

Cornell Cooperative Extension

Eastern NY Commercial Horticulture Program

QUARTERLY HIGHLIGHTS

JULY-SEPTEMBER 2020

Resources Help Boost Confidence for Consumers and Farmers During Pandemic

Laura McDermott, Berry Specialist

The early and ongoing impacts of the NYS Pause created a perfect environment for pick-your-own and Agritourism farms. Consumers were looking for ways to stay busy, support local businesses and be outside in a healthy and safe environment. Needless to say, most of these farms have reported very busy seasons.

This spring and summer Cornell Cooperative Extensions Eastern NY Commercial Horticulture specialists, along with Cornell Ag and Life Science Faculty and the Cornell Small Farms Program staff collaborated on the creation of Best Management Practices for the You Pick Farm Industry and the Agritourism sector. The BMP's were used by NYS Dept of Agriculture and Markets to create the official NYS Guidance for both of these consumer facing ag industries.

The BMP's, in concert with Cornell Cooperative Extension county associations' distribution of thousands of gallons of hand sanitizer and masks to eastern NY farms played an enormous role in helping consumers feel safe as they began to engage in normal commerce. According to CCE statistics, more than 28,000 gallons of the state's hand sanitizer, plus 30,386 two-ounce bottles and 106,640 face coverings, were distributed state wide – much of it in eastern NY. For agricultural businesses of all kinds, that distribution affected 46,755 agricultural employees throughout the state.

The [“Best Management Practices for U-Pick Farms During the COVID-19 Pandemic”](#) guidebook offers detail on adjusting farm practices to reduce risk, and provides clarity on getting consumers safely through the farm and keeping farm employees healthy.

The [“Best Management Practices for Agritourism farms During the COVID-19 Pandemic”](#) guidebook helps farms navigate dealing with high volume customer visits and high touch activities while still keeping everyone safe.

These BMP's were explained to farmers during free on-line workshops that attracted several hundred farmers.

Terri Oosterom of Hand Melon Farm in Greenwich, NY, said the farm followed the Cornell guidelines and provided hand-washing and sanitizer stations. Their efforts paid dividends. “We are booming,” Oosterom said. “People want to buy local and they want to know where their food comes from.”

Specialists also worked to provide farms with an on-line collection of training resources that could be quickly utilized if they needed to train new farm workers due to COVID-19 impacts. This curated list, titled [‘Building Resilience through Farm Employee Training Resources’](#) will be helpful to farmers for many years to come.

For more information about these efforts, please see the [July 21, 2020 Cornell Chronicle](#).



Three Year Orchard Weed Management Project Taking Shape

Michael Basedow, Tree Fruit Specialist

This spring and summer, an orchard weed management field demonstration and research site was established in Clinton county, NY. This site is paired with an additional field site in Western NY, as part of a statewide effort to document the multiple year effects of three different orchard weed management strategies, including: 1. A fall applied residual herbicide program 2. A spring applied residual herbicide program, and 3. No residual herbicides, post-emergent products only.

One of the key goals of this project is to determine how effective each strategy is in managing weed populations throughout the growing season, particularly during the critical weed free period between May and July.

In addition to weed control, the study is seeking to gain a better understanding of the environmental impacts of each management strategy. To meet this goal, we are tracking annual tree growth, tree herbicide injury development, tree mortality, and yearly soil health samples are being taken to be analyzed by the Cornell Soil Health Lab. The site will also serve as a field demonstration, where growers will be able to view firsthand the varying effectiveness of these programs. We are planning to host summer field days at each site where growers can see the differences for themselves. The project will conclude with a final report in the winter of 2022. We thank the New York Apple Research and Development Program for their financial support of this project.



The weed study plot as it appeared this summer. Like many Eastern NY orchards, this field site is dominated by perennial weed species, including quackgrass and perennial sowthistle.

Specialists Support Expanding High Tunnel Production in the North Country

Elisabeth Hodgdon, Vegetable Specialist



Tomatoes, zucchini, and other warm-season crops are offered at this northern Clinton County roadside stand in October following several frost events. This is made possible by successful high tunnel growing practices supported by ENYCHP.

