

Cornell Cooperative Extension

Eastern NY Commercial Horticulture Program



QUARTERLY HIGHLIGHTS

APRIL—JUNE 2020

CCE ENYCHP Continues to Assist Farmers Concerned with COVID-19 During a Challenging 2020 Season

The season has been challenging from a weather and labor perspective. Repeated spring freeze events damaged tree and small fruit crops in the Hudson Valley. Newly enacted labor restrictions have highlighted the challenge that farmers face with acquiring and retaining an adequate number of skilled workers.

Concerning COVID-19 requirements, team members have been assisting growers with Farm Safety Plans, supporting direct marketing at farm stands, auctions and U-Pick operations with operating procedures and safety. Consumer demand for fresh, locally grown food is very strong. Farmers Markets are disrupted with some locations in the metro-NY area not as reliable due to shifts in employee populations, and the safety protocol at all Farmers Markets. This has changed the atmosphere and slowed sales to a degree. We supported local CCE Associations in their effort to distribute hand sanitizer and masks to all farms in the 17 county region that we serve.

Online workshops have been very popular and successful including Special Permit Training, Bloom Thinning meetings, and early season Pest workshops. New additions like weekly office hours, have helped to keep growers and specialists connected. Farm Business Management specialist Elizabeth Higgins knowledge and understanding of the CARE Act and her work with the Cornell Extension Disaster Education Network (EDEN) has been invaluable to growers in our region.

Some additional COVID-19 response topics are listed below. This information, along with seasonal production information, is available in podcasts, newsletters, e-alerts and weekly announcements that are sent to growers on a daily or weekly basis, depending on crop.

- Providing support for You-Pick farms as they adopt NYS required safety protocol.
- Helping growers communicate to customers that food is safe, and making sure that they are using the appropriate sanitizing and cleaning materials.
- Assembling material for mental health outreach through NY FarmNET and other avenues.
- Supporting farm requests for new platforms to sell product.
- Answering questions about Farmers Market and Retail Farm Stand Guidance as well as farm vehicle registration in light of closing of NYSDMV offices.
- Helping the Mohawk Valley Produce Auction transition to running under current mandated limitations.
- Framing normal agricultural questions concerning the safety and importance of locally grown food to reflect concerns surrounding the pandemic.

For more information about CCE ENYCHP, please visit the website at: <https://enych.cce.cornell.edu/> or follow us on [Facebook](#) or listen to podcasts on [SoundCloud](#).

Adjusting to COVID-19 Reality: Reimagining the Cornell Cooperative Extension/NYS Department of Environmental Conservation Special Permit Training Program

Daniel J. Donahue, Tree Fruit Specialist

This spring, Cornell Cooperative Extension (CCE) Eastern New York Commercial Horticulture Program (ENYCHP) tree fruit specialist Dan Donahue coordinated an 8-person multi-disciplinary team of CCE regional specialists to revamp the 20-years running CCE/NYSDEC Special Permit pesticide safety training program. In past years, over 500 non-certified agricultural pesticide applicators working in the NYS apple and processing vegetable industries participated in 3-hour training sessions conducted by CCE and DEC staff at five locations in eastern and western NYS. Significant changes in program delivery were necessitated by NYS restrictions on in-person meetings due to the Covid-19 pandemic. In early March of 2020, it became clear that the pandemic would not allow even for on-farm meetings of employees while maintaining sanitary and social distancing requirements. From mid-March through early April, CCE staffers and Ms. Julie Suarez of CALS government relations in coordination with NYSDEC staff negotiated, developed, and implemented a virtual Special Permit training program that included 3-hour instructional videos in Spanish and English, packets of instructional and testing material, along with the required legal permit paperwork customized for each of the 95 participating farms and 540 trainees. The safety training and performance testing on each farm was administered by CCE regional team staff and supervised at the farm level by the local farm certified pesticide applicator on an as-needed basis upon the on-site arrival of workers and the sprayer operator labor requirements of each farm. In the end, NYSDEC Special Permits were issued in a timely fashion, the safety training needs of non-certified sprayer operators were effectively addressed, and these essential farm employees were able to successfully get the job done.

