NY-1 and NY-2 respond to DCA storage and harvest management PGR's.

#### McIntosh

1-MCP helps keep macs firm on the shelf after long-term storage, and will also help reduce superficial scald and senescent breakdown. It may, however, slightly increase CO<sub>2</sub> injury. DCA storage can be used in macs to reduce CO<sub>2</sub> injury.

**Cortland** are hard to control against superficial scald regardless of postharvest treatments, but both DCA and 1-MCP help to some extent. DCA plus 1-MCP returned the best fruit in Chris's trials, but the added expense might not make this approach feasible commercially. DCA helps maintain fruit quality regardless of 1-MCP treatment, but a tasting panel found that Cortland stored with 1-MCP maintained a better level of 'snap' after storage.

1-MCP treated **Empire** tend to retain their firmness better, but these may pick up more  $CO_2$  injury and flesh browning. For Empire flesh browning, the best way to keep levels down is to harvest at proper maturity. Later picks will pick up more browning, regardless of 1-MCP or DCA practices.

### How does DCA stack up to 1-MCP?

Dynamic controlled atmosphere (DCA) is a storage method that actively measures fruit response to storage oxygen levels to determine the optimum oxygen level for that storage room. By keeping the oxygen level just above the "low oxygen limit", respiration rate can be reduced to a minimum. By slowing respiration further, fruit quality out of DCA storage is higher, with less superficial scald. Below are some of the benefits (+) and negatives (-) of using DCA and 1-MCP.

#### DCA:

- + Chemical Free
- + Easily installed in existing high quality storages
- + Can inhibit superficial scald and some internal flesh browning disorders
- Need to have that high quality facility
- Higher upfront investment costs
- Need to select uniform fruit to serve as your samples
- Requires training of storage operator to interpret fruit responses to  $\mathsf{O}_2$  levels
- Greater potential for quality loss after storage, unless combined with 1-MCP

#### 1-MCP:

- + Applied as a gas at low concentrations for 24 hours or less
- + High quality rooms not required
- + No investment on computerized CA technology
- + No risk of low O<sub>2</sub> injury
- + Flexible timing of 1-MCP application
- + Can maintain fruit quality in air storage
- + Can inhibit superficial scald development
- + Maintains quality parameters, like firmness and acidity, during the marketing chain
- Not for organic use
- Ongoing cost every time you apply
- Can increase some physiological disorders, like CO<sub>2</sub> injury

# Are You Ready for the Public to Come to Your Farm? Take Steps to Reduce Your Liability as an Agritourism Business Elizabeth Higgins, CCE Eastern NY Commercial Horticulture

It's summer and many farms in Eastern NY are starting to welcome the public onto their farm. Opening up the farm to the public is a concern for many farms because, despite your best efforts to keep everyone safe, someone could get hurt and sue. In 2017 New York State passed the "Safety in Agricultural Tourism Act (N.Y. Gen. Oblig. §§ 18-301 to 18-303) which eliminates the liability of farmers for injuries and deaths to the public who are engaged in agritourism activities on their farm, if they follow specific steps outlined in section § 18-303 of the Act. New York State Department of Ag and Markets has issued guidance on complying with the law, including required language for signage.

These are the key provisions of the Act that that must be followed in order to be covered by the liability protection of the Act:

• Posting a conspicuous Warning to Visitors sign, notifying visitors of the inherent risks relevant to the on-farm activity, the farm operation and site conditions. The farm operator is responsible

