

# Cornell Cooperative Extension

## Eastern NY Commercial Horticulture Program

# QUARTERLY HIGHLIGHTS

JANUARY—MARCH 2023

### **Orange County Onion School Delivers Latest Research-Based Recommendations to Muck Onion Growers** *Ethan Grundberg and Maire Ulrich, Vegetable Specialists*

Over 40 onion growers and industry professionals came out on March 9th to participate in a focused morning of research updates at Orange County Onion School held in person at the Pine Island Fire House. Cornell entomologist Dr. Brian Nault presented updates to seed treatment options for managing onion and seedcorn maggot in addition to reviewing onion thrips management programs. Cornell Vegetable Program onion specialist Christy Hoepting presented updates on fungicide trials designed to evaluate the efficacy reducing *Stemphylium* leaf blight severity in addition to leading a conversation on herbicide options for controlling yellow nutsedge. Finally, ENYCHP specialist Ethan Grundberg shared results from his two Onion Research and Development Program funded field trials aimed at screening biofungicides for activity on *Stemphylium* leaf blight and testing late-season applications of pre-emergent herbicides to reduce the risk of Palmer amaranth establishment in direct seeded onion fields. Attendees had overwhelmingly positive feedback for the event, including the comments “best onion school ever!” and “very good program.”



### **NNYADP Supports Winter Greens Research and Outreach in Eastern New York** *Elisabeth Hodgdon, Vegetable Specialist*

The Northern New York Agricultural Development Program (NNYADP) grant program has supported many ENYCHP specialist research and outreach programs over the years. In 2022, the NNYADP funded a grant that included a high tunnel winter greens variety trial at the Cornell Willsboro Research Farm in Essex County. The winter greens variety trial was planted in late September 2022 and was harvested until mid-December, overwintered, and the final harvest took place in March 2023. ENYCHP specialist Elisabeth Hodgdon evaluated yield, regrowth quality, flavor, disease susceptibility, and cold tolerance of 20 varieties of greens for harvest at the baby leaf stage, focusing on brassica crops. The trial included arugula, mustard greens, tat soi, mizuna, and others. Greens in the brassica (mustard) family are particularly cold tolerant and can overwinter in unheated high tunnels. The trial will be replicated in winter 2023-2024, and results will be distributed to growers. In January 2023, the NNYADP grant also funded a virtual high tunnel winter greens workshop as part of the grant. The workshop was attended by 50 producers from the eastern NY region, North Country, and elsewhere in the state. Speakers represented CCE ENYCHP and Harvest New York, industry, and producers who shared their expertise in managing pests and disease, using biological control agents, reducing food safety risks, and marketing winter greens. Demand for winter greens remains strong in much of the state, and CCE aims to support season extension and year-round production to meet this demand.



*Winter greens variety trial funded by NNYADP at the Cornell Willsboro Research Farm in Essex County*

## New Project to Look at Beneficial Fungi in New Orchard Plantings

**Michael Basedow, Tree Fruit Specialist**

Mike Basedow will act as PI for a recently funded SARE Novel Approaches Research project to investigate the use of four commercially available blends of beneficial fungi in newly planted apple orchards. The research team includes Dr. Jason Londo and Hannah Martens of Cornell University, Mario Miranda Sazo and Liz Tee of the Lake Ontario Fruit Program, Jeremy DeLisle of the University of New Hampshire, and Megan Muehlbauer of Rutgers University along with Jen Stanton from the CCE ENYCHP. The project will consist of three replicated, on-farm research orchards in Peru NY, Concord, NH, and Chester, NJ. The field trials will be supplemented by controlled greenhouse studies in Geneva NY. The goal of the project is to determine if any of the four commercially available fungi blends will increase root colonization of the newly planted apple trees by beneficial fungi, and if this colonization results in increase nutrient or water acquisition during the establishment phase. The researchers will also be collecting annual data on tree growth and tree survival. Education plays a large role in this project as well. As part of the project, the research team will be hosting field meetings at each participating farm in 2024 and 2025, with a heavy emphasis on training Hispanic and Jamaican farmworkers, and new and beginning orchard managers. Two of the trainings will be offered in Spanish in Western NY. Trees will be planted this spring, and the project will continue through January 2026. We intend to publish both a peer reviewed article, and Fruit Quarterly articles with our findings.

## Biofungicides, Biorational, and Copper Fungicide Programs to Manage Alternaria Leaf Spot and Head Rot in Broccoli

**Teresa Rusinek, Vegetable Specialist**

Despite grower efforts to implement best cultural practices like crop rotation, production of marketable organic brassica crops in the Hudson Valley is limited by pervasive diseases such as Alternaria Leaf Spot/Crown Rot. Numerous low-risk “bio-rational” fungicide products are allowed in organic production. One of the obstacles organic growers face in managing diseases like Alternaria is discerning which, if any, of these “bio-rational” materials are effective. Although growers have been including these products in their disease management strategies, most have not observed clear results. In collaboration with the Hudson Valley Farm Hub, Cornell Cooperative Extension’s Eastern New York Commercial Horticulture regional vegetable specialists Ethan Grundberg and Teresa Rusinek conducted a series of field trials at the Farm Hub to address gaps in organic management of brassica diseases. After three years of applied field research that began in 2020, the researchers have come to the following conclusions:

