

# Cornell Cooperative Extension

## Eastern NY Commercial Horticulture Program



# QUARTERLY HIGHLIGHTS

JULY—SEPTEMBER 2022

## **Supporting Beginning, Organic, and Spanish-Speaking Growers in Reducing Pesticide Use Risks**

*Ethan Grundberg, Vegetable Specialist*

With support from a \$97,795 Northeast Extension Risk Management Education Underserved by Crop Insurance grant, vegetable specialists on the ENYCHP team (see photo above) dedicated much of 2021-22 to working with organic and Spanish-speaking vegetable growers in the region to better manage the production, human, legal, and financial risks related to pesticide use. The “Spray Safe, Spray Well” project team organized and delivered eight bilingual webinars over the winter months on topics like Integrated Pest Management (IPM), sprayer nozzle selection, how to obtain a pesticide applicator license, organic insecticide modes of action, and incorporating beneficial insects into a pest management program. Recordings of the workshops in both Spanish and English can be found on the [ENYCHP YouTube channel](#). The workshop series attracted an audience of over 100 unique participants, many of whom had no previous working relationship with the ENYCHP team.

Building on the content shared during the workshop series, the project team worked directly with growers on their farms to help affect changes in pesticide use practice. ENYCHP specialists helped growers to adjust water pH using citric acid formulations, select better nozzles to improve pesticide spray coverage, install check valve adapters to spray booms to reduce the amount of pesticide drip at the end of fields, install spigots on sanitizer containers to reduce the risk of human exposure to caustic chemicals, and review IPM plans for specific pests and diseases. The project PI Ethan Grundberg also delivered an in-person workshop on backpack sprayers and nozzle selection to urban farmers at the Brooklyn Grange in New York City in collaboration with Urban Ag Specialist Sam Anderson in August while Elisabeth Hodgdon organized an in-person workshop on boom sprayer calibration and improving pesticide coverage at Juniper Hill Farm in Wadhams, NY in late July.

## **Research Underway to Reduce the Hand-labor Cost of Peach Thinning**

*Daniel J. Donahue, Tree Fruit Specialist*

Peaches are an important tree fruit crop in the Hudson Valley, with sales to directed towards retail chain stores, farmer’s markets and pick-your-own farm operations. The labor associated with the hand-thinning of peaches is a major production expense, approaching \$2,000 per acre. Why hand-thin? Peaches naturally set a heavy crop, and this is generally a good thing. However, a heavy crop of peaches that are too small to sell is not good for the producer’s bottom line. Removing some of the crop in early June while the fruitlets are still small will result in a smaller volume of larger, marketable-sized fruit, that can be sold to the consumer at profitable prices. With farm labor in the Hudson Valley becoming less available and more expensive with each passing season, finding a way to use plant hormones to thin the crop will help our producers maintain profitability and significantly reduce the need for hand labor. Such technology has existed for decades in apples, but never in peaches, until now. ENYCHP specialists are researching the use of a Valent Biosciences product recently registered in New York State for the chemical thinning of peaches. The sprayable material, called “Accede” is a chemical precursor to the natural fruit maturation hormone ethylene. The ethylene produced will result in some fruitlets “abscising” (dropping), effectively thinning the tree. Our current research in the Hudson Valley has demonstrated a potential savings of \$900 per acre in labor cost while increasing overall fruit size. A caveat, the effective use of hormonal fruit thinners is a very tricky and can result in excessive thinning depending on local environmental conditions at and post-application. Practical applied research by Cornell Cooperative Extension staff in local orchards is essential to better understand how to implement new technologies such as this hormonal thinner and help improve the sustainability of the Hudson Valley tree fruit industry.

## Open House Welcomes Public to Visit Cornell Willsboro Research Farm

*Elisabeth Hodgdon, Vegetable Specialist*

On July 7, the Cornell Willsboro Research Farm in Essex County welcomed visitors to their open house for the first time since 2019. Forty-nine community members, gardeners, farmers, agricultural service providers, students, and Cornell staff toured the farm and learned about the many research projects taking place during the 2022 growing season. The annual open house, organized by farm manager Mike Davis, is a way to “demystify” what goes on at the farm and engage with the public about what the farm has to offer. University research farms are great resources for the agricultural community and local food systems, allowing for experimentation and development of farming practices to benefit the region. During the field day, visitors viewed silage corn, sorghum, cover crop, and juneberry trials conducted by Mike Davis and Cornell faculty members. Elisabeth Hodgdon and Andy Galimberti spoke to visitors about ENYCHP trials taking place on the farm, including early spring high tunnel brassicas, winter greens, and a strawberry winter protection experiment. The event brought together the Willsboro and greater Essex County agricultural community that was much appreciated following the open house’s three-year hiatus.



