



Q3 2025

Quarterly Highlights

The Cornell Vegetable Program (CVP) is a Cornell Cooperative Extension partnership between Cornell University and CCE Associations in 14 counties: Allegany, Cattaraugus, Chautauqua, Erie, Genesee, Monroe, Niagara, Ontario, Orleans, Oswego, Seneca, Steuben, Wayne and Yates.

The team of Vegetable Specialists provides educational programs and information to growers, processors and agri-business professionals, arming them with the knowledge to profitably produce and market safe and healthful vegetable crops.



Organic farmer Elizabeth Henderson shares cover crop species selection tips in the cover crop demonstration plots at the Soil Health Field Day held in Rochester, NY. Photo by Frank Keophetlasy. See page 2 for details.

1,537
farm visits and
direct contacts

22
events &
presentations
featuring CVP
Specialists

533
people
attended CVP
presentations



Soil Health Field Day organizers and speakers group shot in the cover crop demonstration plots at the end of a successful field day! Photo by Nicole Kubiczki, NRCS Urban Conservationist.

Soil Health Field Day Gathers Urban Growers Across Western New York and Showcases Cover Cropping in Small Spaces

In September, 65 urban and small-scale growers and agricultural service providers gathered in Rochester for a hands-on soil health field day put on as collaboration between Cornell Cooperative Extension (CCE) Harvest NY, CCE Cornell Vegetable Program (CVP), CCE Monroe, Foodlink Community Farm, Taproot Collective, Monroe County Soil and Water Conservation District, New York Soil Health, Natural Resources Conservation Service, and the Rochester Urban Ag Working Group. The event was a part of the 2025 Soil Health and Climate Resilience Field Days series from New York Soil Health. Attendees came from Rochester, Buffalo, Syracuse, and surrounding areas for a half day of learning, connection, and skill sharing.

The field day featured nine interactive sessions showcasing best practices for building soil health in raised beds while focusing on maximizing biodiversity, soil cover, and living roots, and minimizing disturbance. The field day centered around 24 raised bed cover crop demonstration plots highlighting a variety of warm weather and cold hardy cover crops, in addition to planting and termination strategies. Cover crop demonstration plot design was a collaboration between CVP Specialist Lori Koenick, Foodlink Community Farm Specialist John Miller, and New York Soil Health Team Member Michael Glos. Other field day sessions included talks on the benefits of cover crop roots and best practices for dealing with heavy metal soil contamination from CVP Specialist Lori Koenick and Harvest NY Specialist Mallory Hohl, respectively.

Event feedback thus far has been positive with over 80% of post-event survey responses indicating attendees learned something new and useful, and plan to implement or change a practice based on what they learned from the event. Attendee comments on something they are taking away from this event included “excitement to do additional experimenting and succession planning with cover crops to improve my farm’s soil health” and an awareness “there are many cover crop growing methods that can work in different kind of growing spaces.” Over 15 topics were suggested to cover in future events.



Vegetables Included in Statewide Neonicotinoid Risk Assessment Trials

Cornell Integrated Pest Management (IPM), Cornell University's Department of Entomology, and Cornell Cooperative Extension (CCE), with support from the New York State Department of Agriculture and Markets, have launched the largest on-farm field research and extension project in program history. The project is designed to better understand, identify, and support the transition away from neonicotinoid insecticide seed treatments in conjunction with the New York State Birds and Bees Protection Act. Growers from more than 80 farms across New York State are participating in the trials, which aim to determine where and when there is a significant risk of pest damage; aid in the development and deployment of a seed pest risk assessment tool; and test and demonstrate IPM alternatives, including the viability of not using insecticide seed treatments.

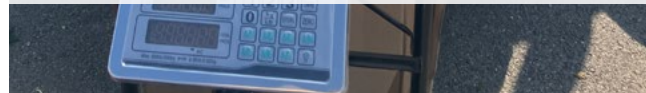
CCE Cornell Vegetable Program Processing Vegetable Specialist, Julie Kikkert teamed up with Marion Zuefle, Cornell IPM, to conduct on-farm field trials in processing sweet corn and snap beans this summer. In coordination with processing field representatives from Farm Fresh First, LLC and five WNY growers, plots were established in two snap bean and four sweet corn fields. Each plot consisted of one acre of seed treated with the standard program of neonicotinoid insecticide plus fungicide, planted next to a one-acre block with seeds treated with fungicide only (no insecticide). Following the statewide protocol, 9 sections per treatment in each field were evaluated at set times for seed emergence, early season pests such as seedcorn maggot, wireworms and cutworms, and biomass. The plots were scouted for other insects for the remainder of the season until yield data was collected. Detailed field history and in-season crop management information was recorded and will be used in the risk assessment protocol along with the other fields statewide (field corn and soybeans). This project will continue for another two seasons to collect more robust data.



