



Re2022view

Regional Commercial Vegetable Specialists

The Cornell Vegetable Program is a Cornell Cooperative Extension partnership between Cornell University and County Associations in 14 counties—Allegany, Cattaraugus, Chautauqua, Erie, Genesee, Monroe, Niagara, Ontario, Orleans, Oswego, Seneca, Steuben, Wayne and Yates—serving the commercial vegetable, greenhouse, potato, and dry bean industries in New York.

Cornell Cooperative Extension
Cornell Vegetable Program



Cornell Cooperative Extension Cornell Vegetable Program 14-County Region

This region accounts for more than half of all vegetable acres in the state with 1,229 farms, and a farm gate value exceeding \$200 million¹.

3,067

farm visits and crop consultations made by the Cornell Vegetable Program team

91

educational meetings and presentations given by Cornell Vegetable Program Specialists

3,507

people increased their knowledge by attending presentations given by the Cornell Vegetable Program

Education and Technical Assistance Provided to Providence Farm Collective

The vision of [Providence Farm Collective](#) (PFC) is to “Empower Just and Equitable Access to Food and Farmland.” Located in Orchard Park, NY, PFC’s incubator farm program centers the farming and business education needs of refugee, immigrant, and Black farmers who primarily reside in Buffalo. PFC partners with organizations like CCE and WEDI to provide technical assistance and workshop support for farmers. PFC includes 21 small farms (8 community farms, 12 incubator farms, and PFC’s demonstration farm), encompassing 275 farmers and 50 youth employees who work 15 ½ acres of farmland, while also working other jobs. Each incubator farmer has a ¼-acre plot to grow crops chosen by the farmer. Overall, roughly 35 varieties of traditional and culturally significant crops are grown.

Produce quality is important for sales and for distribution to food pantries and institutional sales. The CCE Cornell Vegetable Program taught workshops on crop production, pest management, cover cropping, and farm food safety practices to reduce the risk of contamination using simple and easy to understand techniques. Equitable and culturally responsive language access is key for a successful workshop, so PFC’s Farm Mentor Mahamud Mberwa and other farm leaders work alongside Elizabeth Buck to provide these trainings in 4 languages.

After the successful completion of a joint capital campaign with the Land Conservancy, PFC will be building a new facility to house coolers, wash/pack areas, meeting space, kitchen facilities, and more. The CCE Cornell Vegetable Program is further engaged with PFC through Robert Hadad’s participation and input on the organization’s building sub-committee, and CCE Erie’s future move to Burton Road, where the two organizations will continue to grow their collaborative partnership.

Written by Cornell Vegetable Program and Providence Farm Collective



¹ 2017 Ag Census

Engineering Improvements in Biodegradable Mulch

As anyone who has used it can tell you, biodegradable plastic mulch films aren't great at biodegrading. The breakdown process can take a couple years and leaves fields strewn with plastic pieces in the interim.

Researchers and engineers at the Rochester Institute of Technology (RIT) have partnered with the CCE Cornell Vegetable Program (CVP) and CCE Monroe County to develop and conduct real-world tests on cutting-edge advancements in bioplastics engineering. These innovations include:

- a new biodegradable film prototype with enhanced breakdown properties
- a pre-conditioning step in the film manufacturing process that promotes breakdown
- discovery of naturally occurring, locally adapted soil bacteria that can eat bioplastics

CVP staff and RIT PhD students Yvan Hernandez and Harshal Kansara are conducting field tests of these three breakthroughs. The prototype biodegradable mulch and the pre-conditioning step are being tested for agronomic suitability. We are also testing different methods and timings for applying the bioplastic-consuming microbes to a commercially available biodegradable mulch.

Over the next two years, the CVP-RIT-CCE Monroe team will closely characterize the rate of breakdown for all these innovations and continue to test further refinements. Stay tuned for future results!

A RIT student, Yvan Hernandez, and Cornell Vegetable Program Technicians sample mulch plots at the end of the season. Photo by Elizabeth Buck, Cornell Cooperative Extension



Perseverance Leads to Solution for Perennial Sowthistle in Onion

Perennial sowthistle (PST) is a devastating weed in dry bulb onion production in Elba, NY. Uncontrolled, PST can easily cut yields in half. PST is a perennial weed with hardy underground rhizomes that previously escaped all herbicides used in muck onions, leaving aggressive hand weeding (averaging \$175/acre) as the only management option. Because PST accumulates so much biomass, hand weeding crews need to visit heavily infested fields twice as often as they typically would, doubling hand weeding expenses.