*Open house visitors waiting for their ride to the ENYCHP's strawberry experiment, one of many experiments conducted at the 352-acre Cornell Willsboro Research Farm .*

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## Agricultural Supervisory Leadership Certificate Program is Completing Second Year in November

*Elisabeth Higgins, Business Specialist*

For the past two years Elisabeth Higgins has been collaborating with Dr. Richard Stup and the Cornell Ag Workforce Development Program team on a new program, the Cornell Agricultural Supervisory Leadership Certificate for new and experienced farm supervisors and managers. The program is also appropriate for those preparing to become supervisors. All participants learn leadership concepts and practice skills that improve their ability to build a positive workplace and get results through leading others. The courses are offered through Moodle, an easy-to-use online learning platform, and weekly discussion sessions allow participants to engage with instructors and classmates on the week’s topic and assignments. Courses can be taken in any order and run six weeks.

Three courses have been developed and multiple sessions of each class were offered in 2021 and 2022:

- **ASL 101 Transitioning to Supervisor:** Develop essential communication skills and manage conflict. Lead a multi-cultural team. Build an effective workplace culture.
- **ASL 102 Organizing Work for High Quality Results:** Create an efficient and high-performing workplace. Develop clear expectations and standard operating procedures. Delegate effectively. Diagnose and correct performance problems.
- **ASL 103 Managing Performance:** Understand motivation. Harness the power of performance feedback and coaching. Build clear and effective workplace communications. Set safety expectations. Conduct effective performance improvements.

One hundred and eleven students have enrolled in one or more of these classes and at least 25 of those students were from ENYCH-region fruit and vegetable farms. In addition to attracting NYS farm managers, we have had students from six other states and Belgium.

The fourth and final course for 2022, **ASL 104 Staffing and Organizing Your Team** has been developed and will be offered starting November 9th, 2022: This course will cover developing job descriptions, learning how to find potential employees, interviewing, and selecting the right people.

Two classes are in development. **Employee Development and Training** will be offered in March 2023 and **Ethics and Employment Regulations for Supervisors** will likely be offered in the fall of 2023. We will also be offering a section of **ASL 101 Transitioning to Supervisor** in January 2023. In addition, the Ag Workforce Development Program is hiring a new staff person to translate the program to Spanish to better meet the needs of current and aspiring farm managers whose primary language is Spanish.

Past course participant management experience ranges from a few years to over 20 years. All participants say the course content made them more effective at their job. For more information about the program see [Agricultural Supervisory Leadership certificate | Cornell Agricultural Workforce Development](#).



## A Statewide Effort to Predict the Incidence of Bitter Pit in 'Honeycrisp'

**Michael Basedow, Tree Fruit Specialist**

Bitter pit is a calcium related disorder that is a common problem in 'Honeycrisp', one of the most profitable apple varieties grown throughout Eastern New York. Bitter pit alone can reduce packouts by more than 50% in bad years, so it is helpful for growers if they can predict how bitter pit risk there is a given block early in the growing season so they can better mitigate and plan for marketing their fruit.

In July of 2022, ENYCHP tree fruit specialist Mike Basedow collaborated with extension specialists and professors around the state to offer peel-sap analysis to growers throughout the ENY region. Nutrient concentrations are analyzed on the sap of the fruit peel, and the ratios of calcium to potassium give us a general sense of how at risk a particular block is of having bitter pit in a given year. This test is performed in early July, allowing growers to decide if they want to apply additional calcium to their at-risk blocks, or to better determine how they will market the fruit from those high risk blocks.

