Cornell Cooperative Extension

Eastern NY Commercial Horticulture Program

Quarterly Highlights

October—December 2021

Striking Up Conversations Over Cover Crops at the Willsboro Research Farm

Elisabeth Hodgdon, Vegetable Specialist

Cold-tolerant brassica crops, including forage radish and mustards, are excellent options for fall cover crops in northern climates. When established in late summer, they produce a large quantity of biomass in the fall until a hard freeze in November or December.

In August and September 2021, we established plots of four different varieties of forage radish, and one variety of mustard on four planting dates. Our research questions were: 1) How late can you seed brassica cover crops for soil coverage and biomass production?; and 2) Which forage radish variety best suppresses weeds? We collected data on cover crop and weed biomass, radish varietal tendencies to bolt, and other observations on the plots in early November, once growth had ceased before winter. We found that mustard produced more aboveground biomass than all radish varieties, and of the radishes, all produced comparable root biomass except 'Carwoodi,' which had the smallest roots. Planting radishes before the end of August is recommended for maximum biomass production. We found very few weeds in all plots; all cultivars suppressed weeds in comparison to our unplanted control.

On Oct. 5, ENYCHP collaborated with the Lake Champlain Basin Program, the Essex County Soil and Water Conservation District (SWCD), and the Cornell Willsboro Farm to host a Cover Crop Field Afternoon. Twenty-three vegetable and field crops growers and agricultural service providers attended. During the meeting, we viewed the research plots and other cover crop demonstration plots on the farm. We discussed how to choose a cover crop species for your farm, which species best suppress weeds, pros and cons to using brassica cover crops, and viewed a no-till drill available for rent from Essex County SWCD. The program presented an opportunity for growers to share with each other the benefits they see from growing cover crops on their farms, their strategies for seeding and establishment, utilizing cover crops for grazing, and more. After many months of virtual events during the pandemic, the field afternoon provided a welcomed opportunity for participants to socialize, share their experiences over apple cider and donuts, and see what we've been up to at the research farm. *(Above: Growers discuss their strategies for using cover crops at the field afternoon in Willsboro on October 5th, 2021)*

CCE Collaboration in Eastern NY

Laura McDermott, Berry Specialist

In December, Cornell Cooperative Extension county and regional staff came together during a hybrid in-person and virtual workshop. The mission of this event was to encourage collaboration in the shared programs of climate change education and research and forest management. Julie Suarez, CALS Associate Dean for Land-Grant Affairs updated the group on NYS Climate Goals and Potential for Ag and Forest Management and Peter Smallidge, NYS Extension Forester, spoke about Forest Health, Resilience and Managing Forest Stress. Staff participated in a 'Hot-Topic' Roundtable, covering issues from Spotted Lanternfly to Grains to Climate Stewards. Following the workshop, the in-person group had lunch and then a Siuslaw Forest woods walk led by CCE Columbia-Greene educators Connor Young and Tracey Testo. A post-workshop survey revealed that attendees felt the effort was important – especially after

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almost 2 years of pandemic isolation from colleagues. Despite the marvel of Zoom, the benefit of being physically together cannot be dismissed. Some of the collaborations that began includes riparian buffer work, Agroforestry fruit crops; cross program education and new members of PWT. Participants want to continue to meet annually or more, depending on the need.

Tracey Testo of CCE Columbia-Greene, talks about mushroom production at the Siuslaw Forest demonstration plot during December collaboration workshop.

ENYCHP Leading the Way for New Fresh Market Potato Varieties

Charles Bornt, Vegetable Specialist

2021 marked the 18th consecutive Irish potato variety trial conducted by the Eastern NY Commercial Horticulture Program. Samascott Orchards in Columbia County hosted the trial where 33 different varieties were evaluated. We greatly appreciate the Samascott's and their continued enthusiasm for hosting this trial as well as all the input they give about the different varieties. Grower input is used to help determine which lines we will continue to evaluate. We continue to add lines from breeders across the county and were very happy to introduce five new lines from our newest cooperator, Dr. Jeffrey Endelman, Associate Professor, University of Wisconsin-Madison. This year's trial was harvested November 1, 2021 with nearly 7,000 pounds of potatoes harvested and graded by the ENYCHP team. Success of these trials has also led to the program receiving funds from NYS Ag & Markets to help coordinate statewide variety trials with extension colleagues in Western NY and Long Island.

Generating Data on OMRI-Listed Herbicide Efficacy for Organic Vegetable Growers

Ethan Grundberg, Vegetable Specialist

Weed management is typically the greatest production challenge for organic vegetable growers. With support from the New York Vegetable Research Council and Association, ENYCHP specialist Ethan Grundberg collaborated with Tyler Dennis of Alewife Farm in Kingston, Ulster County to evaluate two OMRI-listed herbicides in his organic carrot fields in 2021. Newer formulations of fatty-acid based herbicides have been advertised as being as effective as conventional contact burndown herbicides like paraquat, but few university trials have been completed to evaluate their potential. The preliminary trial results showed that either of the products, Axxe (BioSafe Solutions) or Homeplate (Certis USA), could be used in place of pre-crop emergent flame weeding without any decline in weed suppression. Both products also showed promise in controlling annual broadleaves when applied multiple times using a shielded sprayer between crop rows. The results were shared during the Carrot and Beet Processing Vegetable Growers Advisory Meeting in December 2021 and will be included in an upcoming issue of Produce Pages. Grundberg is hoping to continue his work with OMRI-listed herbicides in 2022 to continue evaluating pre-crop emergent applications in carrots and shielded applications in other crops like bush beans.