Biomass of Perennial Sowthistle in On-Farm Trials in Onions

	Untreated	Hand Weeded (x2)	Stinger 8 fl oz + 1 Hand Weeding
Aboveground Biomass			
Belowground Biomass			
Cost (\$/acre)		\$350	\$183

Through dozens of on-farm trials over the past 9 years, CCE Cornell Vegetable Program Onion Specialist Christy Hoepting has found a solution to PST. The novel herbicide Stinger was determined to be effective because, unlike other herbicides, it destroys the weed's belowground rhizomes. Hoepting optimized rate and timing of Stinger and integrated the herbicide into existing programs without compromising crop safety.

To get Stinger labeled for use in onion, Hoepting worked closely with Corteva, the company who makes Stinger, and the Federal IR-4 program, which supports new product uses. Finally, in 2022, Stinger herbicide was granted a Special Local Needs label in New York. At \$8/acre, Stinger **reduced the cost of perennial sowthistle control by ~50%, which resulted in \$75,000 in savings (due to reduced hand weeding expenses) in the Elba muck in 2022.**

The new technology that Stinger brings to the table will go a long way towards sustainable onion production, especially as growers face tighter margins with higher costs and reduced availability of labor for hand weeding.



Christy Hoepting, in 2013, when she first started working with Stinger to control perennial sowthistle in onion. Thanks to her perseverance, Stinger is now labeled to control this devastating weed in New York; the only label of its kind in the country.

Potato Programming Spans Farms of All Sizes

Western New York is home to the highest potato producing counties in New York State. The CCE Cornell Vegetable Program (CVP) works with growers of all scales that produce chipping and table stock varieties. This year, the CVP provided education to this wide grower base at multiple events with presentations focused on production and varieties. At an August Twilight Meeting in Genesee County, CVP Specialists Margie Lund and Robert Hadad showcased a trial which highlighted commercially available fresh market potato varieties that may be of interest to diversified vegetable growers. On the larger scale, commercial chipping potato growers came together at this year's Chipping Potato Grower Twilight Meeting in Steuben County, to learn about insect pest management and view the chipping potato variety trial organized by Cornell's potato breeder Walter De Jong. Growers provided input on quality and traits for the breeding program.

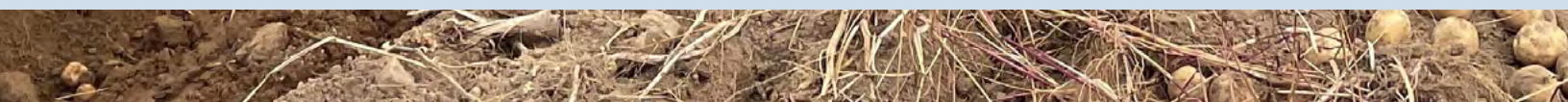
These events helped our team connect with local potato farmers throughout the region and continue to build strong relationships within the potato industry.



CVP Specialist Robert Hadad shows potatoes from the small-scale potato variety trial to a group of diversified vegetable growers. Photo by Margie Lund, Cornell Cooperative Extension



Walter De Jong (second from left) presents the chipping potato variety trial to a group of chipping potato growers and industry members at the Chipping Potato Grower Twilight Meeting. Photo by Margie Lund, Cornell Cooperative Extension



Improving Winter High Tunnel Soil Nitrogen Management

Recent studies reveal a rapidly changing economic reality for New York farmers. Potassium and phosphorus fertilizer prices nearly doubled over the last year, and nitrogen in some cases, tripled! Ongoing research by the CCE Cornell Vegetable Program contributes to farm sustainability by reducing reliance on shipped-in nitrogen and decreasing inputs. Austrian field peas and triticale were trialed as cover crops at a cooperating farm to examine the benefit of nitrogen fixation, scavenging and biomass production in high tunnel tomatoes.

- Row cover increased cover crop biomass, without the need for additional heat inputs.
- The best treatment of early cover crop planting date combined with row cover led to higher N scavenging/fixation of up to 102 lbs per acre. With a Cornell Vegetable Guidelines recommended fertilization rate of 125-150 lbs of N per acre, our project demonstrated tremendous potential to reduce fertilizer inputs!

Research results were distributed to 5,107 individuals through in-person meetings and media outputs. Of those farms that implemented cover crops, 90% reported an improvement in their operation. We estimate our work created a new gross savings of up to \$89,760 per year for the reporting farms. Total potential industry impact in New York State: \$564,311.55 per year.

The work was funded by a USDA Specialty Crop Block Grant, administered by the New York Farm Viability Institute. We used this project to leverage continued support from the USDA NRCS Conservation Innovation Grant for a 3-year, \$500,000 project, currently underway.