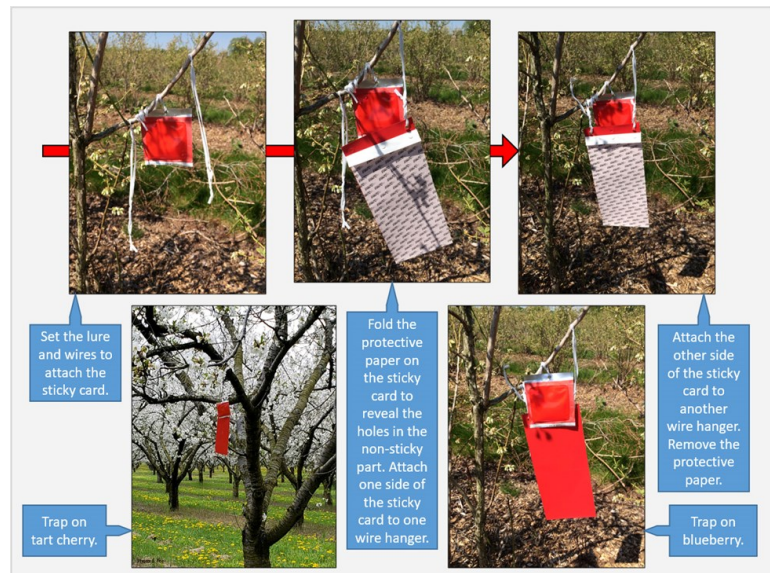
As a follow up to this peel sap analysis, we also performed the passive method of bitter pit prediction in Honeycrisp blocks from across the ENY region. For this method, 100 apples are collected from a block three weeks prior to the anticipated harvest. The fruit are then left at room temperature for three weeks, and the fruit are then rated for the incidence of bitter pit. This estimate is a good predictor of how much bitter pit a block of Honeycrisp is likely to have coming out of storage two months after harvest.

We surveyed 33 blocks from NENY, with additional blocks being collected from the Hudson Valley region. Bitter pit incidence ranged from 0 to 49 percent in the northern NY blocks we tested. These results were emailed directly to growers as they began to harvest their blocks so that they could make more informed management decisions. In addition, we wrote a newsletter article describing our results, giving further recommendations for how to use this information to guide fruit storage.

## Testing the Feasibility of Using Red Stick Card Traps to Monitor Spotted-Wing Drosophila (SWD)

**Laura McDermott, Berry Specialist**

Spotted-wing drosophila (SWD, *Drosophila suzukii*) continues to drive berry and cherry growers' spray schedules. Monitoring helps to determine when populations begin to build up, and therefore can help save growers spray applications in a late infestation year. In 2021 and 2022 CCE ENYCHP, Harvest NY and LOFT regional berry specialists successfully tested red sticky card traps, baited with SWD lures, to detect first arrival of SWD in berry plantings and cherry orchards. The baited, red sticky traps provided good results for the SWD monitoring network. We found that the red sticky traps have potential for use by growers and consultants to monitor SWD pressure in at-risk fruit plantings. The sticky traps can be easier and less expensive for growers to use than more traditional drowning traps. In 2023 we will redouble the effort to train industry consultants to help with grower training and adoption, and we will continue to develop training materials. Eastern NY growers have come to rely on the SWD monitoring network, which is very robust in our region due to ~15 farms participating in this study and allowing us to trap SWD in nearly every county in our region.



An instructional fact sheet developed to train growers to use sticky cards to monitor SWD in cherries and berry crops.

## Looking Outside Traditional Disease Control—Using Ultraviolet-C for Disease Control in Vine Crops

**Chuck Bornt, Vegetable Specialist**

When we hear about Ultraviolet light we often think of the negative connotations involved with it – sunburn, skin cancer etc. However, there are several forms of ultraviolet light (UVA, UVB and UVC) and research is currently evaluating the use of UVC for the control of plant pathogens in summer squash. ENYCHP team members Chuck Bornt and Teresa Rusinek are working with researchers at the Icahan School of Medicine at Mount Sinai Light and Health Research Center and local vegetable growers at Kinderhook Creek Farm in Stephentown, to build a UVC generating unit that can be used in the field, over the top of green and yellow summer squash to control Powdery Mildew. Powdery mildew is a persistent disease of vine crops that can quickly become tolerant to the fungicides that are used to control it. Summer squash are even more difficult because they must be harvested every day. Many fungicides labeled cannot be used because they have a PHI or pre-harvest interval greater than 1 day so they cannot be used. This limits what fungicides can be used and puts more pressure on those products which leads to more fungicide resistance. However, UVC does not have any of these limitations and squash can be harvested immediately after treatment and used however often as needed. Combined with currently labeled fungicides could improve the efficacy and life of these fungicides. If UVC alone is successful, this will also give organic growers another effective tool to use in their production practices.



## July—September 2022

**463** Phone Consults

**362** E-mail Consults

**511** Farm Visits

**17** Field Meetings

**471** Attendees at Field Meetings

**9** Webinars/Distance Learning

**59** Participants in Distance Learning

Personalized, farm-specific vineyard report  
addressing weather and pests—delivered to

**195** growers for a total of **14,235**  
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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415 Lower Main Street  
Hudson Falls, NY 12839  
518-746-2553  
[enych.cce.cornell.edu](http://enych.cce.cornell.edu)