Marion Zuefle, Cornell IPM, (above) and Kaitlyn Stearn of the Cornell Vegetable Program (in the distance) digging sweet corn seedlings to check for early season pests.



Cornell Vegetable Program technicians evaluate snap beans harvested from the trial. Photos by Julie Kikkert.



CVP Specialists Facilitate Faculty Connections to NYS Vegetable Growers

WHO?

Cornell Vegetable Program (CVP) educators Judson Reid and Lori Koenick have working relationships with faculty across multiple campuses and research stations. These relationships bring cutting-edge ag science and diagnostic services to growers, ensuring a competitive ag economy in New York. [Jenny Kao-Kniffin](#), Soil Ecologist in the School of Integrated Plant Sciences at Cornell is an example of faculty advancing research-based knowledge for the industry. Jenny researches how soil microbes affect plant traits, the diversity and function of these communities. Much of her work occurs in urban settings. Members of Harvest NY's Urban Ag team, CVP and county CCE staff support vegetable growers implement best management practices in soil management with science from faculty such as Jenny. As a reminder, CALS is among the top ranked agricultural universities in the world. Connecting faculty with local growers creates access to this world-class resource.

Who are the growers? In this case, farmers in WNY urban centers as well as rural high tunnel growers in the Finger Lakes.

WHAT?

We were successfully awarded a USDA grant of \$500,000! All the connections (faculty, grower, CCE, other labs) were critical to a successful proposal. In this proposal, Cornell Cooperative Extension, in collaboration with Cornell University, Cary Institute for Ecosystem Studies, and 12 vegetable growers, investigated three management approaches for high organic matter soils: pH adjustment, cover cropping, and calibrating soil test results to account for bulk density. Soil microbial activity and diversity associated with the adoption of these techniques was researched by Jenny Kao-Kniffin's lab. Throughout the project period, we conducted 132 soil samples in 84 unique locations on 18 farms. We gave 52 presentations and workshops reaching 2686 participants. The project team conducted 438 farm visits and 304 off-farm consultations (phone and email). Project publications included two factsheets, eight newsletter articles, five urban case studies and one technical research report.

“These relationships between farmers and scientists/ researchers are so important and vital!”

“I feel more capable of reading soil tests results and making strategic decisions to care for soil health. I also feel more connected to our local extension office and confident in my resources!”

Project Results and Impacts

Lab tests documented a general trend of higher microbial indicators with cover crops, particularly where biomass values were higher. Specifically, microbial biomass C, microbial biomass N, and respiration potential were nearly 2-3 times the value in high performing cover crop plots compared to bare ground and had higher microbial diversity, evenness and richness.

What is the value of these treatments we demonstrated?

A current price (\$49.75/50 lb) for conventional soluble fertilizer (20-20-20) gives a grower cost of \$4.98 USD/lb N. In Year 1, the economic value of our lowest performing plot could be estimated at \$184.26/A. Our Year 1 highest performing cover crop would have a fertilizer value of \$383.46/A. In Year 2, these values would range between \$528.36/A and \$886.44/A.

We can also apply this analysis for certified organic sources of N fertilizer. Current prices for general purpose 5-3-4, certified organic fertilizer are \$69.99 USD for 50 lb, or a unit cost of \$28 USD/lb N. This raises the potential value of the Year 1 lowest performing plot to \$1036/A. Our Year 1 highest performing treatment would have an organic fertilizer value of \$2156/A. In Year 2, these values would range between \$2996/A and \$4984/A! This means farmers implementing our results gain nearly \$5000 per acre.

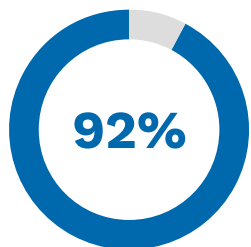
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We did see a 6.7% average increase in organic matter with cover cropping. As a reference, for every 1% increase in organic matter, soil can hold an additional 20,000 gallons of plant-available water per acre. So farmers adopting our methods filter an additional 134,000 gallons of water per acre. That is the equivalent of 5 inches of rain!

We also assessed knowledge gained and adoption outcomes.