Growing seasons in the North Country are short. Newly constructed high tunnels in the region have greatly extended the growing season and roadside stand offerings during the spring and fall “shoulder seasons” when our cool weather won’t support crops in the field. Many growers expanded their roadside fruit and vegetable stands, and several new operations started up in 2020 to meet the sharply increasing demand for local produce. ENYCHP specialists offered advice on vegetable and flower variety selection, soil fertility, irrigation systems, trellising, and pest and disease management to maximize yield and labor efficiency in tunnels to maintain roadside stand inventory. For first time growers, high tunnel production can be a learning curve. Many common tunnel crops require differing production practices compared to field culture. ENYCHP specialists helped new high tunnel owners avoid common costly mistakes and connected new growers with experienced high tunnel producers so that they were able to learn from each other. Through individual farm visits, phone and email diagnostics, newsletter articles and virtual programming, ENYCHP specialists were an important resource for new high tunnel growers during the 2020 season.

Improving Invasive Allium Leafminer Management Options for Organic Growers

Ethan Grundberg, Vegetable Specialist

With support from a Northeast Sustainable Agriculture Research and Education Partnership award, Teresa Rusinek and Ethan Grundberg are conducting trials to improve organic management practices for the invasive insect pest allium leafminer in 2020. Grundberg and Rusinek have been collaborating with Cornell University entomologist Dr. Brian Nault since 2017 to evaluate insecticides for managing the pest, but few organic options have emerged from that work. Grundberg and Rusinek are focusing their research on both cultural and chemical control options, including using insect exclusion netting, floating row cover, reflective mulch, Entrust SC insecticide applications, and combinations of the previously listed tactics to determine what the potential is for reducing damage from allium leafminer without compromising crop quality and yield. The ENYCHP team was able to identify the emergence of the fall flight of allium leafminer on September 9th, 2020 and alert growers in the region to the risk to leeks and scallions and will continue to collect data from the trial through November 2020.



Research Activities

Teresa Rusinek, Vegetable Specialist

This summer work was completed on a bio-fungicide efficacy trial. Many bio-fungicides are marketed to growers as low-risk, environmentally friendly alternatives or to enhance the performance of conventional fungicides; however, the extent of efficacy under typical field conditions and on specific crops has not been thoroughly examined. Farmers in the region grow lots of brassica crops, like broccoli and kale, that are susceptible to destructive fungal and bacterial diseases. These diseases must be adequately controlled to produce a marketable crop. Broccoli plots were established in a farm field and treated with a specific bio-fungicide on a seven-day schedule over an eight week growing period. Each plot was harvested and evaluated for disease severity as well as yield. Results will help guide growers' disease management strategies and reduce risk of crop loss



ENYCHP staff evaluate disease severity on broccoli treated with bio-fungicides.

Another novel research project involves the use of UV-C light to reduce or suppress diseases such as powdery mildew and downy mildew on cucurbit crops. Working with engineers from Rensselaer Polytechnic Institute, ENYCHP vegetable specialists are field trialing this new technology on farms in the Hudson Valley and Capital District. Logger boxes that measure UV-C intensity are placed in the field prior to treatments. This verifies UV-C dosage and guides adjustments that may be needed. Weekly disease assessments provide efficacy data to determine which treatments are optimal. This technology holds the potential to reduce the need for chemical fungicides in organic and conventional production systems. This project is funded by NYFVI. More on-farm trials are slated for 2021.



A side-mounted unit containing several light fixtures is passed over a cucumber crop to deliver a disease killing dose of UV-C light. Logger boxes are placed in the crop to measure dosage of each UV-C treatment.

Ongoing Leek Variety Trial Assessments

Crystal Stewart Courtens, Vegetable Specialist

Thirty-one varieties of summer, fall and winter leeks are being evaluated for yield, marketability, disease resistance, and, for the winter leeks, long-term storage potential. The complete trial details will be published on our website and highlighted during the December variety trial showcase to be hosted by Zoom. The showcase will also include information about spring pea variety trials, watermelon trials, sweet potato work, and more!