Securing Funding to Continue Adjuvant Research

Ethan Grundberg, Vegetable Specialist

Ethan Grundberg was awarded nearly \$10,000 from the Onion Research and Development Program of New York State to continue his research investigating the impact of different adjuvant chemistries on fungicide and insecticide efficacy for managing *Stemphylium* leaf blight and onion thrips in muck-grown dry bulb onions. Grundberg began the research in 2019 with support from the Orange County Vegetable Growers Association and leveraged the preliminary results from year one as the foundation for the successful proposal. Adjuvants are not pesticides, but are products added to spray applications that impact characteristics such as the ability to stick to waxy leaf cuticles, penetrate into the leaf tissue, or spread into difficult to reach leaf clusters. Grundberg and ENYCHP field technician Sarah Tobin will continue managing the trial through August before collecting data on disease severity and yield. The trial is being generously hosted by Mark Rogowski of S&SO Produce Farms in Goshen, NY.



CCE Provides COVID-19 Safety Guidance for NY Farms

Elisabeth Hodgdon, Vegetable Specialist

All farm businesses in New York need to write and implement a “NY Forward” COVID-19 safety plan. The plan covers physical distancing, hygiene, sanitation, health screening, and other important aspects of running businesses to reduce the risk of COVID-19 for farm owners, employees, and customers. In May, a COVID-19 safety plan task force was organized and led by Richard Stup of the Cornell Ag Workforce Development program to develop materials and programming to assist growers with writing and implementing their plans. ENYCHP specialists Liz Higgins and Elisabeth Hodgdon worked with the task force to create plan writing guidance documents for produce farm and retail operations. In June, two webinars were held to introduce produce growers to safety plans and answer questions relating to COVID-19 safety on farms. More than 300 participants attended the two webinars. Throughout the growing season, ENYCHP specialists continue to provide individualized recommendations and support for farms around the state as plans are implemented on farms.

2020 Field Season Underway!

Chuck Bornt and Crystal Stewart Courten, Vegetable Specialists

As strange as the last couple months have been, there has been one comforting thing – the start of another field season and the interesting and beneficial research projects the CCE ENYCHP team are part of. We are continuing to provide vegetable growers in eastern NY with the best production, pest and variety selection information we can. Each year seed companies release hundreds of new varieties, each one being better than its predecessor – but is it? CCE ENYCHP has a strong history of providing growers with this varietal information along with strong connections with the seed industry. This year is no exception with the following variety trial work being done on eastern NY farms: seedless watermelons, sweet and Irish potatoes, beefsteak tomatoes, leeks, peas,. In addition to these trials, we have many other projects underway including two different sweet potato slip quality trials, garlic post-harvest handling, the use of exclusion netting in both berry and vegetable crops, laser scarecrows, and the use of beneficial nematodes for controlling various pests. Many of these projects are funded through grant programs including SARE, SCRI and private industry. Funded research projects in and more has also been kept on schedule, and we have also worked hard to communicate with funders about projects which needed to be adjusted to meet the constraints of this season. Specialists and technicians are working hard to document our work this season with the expectation that much of it will need to be shared online. Videos, numerous pictures, and careful documentation will allow us to show the growers what we have learned in new ways. We may find that some things, like videos showing details that are hard for a group to see in person, may lead to better grower understanding of the work we are doing. Plans are also underway to determine if we can have field meetings for growers to visit several of these trials to see for themselves the different results. To keep ourselves and our growers safe, the thought is to have them be more self-guided tours with longer times to try and limit the number of growers in one place at any given time compared to our traditional, two to three hour twilight meetings where we would all gather in one place.



Figure on the left shows sweet potato slips grown in a greenhouse locally from roots just prior to cutting in early June. Figure on the right shows slips that have just been cut from the bins on the left of three different varieties and ready to plant.

Bio-Control Nematodes Gaining Adoption

Teresa Rusinek, Vegetable Specialist

For the past three years, ENYCHP specialists Teresa Rusinek and Charles Bornt have been researching and demonstrating the application of entomopathogenic nematodes (EPNs) for wireworm management. Successful results from a pilot project hosted at the Hudson Valley Farm Hub in 2017, alongside increasing pest pressure, provided the justification to apply for grant funding through New York Farm Viability Institute (NYFVI) Specialty Crop Block grant. This grant enabled us to demonstrate the use of EPN bio-control on farms throughout Eastern New York in 2018 and 2019, as well as to provide outreach in the form of hands-on workshops, articles, podcasts and presentations at grower conferences. Grower interest continues to grow particularly for those growing root crops which are especially susceptible to wireworm damage. Early this spring, we worked with four additional farms to apply EPNs, this brings us to a total of 12 farms and 19.5 acres treated.