NEW YORK Agriculture and Markets APPENDIX A The following language constitutes the text and graphics specified by the Department as the requirements of General Obligations Section 18-303(c) with respect to a farm The following language constitutes the text and graphics specified by the Department as meeting the requirements of General Obligations Section 18-303(c) with respect to a farm operator's obligation to provide written information to constitutionally direct the attention of meeting the requirements of General Obligations Section 18-303(c) with respect to a farm operator's obligation to provide written information to conspicuously direct the attention of visitors to the required Warning to Visitors sign: BEFORE STARTING YOUR ON-FARM ACTIVITY, YOU ARE REQUIRED TO READ THE POSTED visitors to the required Warning to Visitors sign: BEFORE STARTING YOUR ON-FARM ACTIVITY, YOU ARE REQUIRED TO READ THE F WARNING TO VISITORS AND VISITOR RESPONSIBLITIES SIGNS TO LEARN ABOUT: The risks inherent to participating in on-farm activities; and Your responsibilities when participating in the activities on this working farm. THE WARNING TO VISITORS SIGN IS POSTED AT [insert location of sign, modify if more than INE WARNING TO VISITORS SIGN IS POSTED AT [Insert location of sign, modify if more one sign]. This sign identifies the inherent risk(s) of the on-farm activities in which you will be participating - activities that may expose you to the risk of percent injunct depth or demand to the risk of percent injunct depth or demand to the risk of percent injunct depth or demand to one sign]. This sign identities the inherent risk(s) of the on-tarm activities in which you will be participating – activities that may expose you to the risk of personal injury, death or damage to your property. THE VISITOR RESPONSIBILITIES SIGN IS POSTED AT [insert location of sign, modify if more THE VISITOR RESPONSIBILITIES SIGN IS POSTED AT [Insert location of sign, modify if the sign of the sign describes your responsibilities as a visitor on a working farm, which include: obving directional and "off limite" signs following instructions and obving warning to the sign of than one sign]. This sign describes your responsibilities as a visitor on a working farm, which include: obeying directional and "off limits" signs, following instructions and obeying warnings from representatives; complying with posted rules of conduct; and exercising reasonable care concerning disclosed risks property. If you do not understand the information contained in the Warning to Visitors or Visitor Deconceptibilities since or have any questions should their content, please ack a form If you ou not understand the monitation contained in the warning to visitors or visit Responsibilities signs or have any questions about their content, please ask a farm representative for help before you begin your on farm activity concerning disclosed risks responsionities signs or have any questions about their content representative for help before you begin your on-farm activity. If you are accompanied by individuals who need help in understanding the inherent risks of activities in the on-form activities or the reenonsibilities of a visitor on a undring form If you are accompanied by individuals who need help in understanding the inherent risks participating in the on-farm activities or the responsibilities of a visitor on a working farm, please evolution or ack a farm representative to evolution the risks and responsibilities to the participating in the on-rarm activities or the responsibilities or a visitor on a working rarm, please explain, or ask a farm representative to explain the risks and responsibilities to those nearly so that they understand them IF YOU (OR THOSE YOU ARE WITH) ARE UNPREPARED OR UNWILLING TO ACCEPT THE RISKS DISCLOSED OF THE RESPONSIBILITIES IMPOSED ON A VIETOR TO A WORKING IF YOU (OR THOSE YOU ARE WITH) ARE UNPREPARED OR UNWILLING TO ACCEPT THE RISKS DISCLOSED OR THE RESPONSIBILITIES IMPOSED ON A VISITOR TO A WORKING RARM DI FASE ADVISE THE ATTENDANT AND BETURN THE TICKET(S) INTACT AND RISKS DISCLOSED OR THE RESPONSIBILITIES IMPOSED ON A VISITOR TO A WORKIN FARM, PLEASE ADVISE THE ATTENDANT AND RETURN THE TICKET(S) INTACT AND INVISED VOLVIUL BE REQUED A DEFUND FOR THE AMOUNT DAID FOR THE TICKET FARM, PLEASE ADVISE THE ATTENDANT AND RETURN THE TICKET(S) INTACT AND UNUSED. YOU WILL BE ISSUED A REFUND FOR THE AMOUNT PAID FOR THE TICKET(S) WHEN FIRST ISSUED.

for developing this sign and taking reasonable care to prevent reasonably foreseeable risks to visitors.

- Distributing written information to visitors, with language specified by the Department of Agriculture and Markets, directing the attention of all visitors to the required Warning to Visitors sign. The language is available at this link: <u>https:// www.agriculture.ny.gov/Press%20Releases/</u> Inherent Risk Guidance.pdf
- Posting directional signage and identifying "off limits" areas.
- Posting a conspicuous notice at every point of sale or distribution of tickets that visitors have certain responsibilities identified in the General Obligations Law.
- Posting a conspicuous notice to visitors of the right to a refund for those unprepared or unwilling to accept the inherent risks of

the on-farm activity or to the duties of reasonable care imposed on the visitor.

• Providing adequate training to employees.

So how do you know if you are compliant? In their guidance, Ag and Markets specifically states that a "one size fits all" approach is not adequate for signage and training. Your warnings and your signage should reflect the risks on your farm. For example, a farm offering a hay ride will have different risks than a farm that allows children to feed animals or a PYO apple farm. Reasonable hazards could include heat exhaustion, bee stings and tripping hazards. Ag and Markets recommends that farmers work with their insurers or lawyers to perform a risk assessment for their specific farm business. NYCAMH would also be a good resource for assistance. Also be sure to document any trainings that you offer your employees. Have them sign in and keep a copy of the training materials or agenda in your records.

