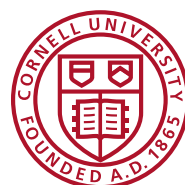




HARVEST NEW YORK  
2024 Year in  
**REVIEW**

## **Linking Consumers and Agriculture Producers**

Harvest NY is an innovative Cornell Cooperative Extension team that focuses on growing New York's Farm and Food Economy. Harvest NY seeks to link consumers and producers in four major areas: Food Systems, Urban Agriculture, Emerging Crops, and Climate Resiliency.



On the cover...

In October 2024, Harvest NY hosted urban agriculture project leads from the USDA's Farm Service Agency and Natural Resources Conservation Service and members of the National Urban Agriculture Initiative to discuss urban agriculture opportunities in New York. Farmers from Brooklyn Grange, GrowNYC, Oko Farms, and New Roots, from Brooklyn, Manhattan, and the Bronx, hosted tours of their spaces, creating an opportunity for attendees to reflect on how federal policy can be leveraged to support urban growers.



# From the Team Leader

Thanks for taking a look at the CCE Harvest NY 2024 Year in Review! Another year of growth and accomplishment for our program includes the following impacts:

- The procurement of \$17 million of New York food products by 83 school food authorities.
- The launch of New York's first Garden Leadership Curriculum for dozens of community gardens across the state.
- Distribution of over \$1 million worth of New York farm products to residents of Buffalo, the Queen City.
- Deployed state of the art weather stations to support urban strawberry production on NYC rooftops.
- 12 new minimally processed vegetable bids in NYC schools resulting in over \$7 million local purchases.
- Developed Cornell Cooperative Extension's first ever comprehensive Agritourism webinar series reaching nearly 800 people.

All this work (and much more!) is made possible through our financial and program partnerships with New York State Departments of Agriculture and Education, the USDA, New York State Berry Growers Association, Scenic Hudson, New York City Department of Education Office of Food and Nutrition Services, and most importantly the people we serve—growers and consumers of New York! Please keep reading for more impacts and details on our work.

Thanks!

Judson Reid  
Team Leader and Extension Vegetable Specialist



## FARM TO SCHOOL **By the Numbers**



Supported 83 School Food Authorities procure \$16,916,360 worth of NY Food Products in service of 591,335 public school students



Provided 2,487 hours of direct technical assistance to 4,265 Farm to School stakeholders



Supported the award \$10,152,000 in public grant money to support School Food Authorities expand their Farm to School program



Provided 59 hours of local procurement training to 667 school food partners and 45 hours to 495 NYS producers



Fostered business-to-business connections through 7 events reaching 637 stakeholders

# Climate Change Programming Comes to New York City

In recent years, the impacts of climate change have become increasingly widespread in the urban agriculture community of New York City, with more intense weather events like flooding, drought and record-breaking summer temperatures. Faced with these environmental pressures, urban growers search for mitigation and adaptation strategies to alleviate the impacts of an ever-warming planet.

As a response, CCE Harvest NY organized two Urban Ag Field Days at Brooklyn Grange and Governor's Island. Thanks to funding from NY Soil Health, over 40 participants from the urban ag community, including urban farm managers, service providers, legislators and urban ag enthusiasts, discussed the basics of climate resilience, adaptation planning, and soil health.

The following topics were covered during the two Urban Ag Climate Field Days:

- Background on climate change science and agricultural impacts in NYS
- Biochar as a tool for soil health and climate change mitigation
- Results from the NYC Urban Soil Survey and the specific characteristics of urban soils
- Climate smart farming practices, extension support and decision tools
- NYC Urban Climate Adaptation and Mitigation Fellowship (CAMF)
- Funding opportunities such as Partnerships for Climate-Smart Commodities and the project dashboard

Participants got an overview of the climate change affects that we can expect in the next few years, with stark reminders of the pronounced impacts for urban and rural agriculture. For many, biochar was a new topic and could serve as a potential tool to build soil health. In attendance were also legislative representatives including Senator Brisport from 25th Senate District (see photo). The Governor's Island Teaching Garden tour featured perennial varieties, like pawpaw trees and ginger, that are more resilient to climate-related pest and disease pressures and extreme heat. These urban ag climate field days are part of a greater effort to expand climate-related educational programming to serve urban growers who are most impacted by warming temperatures.

In 2025, in partnership with the USDA Northeast Climate Hub, Harvest NY will organize a series of in-person workshops, field days and webinars covering topics such as climate change adaptation and mitigation, planning and funding, as well as emergency and disaster preparedness.



Speakers gather with State Senator Jabari Brisport at the Urban Ag Climate Field Day at Brooklyn Grange.



A full house listens to a presentation at the Urban Ag Climate Field Day at Brooklyn Grange.