We will continue our EPN work through the 2020 season specifically looking at wireworm management. Next year, we begin work on another NYFVI grant project that investigates the use of EPNs to manage seed corn and cabbage maggot.



EPN application at Rock Steady Farm in Dutchess County. The gravity fed boom applicator was designed and built by ENYCHP specialists as an alternative EPN application method for farms that do not have spray equipment to cover larger areas.

Local Improvements to Protected Culture Structures Will Have Lasting Impacts for Berry Industry

Laura McDermott, Berry Specialist

CCE ENYCHP Staff Natasha Field and Laura McDermott have been assisting University of Vermont agricultural engineer Chris Callahan with an innovative exclusion netting structure design at The Berry Patch in Stephentown, NY. Dale Ila Riggs and Don Miles secured NYS Specialty Crops funding to design and fabricate a structure for the ProTek Insect Exclusion netting that Cornell researchers have found to successfully exclude small insects like Spotted Wing Drosophila (SWD). Riggs and Miles paired with Cornell and UVM with the long term project goal of making the netting structures more adaptable and available to berry farmers – and perhaps qualify for cost sharing through government programs.

The team used design concepts and materials familiar to ginseng shade cloth production. They are examining wooden and steel support posts to evaluate cost, the ease of use and the longevity and structure performance over time. The group constructed the netting support structure using tools that are commonly available to small farmers – even those farmers that don't have tractor assistance.

If left unmanaged, SWD can cause losses of nearly 50% to berry plantings, creating an economic loss of tens of thousands of dollars per acre. Weekly insecticide sprays will help manage SWD, but past research has revealed that exclusion netting can eliminate SWD while avoiding chemical applications. Exclusion netting is very durable and will last 10 years with proper care. The new netting features zippered panels and grommets to help farmers secure the material to the structure.

This project also illustrates how important collaboration is for success. Researchers across academic institutions are collaborating with extension and farmers, and Canadian netting manufacturers have been supporting the farmers' research for many years. Educational videos and other information will be forthcoming.



Above: Team members help unroll exclusion netting onto support cables.

Right: Team members secure stabilizer cables to wooden support post.



ENYCHP Provides Outreach to Growers on SBA COVID-19 Disaster Programs

Elizabeth Higgins, Business Specialist

In response to the pandemic, SBA disaster funding, which usually is not available to farms, became available to ag producers. The two SBA programs were the primary federal cash response to assist businesses affected by COVID-19. The Paycheck Protection Program, a new program, provided very low interest forgivable loans to businesses for payroll, mortgage interest and rent. It covers both businesses with employees, but also allows sole proprietors and LLC partnerships to cover their income. SBA's traditional disaster program, EIDL, which usually isn't available to farms, eventually became available to farms and offered up to \$10,000 as a grant (\$1,000 per employee). These SBA programs were especially important to fruit and vegetable producers in ENY because USDA's COVID-19 disaster assistance grant program, CFAP, and the state's food box program, do not cover the majority of ENYCH fruit and vegetable farms. PPP and EIDL Advance are currently the most accessible source of federal disaster financial assistance to ENYCH fruit and vegetable farms.

Liz Higgins helped to educate other CCE Ag Business specialists and educators about these SBA grants and worked with other educators around the state to provide education and information to farmers about the availability of these funds. This was critical because early on many farmers were being wrongly informed that they were not eligible for SBA disaster funds. The SBA programs also changed frequently adding to the confusion. In Eastern New York Higgins counseled many growers and technical assistance providers directly about the programs, helping them understand the rules and how to navigate the application process. For example, many farms were hesitant to apply for PPP funding because they were essential businesses and not required to close or lay off staff. They assumed that this would make them not eligible for loan forgiveness. She helped them understand that the PPP funding could be used to help manage uncertainty and to offset other costs and losses for which disaster funding is not available.

The materials she developed, 6 factsheets, 3 webinars and bi-weekly newsletter articles and podcasts through ENYCH tree fruit news and veg news were downloaded directly over 1300 times and the webinars, held in collaboration with the CNY regional Livestock Dairy and Field crops team reached over 200 growers. In addition, the materials were disseminated through the Cornell Ag Workforce site, the Cornell EDEN site, the Cornell Small Farms Program and other CCE Associations.