# **Apple Rootstocks for Eastern NY**

#### Mike Basedow and Dan Donahue, CCE Eastern NY Commercial Horticulture

Recently Dr. Terence Robinson and Mario Miranda Sazo released their suggestions for rootstock choices in New York. Their suggestions are as follows:

- 1. Fresh fruit orchards: G.11 for vigorous varieties, G.41, G.11 G.214 or G.935 for medium-vigorous varieties, and G.969 or G.935 for low vigor varieties. They are all fire blight resistant and more productive than other stocks. Our suggested spacing is 3X11.
- 2. Processing orchards: G.969 for vigorous varieties and a spacing of 5X14 with a conduit pipe/1-wire trellis. For weak varieties G.890 with a similar spacing.

What follows are some of our insights with these, and a few other rootstocks, under Eastern New York conditions.

#### Rootstocks

**M.9** is still one of the most widely planted rootstocks in Eastern New York. This rootstock is available in various strains, with two of the most popular including M.9 T337 on the smaller end, and M.9 Nic 29 on the larger. This rootstock has its share of issues, including reduced cold hardiness and susceptibility to fire blight. However, the stock is dwarfing and very productive, making it well suited for high-density production. We also have a great deal of experience with it in our conditions, so we have a good sense of how to manage many of its faults.

In eastern New York, **G.11** appears be a good rootstock choice for high vigor varieties. We have observed it to be slightly smaller than M.9 T337 in size and is very yield efficient. However, it is not woolly apple aphid resistant, and is only partially tolerant of replant soils. Replant tolerance is of concern in the Hudson Valley where crop rotation strategies are generally not practiced. Anecdotally, it is also known for having flakey bark, which could make an attractive site for boring insects.

**Bud 9** is known for its cold hardiness, and is more tolerate of fire blight than M.9 once it matures. Honeycrisp on Bud 9 also tend to get less bitter pit. However, this stock is more dwarfing than M.9 T337, and is generally recommended for more vigorous varieties. If you do plan to use it for varieties with less vigor, be sure the trees have had a chance to reach the top wire before you crop them heavily, especially Honeycrisp. Be sure to adjust tree spacing to compensate for low vigor characteristics. Performance of Bud 9 in eastern New York has been variable, often for no immediately observable reason. We've observed fantastic blocks that have filled their space and produce high-quality fruit, especially Honeycrisp. We also have stunted blocks that are a yield disaster. There is little room for error with Bud 9.

**G.41** would be a good variety for some high and medium vigor varieties as well. Trees appear to be slightly stronger in the Hudson Valley compared to the Champlain Valley. Weak varieties should also do ok on G.41, though they make take more time to fill their space when planted at 3 X 11 or 3 X 12. This one is resistant to fire blight, WAA, and tolerant of replant and phytophthora. Bitter pit performance when under Honeycrisp is unclear. Fazio (et al., 2019) found it to offer slightly better BP performance compared to other rootstocks in Western NY conditions, while Donahue (2017) found it to be significantly worse than M.9-T337. Unfortunately, G.41 tends to produce a weak graft union with some varieties. With this in mind, extra care should be taken to prevent the graft unions from breaking, particularly if you are planting Honeycrisp on it. However, we think the benefits outweigh the extra care that is necessary with this one. If you are careful handling the trees at planting, and get them set up with a good trellis system right away, the trees should stiffen up after about two years in the ground.

Perhaps similar in size to G.41, **Bud 10** may be another rootstock to keep on your radar in the coming years. It is reported to have low bitter pit incidence, good cold hardiness, and good fire blight resistance. However, it is said to do poorly in replant situations, and still appears to be limited in availability. We also have not seen it trialed in our region.

**G.214** is reported to grow larger than G.41, likely closer to M.9 Pajam 2. It appears to have all the positive attributes of G.41, and may be a good choice for medium to low vigor varieties. That being said, this one is a newer release, so I haven't seen it planted at commercial scale yet in our area.

**G.935** produces a larger tree, somewhere between M.9 Pajam 2 and M.26. It seems to be a good choice for our region for low vigor varieties, but again care **must** be taken. This one is not resistant to WAA, and is also very susceptible to latent viruses. If your planting stock is virus-free it may do well, but we've got a few in our trial that appear to be collapsing, likely caused by the virus sensitivity. At this time we recommend you do not plant this rootstock unless you have virus-tested your budwood to insure that it is clean.