“.... You’re going to get more growth through better fertility...the soil is going to be better....I want to thank Cooperative Extension for working with us on this... We’ve really enjoyed the partnership.

– a cooperating farmer

”

Laser Scarecrows Tested on Local Farms

Laser scarecrows use a rapidly moving green laser beam to scare birds from fields. Over the last two years, the CCE Cornell Vegetable Program tested the [device designed by the University of Rhode Island](#) (URI). Feedback from project cooperators led to a significantly improved design for 2022.

Seven WNY farms cooperated in trials this year. Lasers were deployed in commercial sweet corn fields 10 to 14 days prior to harvest and moved to new plantings regularly. Overall, there was a lower percent bird peck in fields with lasers compared to nearby fields without lasers. The addition of a BirdGard squawker device further reduced bird damage. However, bird damage increased with distance from the laser.

The lasers are not a “silver bullet” and additional research is needed to optimize set-up and coverage. This project is supported by grants from the New York Farm Viability Institute and the USDA NIFA Multistate Specialty Crop Block Grant Program. Other cooperators on this project are Marion Zuefle, NYS Integrated Pest Management Program, and Chuck Bornt, CCE Eastern NY Commercial Horticulture Program.



CCE Cornell Vegetable Program Technician, Anthony Rampulla, Jr. setting up a laser scarecrow. Photo by Julie Kikkert, Cornell Cooperative Extension



CCE Cornell Vegetable Program Specialist Julie Kikkert adjusts controls on the laser scarecrow. Photo by Julie Kikkert, Cornell Cooperative Extension



Support

Without the financial and in-kind donations by area vegetable producers, agribusinesses, and grantmakers, the Cornell Vegetable Program could not offer the level of support that we provide to the New York vegetable industry. Thank you!

In-Kind Donations

Abe Datthyn Farm – Kevin Datthyn, Mike Johnson
Amos Zittel & Sons, Inc. – Mike Wright
Bezon Farms – Joe Bezon
Big O, Inc. – Max Torrey
Brewster Street Farm – Lauren Dawes, Journey's End
Refugee Services
Brubaker's Produce – Arlan Brubaker
Bushart Farms – Brent Bushart
Jake Byler
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C.C. Farms – Craig Chelini
Chautauqua Produce Auction – Chester Bricker, Crist Byler
Common Roots Farm
CY Farms – Mike Riner
Dan Dunsmoor Farms – Joe Burghart
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Duncan Family Farms – Rick Pedersen
Dunsmoor Farms – John Dunsmoor
Duyssen Farms – Dan Duyssen
Edgewood Farms – Clay Phelps
Farm Fresh First – Mike Gardinier, Roger Ward, Buzzy Lowe,
Steve Lashbrook, Mike Lynch
Fenton's Produce – Paul Fenton
Fish Farm – Lynn Fish
Gakwi:yo:h Farms – Michael Snyder, Gerry Fisher, Allen Gage
Genesee Valley Bean – Mark Callan
Genesee Valley Produce Auction – Emma & David Nissley,
Ben Girod
Gianetto Farms – Nick Gianetto
Enos Girod
John Girod
Groundwork Market – Mayda Ponzatides
Harrington's Produce – Andy Harrington
Harris Farm Market – Nate Harris
Henry W. Agle & Sons, Inc. – Jonathan Agle
Jake Hostettler
Huntington Farm Market – Dan Huntington, Carl Huntington
J. Hurtgam Farms – Jeff Hurtgam
Jacobson Farms – Adam Jacobson
John R. Wallace Farms – John Wallace

Johnson Creek Produce – Levi Stauffer
Johnson Potato Farm – Eric Johnson
K.S. Datthyn Farms – Eric Tuttle
King's AgriSeeds – Don Wild
Kreher Farm – Josh Jurs
Dave Krist
L. Stoltzfus Farm
Love Beets – John Henderson
Lynn-Ette & Sons Inc. – Darrren Roberts
Maple Lane Produce – Nelson & Ruth Hoover
Martens Farm – Peter Martens
Curvin Martin
M-B Farms – Dave Paddock
Morgan Brothers Farm – Mark Morgan
Munsee Farms – David Munsee
Pleasant Valley Farm – Paul & Sandy Arnold
Preferred Seed – Garrett Coleman, Ray Favale
Providence Farm Collective – Beth Leipler, Ike
Placke
R. L. Jeffres & Sons – Tom Jeffres
R. Hoover Farm
Emmanuel Raber
Reed Farm – Bruce Reed
Rickard Nursery Growers – Pete Rickard
Root Brothers Inc. – Robin Root
Seneca Foods – Jeff Johnson, Jay Westfall,
Jerome Kingston
Sorbello & Sons – David Sorbello
Henry Stutzman
Tomion Farms – Paul Tomion
Triple G Farms – Guy Smith, Peter Smith
Urban Fruits and Veggies – Allison DeHoney
W.D. Henry & Sons, Inc. – Dan Henry
L. Weaver Farm
Williams Farms – Garret Williams
Wilson Street Farm – Mark and Janet Stevens
Windy Hill Farm – Erin Bullock
Woody Acres Farm – Dave Woodward
Yerico Farms – Derek Yerico