Precision Apple Thinning with Computer-Based Plant Growth Models

Michael Basedow, Tree Fruit Specialist

In Eastern NY, there has recently been increasing interest in thinning apples earlier at bloom to improve return bloom in biennial varieties like Honeycrisp, and to begin the thinning process earlier in hard to thin varieties like Gala.

Growers sometimes use plant growth regulator based products at bloom to begin their thinning programs. These bloom applications are generally not very efficacious, as these products work best in temperatures above 70F, particularly in our region, which can be difficult to reach in Eastern New York at bloom. There are other products that can be used at bloom, however products have a very narrow application timing to get good results, which has limited their use. To help growers identify these timing windows, a bloom thinning model was developed by Virginia Tech researchers. The model is being widely adapted by growers in Washington State. The model's use is still limited in New York, as our sometimes wet spring conditions restrict its use in some seasons. That, along with the narrow application window, led to a need for further field testing and demonstration in our region before growers could be confident bloom thinning with the model.

This season, Eastern New York fruit specialists were awarded a grant through the Northern New York Agricultural Development Program to further study and demonstrate thinning with the bloom thinning model. Through this project, specialists hosted a bloom thinning webinar in March with Dr. Greg Peck, Assistant Professor of Horticulture at Cornell, along with Dan Olmstead of NYSIPM, who is the coordinator of the Network for Environment and Weather Applications (NEWA). Greg Peck helped develop the bloom thinning model, and the model is currently operated off the NEWA website.

Following the webinar, specialists set up extension research and demonstration trials at two commercial orchards in Eastern New York, and provided guidance to additional orchards on how to use the model. Specialists helped growers determine when to start the model, collected model inputs necessary to accurately run the model, and provided guidance and the rates and timings for the application of bloom thinning materials.

Following bloom thinning, specialists demonstrated how to use the fruit growth rate model, another orchard management tool available online at malusim.org, which helps growers determine when they have thinned enough fruit off of their trees. Specialists collected fruit growth measurements on the two across eastern New York, and worked closely with Cornell University staff to interpret model recommendations for Eastern New York growers. This data was also discussed weekly during the nine online thinning webinars that were held for three overlapping portions of Eastern New York this May and June.

While we still need to evaluate yield and fruit quality at the conclusion of the harvest season, fruit counts conducted in June at two sites indicate two sites still have slightly more fruit left on the trees than the crop load the grower was initially targeting. However, we expect some additional fruit to drop off between now and harvest.

Growers that have used the models have already expressed interest in continuing the use of these tools next season, and additional grant projects are being planned to make these tools more accessible to Eastern New York apple growers.



Tree Fruit Specialist Mike Basedow measuring Honeycrisp apples for the fruit growth model at an Eastern New York orchard.



New vineyard freshly planted and vines receiving their initial watering prior to irrigation installation (inset) in Claverack, NY

Large Vineyard Planting at a New Columbia County Distillery

James Meyers, Viticulture Specialist

A new vineyard planting in Columbia County is a substantial expansion of acreage in the Hudson Valley. Klocke Estate in Claverack, NY planted nearly 12,000 vines including two clones of Riesling, Vidal Blanc, Seyval Blanc, Cayuga White, and Traminette. The vineyard is approximately 20 acres and is the culmination of over three years of site analysis and preparation and the farm. A similar sized planting of apples and additional tree fruits is planned for the fall. Most of the fruit will be used to make brandy which will be produced on the estate. ENYCHP worked with Klocke Estate during the planning phase, providing guidance on site evaluation, site preparation, cultural practices, and ongoing operations.

April—June 2020

825 Phone Consults

689 E-mail Consults

437 Farm Visits

53 Webinars/Distance Learning

2,002 Participants in Distance Learning

Daily, personalized, farm-specific vineyard
report addressing weather and pests—

delivered to **194** growers for a total of

17,460 unique reports



The Eastern NY Commercial Horticulture Program is a Cornell Cooperative Extension partnership between Cornell University and the CCE associations in Albany, Clinton, Columbia, Dutchess, Essex, Fulton, Greene, Orange, Montgomery, Putnam, Rensselaer, Saratoga, Schoharie, Ulster, Warren, & Washington.

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