## A New Role for Makela Elvy: Urban Garden Leadership Curriculum Specialist

After completing two years as an Urban Garden Specialist with Harvest NY, supporting gardens in the Bronx, Manhattan, and Queens, Makela Elvy is now serving the team as an Urban Garden Leadership Curriculum Specialist. In her new role, Makela works directly with NYS Department of Agriculture and Markets to create and implement a curriculum aimed at increasing leadership skills of community gardeners across NYS.

A native New Yorker, Makela attended DePauw University majoring in Environmental Geoscience, and has her MS from Concordia University - Portland in Curriculum and Instruction. Makela has been involved in a number of environmental experiences in NYC, including being the Compost Outreach Coordinator at the Snug Harbor Cultural Center and Botanical Garden on Staten Island.

## Developing a Community Garden Leadership Program in NYS

There are approximately 3,000 community gardens in New York State, contributing to food security and nutrition in both urban and rural populations. Section 31-j of the Agriculture and Markets Law established a Community Gardens Taskforce in 2021 with the purpose of establishing and expanding community gardening efforts across NYS. Recommendations from the Community Gardens Taskforce in 2023 identified a need for support with community gardens operations, management strategy, and leadership development.

In 2024, Harvest NY partnered with the Community Gardens Taskforce to develop the [Community Garden Leadership Program](#). Community Garden Leadership Specialist Makela Elvy spearheaded this initiative by establishing an advisory council to inform the recruitment process, marketing strategy and curriculum development, and by conducting meaningful stakeholder outreach to better understand the needs of community gardens and existing support. Elvy conducted a needs assessment to understand types of support community gardens are receiving from Cornell Cooperative Extension and identify key topics and skills areas to include in the curriculum. The 22 responses from the needs assessment, coupled with feedback from the advisory council, resulted in the development of a 12-module, year-long certification program.

Additionally, Elvy gathered stakeholder feedback via 39 interactions including several stakeholder meetings and two large-scale presentations: one at the Resilient Gardens Symposium in New York City, and one at the Agriculture, Food & Environmental Systems In-service in Ithaca, NY

resulting in 170 direct contacts. This targeted outreach led to 86 applicants for the program, two learning tracks within the inaugural cohort, and increased interest in the program. Twenty community gardeners were selected to participate in the program, which began on December 20, 2024. Congrats to Makela and our partners at NYS Department of Agriculture and Markets on the launch!

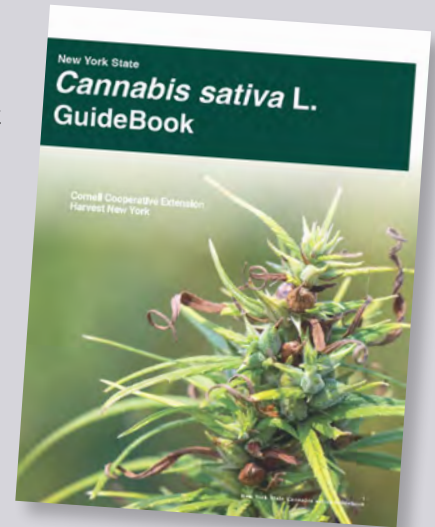


Source: Department of Agriculture and Markets



## Free Resources for the NYS *Cannabis sativa* Industry

The [NYS \*Cannabis sativa\* L Guidebook](#) is a free resource designed to assist cultivators in New York State. Developed under the leadership of Dr. Daniela Vergara, Hemp Specialist with Harvest NY, this guidebook, released in July 2024, is the result of a collaborative effort with cultivators and industry stakeholders from New York and other states. The guidebook was designed by a talented young team from [SciAnno Mosaics](#).



The guidebook offers comprehensive guidelines on regulatory compliance, Good Manufacturing Practices (GMP), and Integrated Pest Management (IPM) strategies. By addressing preventative measures, product recommendations, and reactive protocols, the guidebook supports cultivators in maintaining pest-free, high-quality crops. In addition to actionable guidelines, the guidebook provides tools for meticulous record-keeping, such as product tracking sheets, IPM scouting logs, and application tracking forms.

These resources not only help growers streamline operations but also facilitate data collection to advance industry standards.

Available for free download, this guidebook is designed to evolve with feedback and insights from the growing season. By adapting to the needs of cultivators, it ensures that New York's *C. sativa* industry remains informed and competitive in this dynamic market.

It complements other free resources provided by Harvest NY, including the [New York State \*Cannabis sativa\* L. Production Manual](#) in English and in Spanish.