New York Vegetable Industry Support



It takes a team! Muck onion production in New York is one of the most intensive agricultural production systems in NYS. At Muck Donut Hour, the Cornell Vegetable Program (CVP) meets every week with Elba muck onion growers, crop scouts, and ag chemical industry reps to use scouting data to make research-based pesticide spray decisions. From left to right: Sarah Caldwell (CCE CVP Lead Onion Scout), Lidia Komondy (Ph. D. candidate, studying onion thrips and IYSV with Brian Nault), Clay Phelps (new onion grower from Lima, NY who drives 1 hour every week to attend Muck Donut Hour), Jesse Snyder (Helena representative), Joe Bezon (Elba onion grower), Christy Hoepting (CCE CVP Onion Specialist), Peter Smith (Elba onion grower), Max Torrey (Elba onion grower), Lori Ames (Crop consultant for CY Farms), and Mike Riner (Elba onion grower).



Local farmer and frequent CVP collaborator, Paul Fenton (on the right), shares his experience growing carrots at a 2022 meeting held on his farm in Batavia.



High tunnel cover crop trial preparations by Maple Lane Farm.



Research grants and projects managed by the Cornell Vegetable Program*



Value of research grants and projects managed by the Cornell Vegetable Program*



Farms and organizations offered land, labor, and/or supplies to support Cornell Vegetable Program research trials and events

Contributions

Henry W. Agle & Sons, David Agle
Abe Datthyn Farms, Kevin Datthyn
Chad Amsler
Anderson's Produce, Kevin & Nancy Anderson
Karen Baase
Chris Becker
Bodine Farms, Robert Bodine
Bowman Farms, Larry Bowman
Jonas Z Burkholder
C.C. Farms, Craig Chelini
Evergreen Farms, Eugene Hoover
Henderberg Farm, Charles Henderberg
Hillside Produce, Lowell Zimmerman
Johnson Potato Farms, Mark & Eric Johnson
Kreher's Poultry Farms, Brett & Mike Kreher
Kwilos Farm & Greenhouse, Joseph Kwilos
Maple Ridge Fruit Farm, Gary & Barb Wells
Timothy Martin
Gary Patterson
Reeds Farm, Bruce Reed
Reukauf Farms, Charles Reukauf
Root Brothers Farms, Robin Root
Sensenig Farm, Curvin Sensenig
Sweeney Fruit & Veg Farm, Brian Sweeney
Triple G Farms, Guy Smith
Walstead Farms, William and Donna Walz
Walnut Hill Farm, Darvin Weaver
Williams Farms, John Williams

**Strengthen the NY vegetable industry
by supporting our program!**

[Make a donation](https://CVP.CCE.CORNELL.EDU/DONATION_INVOICE_NEW.PHP) at CVP.CCE.CORNELL.EDU/DONATION_INVOICE_NEW.PHP



About Us

The Cornell Vegetable Program works with Cornell faculty and Extension educators to address the issues that impact the New York vegetable industry. The team offers educational programs and information to growers, processors, and agribusiness professionals in pest management, variety evaluation, cultural practices, market development, and farm food safety.

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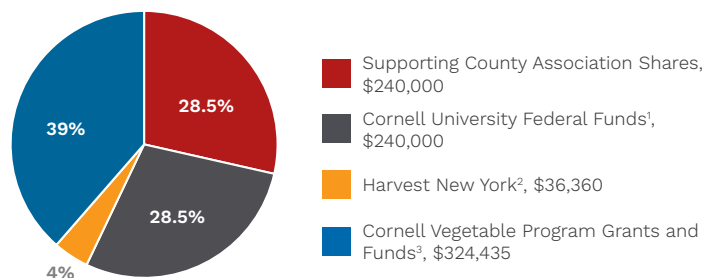
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2022 OPERATING BUDGET BY FUNDING SOURCE



¹ USDA National Institute of Food and Agriculture Smith Lever Funds

² New York State funds

³ Includes funds from industry, state and federal grants, event registrations, sponsor support, and Cornell Vegetable Program reserve accounts

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