2020 Statewide Veraison to Harvest Newsletter

James Meyers, Viticulture Specialist

Each grape harvest season, regional CCE grape specialists coordinate with statewide CCE viticulture and enology specialists to produce the 'Veraison to Harvest' newsletter. Supported by funding from the New York Wine and Grape Foundation, 'Veraison to Harvest' provides growers with a weekly overview of how grapes are ripening around the state. Grape specialists and technicians collect fruit samples and send them to the Cornell Craft Beverage Analytical Laboratory in Geneva, NY. Fruit is analyzed for the key ripening parameters of Brix (soluble solids/sugar), titratable acidity, pH, and berry weight and the numbers are reported in the newsletter along with commentary from regional grape specialists. This fall, ENCHYP sampled fruit from six counties: grape specialist Dr. Jim Meyers collected weekly samples from Ulster and Dutchess counties, technician Natasha Field sampled from Washington and Saratoga counties, and technician Andy Galimberti sampled from Clinton and Essex counties.

Comparison of 2020, 2019, and 2018 ripening at 16 vineyards in eastern New York. CV = Champlain Valley. HV = Hudson Valley. UHV = Upper Hudson Valley.



AROUND NEW YORK...

Statewide (Tim Martinson)

It's that time of the year again. Welcome to the start of the 2020 *Veraison to Harvest* newsletter season, which runs... from veraison to harvest. Now in our 14th season, we are grateful – in the era of COVID-19 – to be bringing this weekly update of fruit composition and timely harvest issues once again.

This newsletter is a joint project of the statewide enology and viticulture programs, the Lake Erie regional grape pro-



First of eight weekly 'Veraison to Harvest' newsletters.

Brix 2020/2019/2018



2020 Seedless Watermelon Trial

Chuck Bornt, Vegetable Specialist

In the winter of 2019, Ulster County grower John Ferrante of Ferrante Farms, emailed CCE ENYCHP Specialists Teresa Rusinek and Chuck Bornt wondering if we would be willing to work with them to do a seedless watermelon variety trial. We agreed and with our seed and vegetable breeder contacts, procured 10 seedless watermelon varieties and required pollinator seeds. The plants were grown in the Ferrante's greenhouses and planted in the field on June 5, 2020, harvest of the first melons took place on August 12, 9 harvests were completed, and data will be compiled this winter for newsletters, on-line meetings and other means of outreach. To try to receive input from Ferrante's customers, after each harvest melons of the same variety were individually marked with a letter and placed in the market. We then placed a sign explaining that these melons were part of an experiment with Cornell Cooperative Extension and Ferrante's to help identify potential new varieties that might be grown in the future. A questionnaire simple asking them to identify which melon they took, if they liked it or not, what they liked or disliked about it and if they would purchase it again. They were asked to bring them back and although we did not receive many back, there was certainly a trend in certain melons that folks



purchased. This information will be used by Ferrante's and other growers potentially identify new melon varieties that they normally would not have grown.

CCE ENYCHP specialists collecting seedless watermelon data while practicing COVID-safe working environments (left and center). Watermelon variety questionnaire placed on the watermelon table at the Ferrante's stand to obtain customer feedback on new varieties (right).

Understanding the Genetic Roots of Bitter Pit Disorder in the ‘Honeycrisp’ Apple

Daniel J. Donahue, Tree Fruit Specialist and Sarah E. Elone, Field Technician

Bitter pit is a calcium-related physiological disorder of certain apple varieties, of which ‘Honeycrisp’ is the most economically significant in Eastern New York. The appearance of the sunken dark spots on the blossom-end of the fruit results in cullage to juice grade, low dollar returns and the loss to the producer of thousands of dollars in crop value per acre every year. After decades of research, there remains no reliable mitigation strategy. Most commonly producers apply multiple applications of foliar calcium sprays to minimal effect. Research conducted by ENYCHP specialists and technical staff has led to several extension recommendations with the potential to substantially reduce bitter pit losses. ENYCHP specialists discovered that the Apogee plant growth regulator when applied in a single application at “pink” stage can reduce the incidence of bitter pit 50%. The timing of these sprays maximizes effectiveness. Our research has also demonstrated that ‘Honeycrisp’ on B.9 produce fruit with significantly less bitter pit than the more commonly planted East Malling series (M.9, M.26) rootstocks.

A 3-year project was initiated in 2019 to study the genetic basis of the bitter pit incidence difference observed between the relatively ‘clean’ fruit produced on the B.9, and the greatly afflicted fruit produced on the M.26. Our intent is to directly link early season mineral status to actual bitter pit symptom expression.