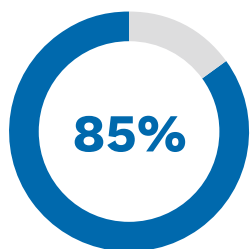
Grower Evaluation Results



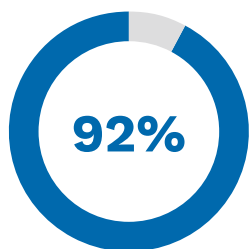
learned new or increased their knowledge of soil management strategies



increased their ability to manage soil health on their farm



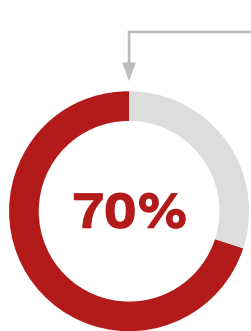
are better able to understand soil test results



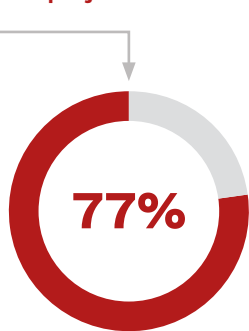
increased their understanding of soil biology



have used one or more soil management practices on their farm as a result of the project



learned new or increased their knowledge of soil management strategies



increased their ability to manage soil health on their farm



Buckwheat as a cover crop in a Monroe County urban farm. Our collaborative research shows cover crops can improve organic matter.



High-yielding crops require high levels of nutrients. Our research shows that farmers can save up to \$5000 per acre in fertilizer.



The intensive cropping patterns of high tunnels can impair soil health. Our research fine tunes management techniques to sustain soil productivity over the long term. Photos by Judson Reid.

The CVP would like to acknowledge the contribution of our Cornell faculty like Jenny Kao-Kniffin, the USDA and, of course, our farmer cooperators.

Weather Extremes Challenge Vegetable Growers this Season

Who would have thought back in the spring, with all of the heavy and seemingly endless days of rain, that by the summer WNY would be in the grips of a severe drought? Above average rainfall was found in most counties going into May then to have less than an inch and in many areas only around 0.1" per month for more than 60 days. Typically, summer rains account for 2.5-3.5" of rain per month. The soil moisture deficit currently is quite high and will take a while to make up the shortfall. This has really taken a toll on vegetable growing and our vegetable growers.

Early in the season, Cornell Vegetable Program (CVP) Specialists were in the field focusing on the problems with the early wet soils. It was hard for farmers to get onto the land to field prep and plant on time. Some crops that did manage to get planted were exposed to cool wet conditions. Not ideal for a great start. The talk was all about "hoping the sun comes out and dries things out".

Unfortunately with widespread droughty conditions, it is hard to predict it coming until it is already in full play. CVP provided information on effective irrigation in hopes that the heat/dry would break and vegetable plantings would catch some much needed rain. Irrigation never truly replaces decent timely rains though. The longer it stays dry, the harder it is for irrigation to make up the difference. For many growers, their irrigation water supply sources started to dry down, making the situation even worse.

The Cornell Vegetable Program has taken the lessons learned from working with growers this dry season and are determined to provide more guidance on irrigation efficiencies, figuring costs of irrigation, and looking at technology to provide new tools to better aid growers ahead of future conditions like this growing season has endured.

Western Bean Cutworm Trapping in Dry Beans Monitors Year-to-Year Pest Pressure

Western bean cutworm (WBC) is a moth pest that causes direct damage to dry beans and corn in its larval form. Cornell and the Cornell Vegetable Program (CVP) have been monitoring WBC numbers in dry beans since 2011 through trap networks throughout western NY. Over the past few years, we have measured best trapping practices for WBC in dry beans and put those methods to use this summer. We set up traps in 15 dry bean fields in 8 counties across western New York. Each week we checked traps for WBC moths and monitored trends across the region throughout the summer.

This year, WBC numbers were similar to what we have seen in the region in recent years. Each year we see fluctuations, but overall moth numbers appear to have leveled off slightly since 2021 when we saw the highest number of moths in dry bean fields since they were introduced. We are able to use this information to alert farmers to moth numbers on their farm or in their area throughout the summer so that they may make informed management decisions for their dry beans. Some farmers may see high numbers and use that as an indicator to treat their fields, while others may learn that numbers are low and treatment isn't needed. By continuing to track WBC in dry beans in Western NY, we can see how this pest continues to impact the region and educate farmers about the risk to their farms.



CVP Onion Scouting Program Returned to Full Force in 2025

Under the leadership of Cornell Vegetable Program (CVP)'s Onion Specialist, Christy Hoepting, approximately 4,400 acres of onions valued at ~ \$45 million are grown in the CVP region, which accounts for ~ 20% of its vegetable production and ~ 60% of the state's production. This crop is grown on muck soils rich in organic matter, which makes for one of the state's most exciting and intensive agricultural production systems.

Christy collaborates with muck onion growers in all aspects of onion production to sustain the viability of this valuable crop. But her Onion Scouting Program is the “beating heart” of her onion program. Every week during the last several growing seasons, Hoepting and her technicians vigorously scout 1-2 onion fields per farm, and growers share their spray records. The scouting team diligently summarizes and compiles the data and spray records into three regional reports complete with research-based recommendations for pest management for each field. The reports are shared with the onion growers in each region. In 2024, the CVP Onion Scouting Program operated at a reduced capacity due to unexpected staffing and personal circumstances.