#### (Continued from page 4)

**G.969** is another newer rootstock, which is considered to be between M.26 and M.7 in size. We have a few of these in our rootstock trial, and they have a wide range in size depending on where the trees are located across the block. This rootstock could prove to be very good for low vigor varieties, but again we have not seen it in commercial plantings here in the Eastern NY yet.

With all of this in mind, we have planted another rootstock trial in Peru this spring, and will be evaluating the following rootstocks over the course of the next few years: G.11, G.202, G. 969, G. 890, G. 214, G.935, along with many other yet to be released Geneva stocks.

#### A Word of Caution



A fifth leaf row of NY-1 planted on G. 41 in the Champlain Valley. Photo: Mike Basedow

**Rootstocks**: The development and introduction of new rootstocks is a slow process, remember that M.9 was introduced over 100 years ago. After much time and widespread planting, we understand a few things about its strengths and weaknesses. Rootstock selections with which we have less experience should be considered experimental until commercial plantings have been in place for a substantial period, perhaps decades. Consider newly released rootstocks as test subjects suitable for trialing unless you are comfortable with being at out at the cutting edge and willing to absorb the financial risk of an unexpected problem, caution is advised. When placing your tree order, a great question to ask is "do you have field experience with this particular variety/rootstock combination?". You may not want to be the first to plant thousands of trees of a commercially untested combination.

**Tree Quality**: We have understood for over 40 years in the U. S. that the success of high-density orchards is predicated on the planting of high-quality, healthy trees that fill their allotted space within several years and produce quickly. The time-value of money is an overwhelming factor in the financial success of an orchard. The choice of a high-value variety, in concert with an aggressive yield curve and high mature yields drives profitability. The planting of latent virus infected trees, trees of less than ½" caliper, trees arriving to the farm already infected with disease, or leafed-out, or with winter injury, or variety/rootstock combinations not commercially vetted or otherwise unsuitable for a particular orchard site will significantly reduce the profitability potential of your new orchard investment. There is little room for error these days.

Thanks to Mac Forrence for hosting these valuable rootstock trials in the Champlain Valley!

#### Cited Literature:

- Donahue, D. J. 2017. Bitter Pit in Honeycrisp on G-41 vs M9-337: Observations from an Orchard Visit. Fruit Quarterly.
- Fazio, G., J. Lordan, M.A. Grusak, P. Francescatto, and T.L. Robinson. In Press. Mineral nutrient profiles and relationships of 'Honeycrisp' grown on a genetically diverse set of rootstocks under Western New York climatic conditions. Scientia Horticulturae.

### Making SOPs Available to Employees Jessica Skellie, Cornell University

Utilization of Standard Operating Procedures (SOPs) is critical to any quality system. These policy and procedure documents lay out the regularly recurring activities performed within a business. Not only do SOPs provide organization, clarity, and consistency to a task, they play a large role in setting employees up for success in their work.

When a new employee begins work on a farm, they likely have many questions. When should I fuel up machinery? How do I wash and sanitize totes? How and when does fencing need to be repaired? Rather than tracking down a manager and asking these seemingly simple questions, a new employee may make assumptions or be hesitant in their work. Preparing these step-by-step instructions and posting them in known locations allows for a training system that develops self-sufficient and proactive employees.

In order to be fully utilized, SOPs must be two things. First, they need to be written in a way that is easily understood. They should be clear and to the point. SOPs also may need to be translated. It is a good idea for SOPs to include pictures of each step of the procedure followed by a short caption describing the work being done. Second, SOPs should be placed in an accessible location. For a group of procedures, such as those for equipment maintenance, a binder of documents in the shop office may be appropriate. For documents that should be readily available, such as sanitation practices, instructions should be hung up on a wall in plain view. All SOP documents should be laminated as well.

The first step in developing a set of SOPs is identifying what procedures would benefit the most from these documents. Where is there procedure drift? Lack of consistency among employees? Positions that turn over most often is a likely place to start. Keeping in mind that SOPs describe the tasks identified in job descriptions, start with basic procedures. Take photos of each step. Limit each procedure document to a page or two and be clear but concise. Utilize consultants to help in the development of SOPs. Once a set of SOPs has been created, let employees know they are there and that they should be followed. Only then, can SOPs be used as a tool in evaluating employee performance.

Visit <u>http://agworkforce.cals.cornell.edu/</u> <u>human-resource-management/performance/</u> to access the SOP writing guide, example SOPs, and an SOP template.