2019 results were encouraging. A more thorough understanding of the genetic basis of the bitter pit disorder will help in the development of more profitable apple rootstocks and may lead to the development of improved mitigation strategies. Our bottom line is to improve the bottom line of our NYS apple producers!

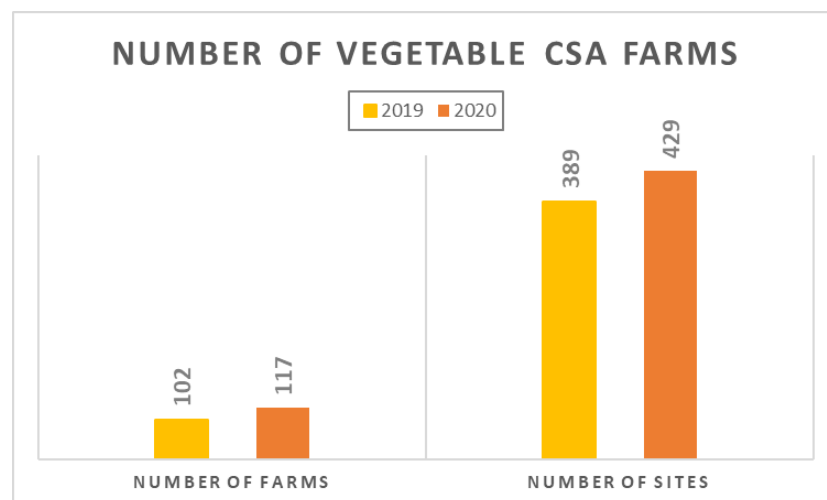
ENYCHP CASE Data Demonstrates Complex Impacts of COVID on Local Foods

Elizabeth Higgins, Business Specialist

For the past three years Liz Higgins, with the assistance of Sarah Tobin and Sarah Elone has been collecting price and market data of CSA farms in the 17 ENYCH counties, plus Westchester, Rockland and Sullivan. This data has been helpful in seeing trends in CSA marketing, share price and farm entry and exit patterns. This year the data has been extremely helpful in seeing how CSA farms, and others adapted this spring and summer as the COVID-19 pandemic and the subsequent NY Pause shutdowns changed consumer behavior. We had collected the 2020 CSA price and market data for most farms prior to April, then in July, Higgins went back and updated the price and distribution locations for all the farms in the database. She searched to find new CSA farms and noted farm changes due to COVID-19. These included adding home delivery, changes in how shares are packed and distributed, changes in drop-off sites (including additional sites and discontinued sites). She also recorded those farms that were sold out of shares. Sixty nine farms (59%) indicated that they had sold out their shares for 2020.

COVID-19 has had an impact on how CSA farms in our region are doing business. Forty five percent of the farms added COVID information to their websites and had updated their site locations, methods of distributing shares, and volunteer practices. 13 farms had sites that closed after initial sign-ups in the winter, specifically due to COVID. These were generally sites affiliated with schools and offices. Office/ workplace CSA sites seemed to be especially vulnerable.

The number of CSAs and the number of sites did increase, as did the average weekly price of a full size vegetable CSA share, which increased from \$28.40 per share to \$31.33 per share. Large gains in prices were most likely due to a drastic increase in the number of CSA farms offering and charging for home delivery in 2020. In 2019 there were only 6 vegetable CSA farms that offered home delivery as an option at



sign-up. This year there are 22 farms, and several others noted that they were open to home delivery for at-risk customers in their service area. Most added delivery after enrollment started this winter in response to COVID-19.

This data will be included in an analysis of the impact of COVID-19 on agriculture in NYS that Higgins is working on, in collaboration with Cornell faculty from the Dyson School, the Ag Workforce Development Program and the LOF Team. This analysis will be used to help state and federal policy makers understand how COVID has affected NYS Ag to help them direct resources where they are needed.

July—September 2020

761 Phone Consults

748 E-mail Consults

566 Farm Visits

19 Webinars/Distance Learning

1,368 Participants in Distance Learning

Daily, personalized, farm-specific vineyard
report addressing weather and pests—
delivered to **191** growers for a total of
15,015 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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