During the 2025 growing season, the CVP onion scouting program returned to full force:

- **17 muck onion fields were scouted** in Elba muck, Wayne Co. and Oswego Co.
- It took **5 scouts and 3 days/week** to scout the region:
On Mondays, Christy and trainees Camila (Technician II) and Kaitlyn (1st-Year summer Technician) scouted 7 fields in Elba, while Lead Scout Destiny (3rd- year Summer Technician) scouted 4 fields in Wayne Co. On Wednesday, Destiny and Camila scouted 6 fields in Oswego Co.
- Also, the team trained a Ph. D. candidate in Brian Nault's Entomology program, Katherine, to scout onions in Wayne and Oswego Cos. as part of her **Extension and Outreach Assistantship**.
- The Onion Scouting Program ran in all 3 regions for **14 consecutive weeks** from June 2 to September 2 and included 42 separate onion scouting reports, which were sent to **33 onion growers, crop consultants, scouts and Cornell researchers** each week.
- In total, Christy made **238 individual research-based pesticide recommendations, which covered at least 960 acres of onions**. That's a lot of influence!



The 2025 CVP Onion Scouting team. From left to right: Destiny Schultz (Lead Scout in Wayne & Oswego Cos. and 3rd-year Summer Technician), Kaitlyn Stern (1st-year Summer Technician), Christy Hoepting (CVP Onion Specialist) and Camila Ichazo (1st-year Technician II). Photo by Andy Harrington.

The CVP Onion Scouting Program is a “heavy lift” but worth all the effort:

- ✓ Muck onion growers highly value the onion scouting program, as managing the pest complex in muck onions is the most complicated of any crop.
- ✓ The effectiveness of grower spray programs is literally measured in real time through detailed field scouting.
- ✓ It ensures grower engagement and encourages team building via transparency of spray programs and scouting data and provides opportunities to learn from each other through shared scouting reports.
- ✓ It is critical to implement research-based recommendations that may otherwise “remain on the shelf.”
- ✓ It is imperative for early detection of emerging issues to allow them to be addressed in a timely manner before economic loss occurs.
- ✓ Early career agriculturalists (technicians, graduate students) experience highly effective Extension programming that is valuable to their future endeavors.

Niagara Region Summer Meeting Builds Community, Grows Farmers' Knowledge

As the sweltering afternoon sun gave way to the golden light of evening on August 7, vegetable farmers from across Niagara and surrounding counties gathered at J. Hurtgam Farms in Ransomville for the Cornell Vegetable Program's 2025 Niagara Region Summer Meeting. Forty people, from next generation growers in their first years to producers with five decades of experience, from industry members to university professors, came to share a meal with their vegetable community and to learn new knowledge and skills to improve their farms' performance.

The night began with a pizza, wings, salad, and dessert dinner generously sponsored by BASF. Jeff Hurtgam, who hosted the field meeting, provided a watermelon, one of the first ripe ones of the season. Growers enjoyed the opportunity to network, meet new colleagues, and catch up with friends during dinner.

The special guest speaker for the evening was Dr. Steve Reiners, who gave the last field meeting talk of his career before retiring from his position as Professor of Horticulture with Cornell University. Steve spoke about crop fertility, getting into the details of what specific nutrients like potassium, calcium, and phosphorous do inside vegetable plants. By better understanding how and when plants use specific nutrients, growers can maximize the health, yield, and fertilizer use efficiency of their crops. Steve's talk was very popular and there was a lengthy Q&A/group discussion session afterwards.

Next was a hands-on, peer-to-peer field scouting lesson. CVP specialist Elizabeth Buck led the group through a scouting exercise in brassicas and squash, facilitating the group in learning from one another about which techniques work best and how to recognize pests and diseases. Some growers were so engaged in the activity that it was hard to move on to the next stop on the evening's farm tour!

The final stop for the night featured two pieces of CVP-led on-farm research. The first was a variety trial in sweet corn that was screening for tolerance to a new, serious disease called tar spot. Cornell Plant Pathologist Dr. Sarah Pethybridge taught growers about tar spot's life cycle, how to tell it apart from other diseases, and had an opportunity to walk the quarter acre trial. The meeting finished with a late blight update and viewing of a potato variety demonstration featuring russet varieties, led by CVP's Margie Lund.



Dr. Sarah Pethybridge talks about how to recognize tar spot at the 2025 Niagara Region Summer Meeting. Photo by Julie Kikkert.

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