Completing a weed count in the 2021 OMRI-listed herbicide trial at Alewife Farm.

Fight the Mite! The Latest in Garlic Research

Crystal Stewart Courtens, Vegetable Specialist

New York is the 4th largest garlic producing state in the nation, and the number of garlic farmers here has been consistently increasing year after year. In an effort to continue to support this growing sector of the vegetable industry, Crystal recently secured funding through Northeast SARE to work with University of Vermont entomologists on managing a microscopic mite damaging garlic in storage. Eriophyid mites are one of the most damaging pests of garlic worldwide, and have become an increasingly serious problem in New York over the last ten years. We will be releasing predatory mites in storage facilities with garlic, and measuring whether they are able to effectively eat the mites eating the garlic. Six farms will be involved in the initial work, including two in our region. If this work is successful, it could help hundreds of farmers reduce their storage losses and increase profitability each year.

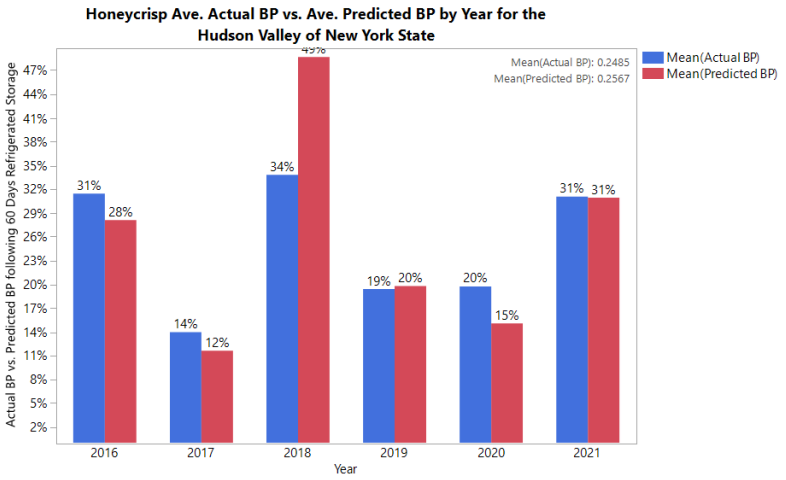
EMR Model Successful in Predicting 2021 Storage Bitter Pit in Hudson Valley Honeycrisp

Daniel J. Donahue, Tree Fruit Specialist

The EMR model predicted a troublesome BP storage season for the HV crop in 2021, and this turned out to be correct with average BP incidence observed in our long-term commercial orchards of 31% (Fig. 1). BP wasn't our only problem this season as defects such as skin cracking, black rot, bitter rot, and russeting combined to push many packouts below 50%.

The EMR model performed well on an individual orchard basis as accurate recommendations were made in 22 of 24 evaluated orchards. The model did not make the major mistake of recommending long-term storage when the actual result was bitter pit above 15%. The model also exhibited a degree of sensitivity to crop load effects in the Bud.9 orchards, but less so for the EM.26.

The EMR prediction model was developed in Hudson Valley and Champlain Valley orchards during the 2016-2018 seasons and validated statewide in 2019 and 2020. 'Honeycrisp' while one of our most valuable varieties produced in NYS has the potential for high losses to the BP disorder and this was observed in 2021, Average cullage of 31% observed in 2021 equate to dollar losses of as much as $7,750 per acre.



Summary EMR model bitter pit (BP) prediction performance for 19 Honeycrisp orchards in the Hudson Valley of New York State from 2016 through 2021. As predicted, 2021 was a troublesome year for Honeycrisp, similar to our experience in 2016, not quite as bad as 2018. From a "global" perspective, the EMR model has performed well in predicting BP for the Hudson Valley region.

The Next Generation of Produce Farmers

Teresa Rusinek, Vegetable Specialist

ENYCHP has launched a new peer development and risk management program for next generation (next gen) growers. The program is targeted to farmers in multi-generational farm operations looking to move into a leadership or ownership position on the farm. The program offers opportunities to gain production and business skills while networking with peers in the region.

The monthly training and networking programs offer an opportunity to gain production and business skills while networking. Participantswill take an active role in determining the types of training they feel is needed.

November 10th was our first program at Samascott Farms in Kinderhook,. The group toured post-harvest and storage facilities with next gen farmers Jake and Brian Samascott. Chris Callahan, Extension Ag Engineer at UVM, and ENYCHP production and business management specialists were on hand to answer questions and facilitate discussion of enterprise diversification, risk management and approaches to build sustainability within multi-generational farm families.