- Programs with Oso (polyoxin D zinc salt, Certis USA) can significantly reduce Alternaria severity and increase marketable yield
- Using Oso on a reduced schedule during the season did not result in decreased control during 2022—a dry year.
- Rotate Oso with other commonly used fungicides will help with resistance management.
- Reducing biofungicide/biorational applications **can reduce costs without sacrificing disease control** on foliage or crowns
- Rotating Oso applications with a Stargus + Regalia tank mix **can reduce or eliminate copper fungicide applications that would decrease costs.**



*Top: Alternaria Crown Rot Disease on Broccoli*

*Bottom: Site of 2023 Bio-rational Brassica Disease Management Trial at the Hudson Valley Farm*

## CCE-ENYCHP hosts esteemed pomologist Dr. Esmaeil Fallahi

**Daniel Donahue, Tree Fruit Specialist**

Dr. Esmaeil Fallahi visited several Hudson Valley orchards during a February 16th & 17th tour of the Hudson Valley, and conducted an apple tree pruning workshop and pomology seminar at the Hudson Valley Laboratory. A notable stop on the tour was Rose Hill Orchards in Red Hook where Dr. Fallahi discussed the horticulture of traditional cider apple varieties with the farm staff. Dr. Fallahi is the current president of the American Society of Horticultural Science and a highly respected researcher of international stature with over 300 refereed scientific publications to his credit.

## CCE-ENYCHP Staff Retreat a Success

*By Crystal Stewart-Courtens, Mike Basedow, Natasha Field, Elizabeth Higgins and Laura McDermott*

In late January 2023 the CCE ENYCHP team had a working staff retreat in Hoosick Falls, NY. This was the first time since our winter conference in 2020 that we had all been in person together! The planning committee consisted of Crystal, Mike, Natasha, Liz and Laura with Crystal as our facilitator. It was great to see everyone, to spend time cooking, eating and doing a small amount of recreating.

The purpose of the retreat was to create work plan matrices for individuals and the team. We made good progress on both, and while doing so, realized that we had some challenges in terms of staffing equity and with vehicle inventory. The team requested that Cornell change the job descriptions of our four Technicians to Program Assistants. This will allow the individuals involved to be working at a job that is correctly described by their position description. The technicians/program assistants are highly valued members of the team, and they have been, and will continue to be integral to the process of educational outreach and applied field research. Additionally, we realized that the requirements of ongoing and future field research could not be supported exclusively using fleet sedans. With the support of the Advisory Management Group (AMG), we purchased two pick-up trucks that will be coordinated by Fleet Services. This will make every member of the team's work easier, because all staff will have access to the trucks when needed.

The robust discussion surrounding the question of 'What does a great extension program look like to you?' which pervaded all conversations helped us to think about the value of extension and our role in the larger organization. The discussion should help us to be more accountable to one another as we move forward. The work resulting from this retreat has only begun, but we are confident that we will continue to see positive impacts from our time together.

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## 2023 Winter Fruit & Vegetable School

*Chuck Bornt, Vegetable Specialist*

On February 22nd and 23rd, growers from across the Eastern New York Region gathered at the Desmond Hotel and Conference Center for the Eastern NY Fruit and Vegetable Conference. This was the first in-person conference since 2020, and featured multiple concurrent sessions on tree fruit, small fruit, business management, vegetables, fertility, FSMA/PSA Training, irrigation, and grapes. Cornell Cooperative Extension staff and guest speakers presented on improving farm efficiency, vegetable and fruit disease management, and much more. Highlights of the conference included a presentations by Dr. Megjuin Hu from University of Maryland about managing disease resistance in grapes and strawberries; an update on Spotted Lanternfly in Eastern New York by Brian Eshenaur of NYSIPM; and a grower to grower discussion about the efficacy of Laser Scarecrows with Gerry Barnhart, John Altobelli, Corey Confreda, and Matt Eckhardt. Accompanying the presentations was a large trade show in the main hall, with vendors and company representatives showcasing seeds, fertilizers, equipment, and more. Feedback from grower attendees and vendors has been resoundingly positive.



*Cornell University pathologist Dr. Margaret McGrath gives her last vegetable disease presentation to New York growers before her retirement later this spring.*

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## Orchard Finance Courses Held During Winter Season

*Liz Higgins, Business Management Specialist*

Elizabeth Higgins in collaboration with Craig Kahlke, Dan Donahue and Mike Basedow trained 39 farmers in 5 in-person classes around New York State to use financial modeling tools. These tools are intended to help managers evaluate investment decisions on their farms and are commonly used by businesses. These included: Calculating and interpreting common financial ratios from annual financial statements; Developing an enterprise budget; Conducting a price, volume, cost analysis to determine break-even prices or sales volumes; Developing a partial budget and using it for analysis; Using and interpreting payback period ; Using and understanding Net Present Value and Internal Rate of Return functions in Excel. The class had participants do the calculations in groups and then discuss how to interpret their results to make decisions that also take into account risk, uncertainty and personal preference. Several farmers commented during the class that, although they knew that these tools existed, they appreciated learning how to interpret and use the information for decision-making. This training program was supported by a Northeast Risk Management Education (NERME) Grant.



## January—March 2023

235 Phone Consults

306 E-mail Consults

79 Farm Visits

32 Field Meetings

1445 Field Meeting Attendees

39 Webinars/Distance Learning

2380 Distance Learning Participants

8 personalized, farm-specific vineyard reports addressing weather and pests—delivered to 219 growers for a total of

1752 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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