# A Comprehensive Acreage & Variety Survey for Commercial Apple Growers in NY Craig Kahlke, CCE Lake Ontario Fruit Program and Mike Basedow , CCE Eastern NY Commercial Horticulture

With the large plantings of new high density apple acreage in recent years, and the high percentage of those being managed varieties, it is paramount to have a handle on current and future acreage and variety makeup. This is critical information to have when trying to market the apple crop, and will assist in future planning for storages and other infrastructure.

Your data from your individual operation will remain anonymous.

Aggregated data will be published.

One survey per farm—please communicate with others in your operation to submit only once- this survey is being distributed in multiple outlets.

#### Records to have on hand to complete the survey quickly:

- Total current acreage, and by variety
- ✓ % bearing total, % non-bearing total
- ✓ % destined for fresh, processing, slice, and cider markets
- ✓ Approximate total acreage planting in next 3 years- total, and by variety
- ✓ For planting in next 3 years, approximate rootstock percentages- total
- ✓ Approximate acreage removing in next 3 years- total, and by variety
- ✓ Approximate total acreage currently under drip irrigation
- ✓ For planting in next 3 years, approximate that will be planted with drip irrigation

#### If you have all records on hand, it should take you less than 15 minutes to complete.

If your records or future plans are not as detailed or clear, please give your "Best Guess". We are striving for full industry participation to enable all of us to make the most informed decisions!

PLEASE BE AWARE - There is no "Back Button" anywhere in the survey, and all your answers will count once you hit the SUBMIT button on the last page (questions on drip irrigation systems). Once you open the link and start the survey, you will have 1 week to complete it.

#### This survey is funded in part by the Apple Research and Development Program

NOTE - If you're in a region in Eastern NY, at the end of this survey you'll be redirected to another - The Eastern New York tree fruit specialists would like to collect additional information on the extent of planting and performance of club and managed varieties in their local conditions. This should take no more than five minutes.

Questions? Contact Craig Kahlke at 585-735-5448, or cjk37@cornell.edu

### LINK to THE SURVEY: https://cornell.gualtrics.com/jfe/form/SV ba6M0RB8boWJoDb



# **Upcoming Events**

# Utilizing UAV's (Drones) on Eastern NY Farms

August 19, 2019 - American Legion Hall, 9509 Route 9, Chazy, NY 12921

ENYCHP specialists Jim Meyers and Mike Basedow will be hosting a demonstration and discussion of the use of low-cost unmanned aerial vehicles in crop management. Register at <a href="http://bit.ly/DronesinENY">http://bit.ly/</a><br/>
DronesinENY

# Orchard IPM Clinic

# August 22, 2019 - Finnegan Road Orchard, Canton, NY

Come learn about recent developments in integrated pest management options available to fruit growers for combating pests and diseases in apples and others tree fruits. Some topics to be covered include:

- Monitoring for key pests and diseases in the orchard
- Weather stations and pest modeling
- Variety and rootstock selection for minimizing damage
- Bioinsecticides and mating disruption for key orchard pests
- Rapid fire blight diagnostic tools for the orchard

For more information and to register, visit: <u>http://stlawrence.cce.cornell.edu/events/2019/08/22/</u> orchard-ipm-clinic

# <u>Crop Insurance Webinar: Types of Crop Insurance Available for Apple Growers</u> August 22, 2019

What are the options for federal crop insurance for apple growers? This webinar will go over the types of crop insurance available for apple growers. Crop insurance for apples, in particular, can start to become complex if you choose to use the varietal class options. We will sort out what options are available, how to estimate the cost and coverage, and other fundamentals so that you can decide which path is the right one for you and your farm.

Register for the webinar series at: <u>bit.ly/CropInsuranceWebinars</u>

# <u>Crop Insurance Webinar: Record-Keeping and Preparing Your Farm for Apple Crop Insurance</u> September 5, 2019

For the higher coverage options for apple crop insurance, classifying your different orchards into units is necessary. Also, more detailed production history record-keeping is required. This webinar will go over what steps you need to take to prepare for the type of crop insurance you wish to employ.

Register for the webinar series at: <u>bit.ly/CropInsuranceWebinars</u>

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The Eastern New York Commercial Horticulture Program is a Cornell Cooperative Extension partnership between Cornell University and the CCE Associations in these seventeen counties: Albany, Clinton, Columbia, Dutchess, Essex, Fulton, Greene, Orange, Montgomery, Putnam, Rensselaer, Saratoga, Schenectady, Schoharie, Ulster, Warren & Washington.