ENYCHP Next Gen Farmer Post-Harvest & Storage Tour at Samascott's Orchards

Future "Next Gen" workshops are scheduled for: Jan. 26th Family Communications; Feb. 10th - Leadership Skills In Your Business; Feb. 18th- Leadership Training Opportunities; Feb. 24- Importance of Leadership: Getting Engaged; March- Mechanics of Farm Transfer/ Farm Insurance/Agencies Serving Farms and Grants. A Teachable website was developed to house resources and tools for program workshops as well as recordings of workshops participants can view at their convenience.

A Slack group (a messaging app for teams) helps participants interact directly with peers and receive direct assistance from extension specialists. Please refer next gen growers you think may be interested in this program to Teresa Rusinek tr28@cornell.edu or Liz Higgins at emh56@cornell.edu.

Tree Fruit Herbicide Study Completes First Year of Trials

Michael Basedow, Tree Fruit Specialist

NYS commercial apple growers have many herbicide products to choose from, including those that are applied in the fall. This is a good option when harvest and weather cooperate. While the efficacy of fall-applied products has been tested, we did not have direct comparisons to see how their efficacy varies if applied in the fall vs. the spring. Some orchards are looking to improve their knowledge and develop a full season integrated weed management program.

Field trials in Peru and Albion NY were established in fall 2020 to compare different pre-emergent herbicide timings. The commercial herbicide products Chateau, Prowl, and Rely were applied in commercial orchards, and on adjacent plots in the spring of 2021. These treatments were replicated five times across the orchard to improve statistical significance. The percent of weed cover, weed height, and weed count by species was monitored throughout the plots. The plots were re-treated with post-emergent herbicides as needed, which was determined by using a groundcover of 20%, or a weed height of 25cm as our treatment thresholds.

Trunk guards were installed on half the treated trees in 2020, so we could determine if tree guards had impacts on tree growth. We collected data on where herbicides deposit onto the tree trunks when sprayed, and collected data on tree growth, tree survival, and canker development.

We plan to discuss results during 2022 winter meetings, and will write grower articles for distribution.

Effects of NY Ag Overtime Laws on Production Costs and Competitiveness for Vegetable, Fruit and Dairy Farms—A Dyson/CCE ENYCHP collaboration

Elizabeth Higgins, Business Specialist

The Farm Laborer Fair Labor Practices Act (FLFLPA) regulating New York farm employers went into effect on January 1, 2020. Under the FLFLPA, overtime and day of rest rules were put in place for most non-supervisory, non-family farm employees. This meant that the overtime threshold for hired employees in New York agriculture now begins at 60 hours. In addition, the minimum wage for upstate New York continues to increase. The New York Farm Labor Wage Board decided in late 2020 to keep the threshold at 60 hours for 2021 with the intention to revisit the policy with more data and analysis.

The Dyson School at Cornell examined the economic effects of New York overtime laws on farms in 2020 as well as the potential effects of lowering the limit. Elizabeth Higgins of the Eastern NY team and Mark Wiltberger of the Lake Ontario Team interviewed and collected data from 20 fruit and vegetable farms in New York for the study. The report has been widely cited in the press and is being used to help inform the Wage Board hearings in January 2022. The full report is available at EB2021-06_Public.pdf | Powered by Box

Results for Fruit and Vegetable Farms in the Study

- Fruit farm total wage expenses increased 6.8% in 2020 relative to 2019
- Vegetable farm total wage expenses increased 10.1% in 2020 compared to 2019

The biggest challenge on many operations in 2020 was the required day of rest which necessitated tighter controls of crews and activities. The most common response, 11 of the 20 respondents, was to tighten up management over labor use and allocation to focus on most profitable tasks and crops. Farms mentions the use of time tracking software, alternating work crews and reexamining productivity expectations. Many farms described switching to less labor-intensive crops. Most reported planting fewer acres of high labor, lower return crops like summer squash and cucumbers. Other farms discussed shifting their production mix to higher value varieties and dropping lower value/cost varieties. One-quarter of respondents left at least some crop in the field that they would have harvested in past years.

When asked about what changes they would make if overtime went to 50 or 40 hours, half of the farms responded that they would hire additional employees to reduce or eliminate overtime hours. But most also questioned their ability to do so given the current labor market. Unlike dairy farms, however, fruit and vegetable farms can utilize H-2A workers. Many farms indicated that they would likely seek to hire more H-2A workers. They also were concerned that if they capped weekly hours to control overtime costs, these H-2A workers might be less willing to accept positions. Several farms also expressed concerns about housing costs and housing availability for H2A workers.

October—December 2021

207 Phone Consults

266 E-mail Consults

164 Farm Visits

15 Field Meetings

286 Attendees at Field Meetings

23 Webinars/Distance Learning

672 Participants in Distance Learning

Daily, personalized, farm-specific vineyard report addressing weather and pests—delivered to **194** growers for a total of **16,296** unique reports

ENYCH

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, Schenectady, Schoharie, Ulster, Warren, & Washington.

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