## Assessing Profitability in Greenhouse Cultivation of Autoflower vs Photoperiod Varieties

Current work with John Hanchar, Cornell Cooperative Extension economist, examines whether autoflower (*C. sativa* plants that flower without light cues) or photoperiod (*C. sativa* plants requiring light cues to flower) varieties offer greater profitability in greenhouse cultivation. Autoflowers feature shorter cultivation cycles, lower labor costs, and support more frequent annual grows, whereas photoperiod plants, though larger and yielding more per plant, require more time and resources. This research seeks to identify possible sustainable and profitable options while addressing challenges such as yield variability, labor costs, and regulatory fees in New York State's growing cannabis industry. Stay tuned!



Autoflower plants in a cultivation in the Catskills.



Photoperiod plants at Cornell AgriTech, Geneva, NY.

# Inaugural Farm to School Summit a Resounding Success

The [NYS Farm to School Summit](#), cohosted by the NYS Department of Education (NYSED) and CCE Harvest NY, brought its theme, “*It Takes a Village: Cultivating Community in Farm to School*,” to life in November, as over 500 passionate stakeholders gathered for this inaugural event. This vibrant gathering brought together educators, farmers, food producers, food service professionals, government officials, and community leaders, all united by a shared mission: strengthening local food systems and cultivating healthy, sustainable connections for students. The energy was palpable as attendees exchanged innovative ideas, explored best practices, and formed new partnerships.

True to the event’s commitment to supporting New York farms, [meals](#) throughout the conference showcased locally sourced foods, and adhered to the Child Nutrition Meal Pattern – truly embodying our commitment to “practice what we preach.”

The event was made possible through USDA Federal Formula Funds, the NYS Department of Education, and sponsorships. CCE Harvest NY Farm to School staff support was made possible through the NYS Department of Agriculture & Markets.

Plans are already in the works for a second summit in early 2026!

## NY School Food Cookbook

Explore a collection of New York School Food Recipes in this continuously updated repository.



52 workshops

82 speakers

57 trade floor vendors

4 pre-conference field trips

535 attendees

“Invaluable information, inspirational speakers, so many products I didn’t know were made in NY, lots of great networking” – *Food Service*

“The ability to meet new people and everyone was kind and open. I loved the educator workshops. Learning how to tap a maple tree was something I have always wanted to do.” – *Educator*

“Trade shows can be a lot of work, but this one felt more like a celebration of our collective efforts than a chore.” – *Exhibitor*



# Urban Strawberry Production

In 2024, Harvest NY continued work to support strawberry production in Bronx, New York City. In May, Makela Elvy, Urban Garden Leadership Curriculum Specialist and Anya Stansell, Berry Production Specialist, both of Harvest NY, along with Dan Olmstead, Digital Outreach and Development Coordinator of New York State Integrative Pest Management, led a 2-hour 'Growing Strawberries 101' workshop at Riley-Levin Demonstration Garden to increase awareness about the ongoing project and the research goal of better understanding the impact of micro-climates on strawberry production in urban environments. The workshop covered the use of diagnostic tools for identifying pest and disease pressure, management techniques, and unique environmental factors characteristic to urban strawberry production. During the workshop, the 25 participants planted a new strawberry bed, and all reported an increase in plant care knowledge.

From June – October Elvy, Stansell, Olmstead, and Integrative Pest Management intern Aziza Alvarenga-Marchante partnered with 5 host gardens to research disease emergence in 'Albion' strawberries. The host gardens, Community Access, Via Verde, Rivers' Run, Karol's Farm, and Bissel, provided a range of environments, including rooftop and ground-level spaces. Weather loggers were installed in each site to characterize microclimate. Data collection was spearheaded by Elvy and Alvarenga-Marchante. Visual scoring in the field was conducted weekly using Cornell's Berry Diagnostic tool to determine the health of the plantings at each site, and disease presence was determined by the Cornell Cooperative Extension Horticulture Diagnostic Lab in Suffolk County, NY. Amongst the ground level gardens there were 7 diseases present, and amongst the rooftop gardens there were 3 diseases present affecting plant health.

The purpose of this research trial is to gain preliminary data on disease presence and identify any correlations with environmental factors. Once we understand the correlation between disease incidence and climatic factors, we will continue to identify means of ameliorating these challenges in an urban garden setting. Next steps include creating fact sheets on production in English and in Spanish, summarizing findings for growers in presentations, and disseminating findings for specific urban micro-climates.



Dan Olmstead of NYS Integrated Pest Management, Anya Stansell of Harvest NY, and Garden Manager Maria Soto establishing a research bed at Via Verde Community Garden.





## Cover Crops in Small-Scale Urban Growing Systems

Community gardens play a significant role in NYC, specifically in terms of community engagement, food access, and environmental benefits. The city benefits from the contribution of more than 1,000 community gardens across the five boroughs. Community gardeners often face challenges in expanding their food production and improving soil health due to limited technical expertise and financial resources, which can hinder the long-term sustainability of their gardens. However, through programs like CCE Harvest NY, gardeners gain valuable knowledge about sustainable growing practices and how to enhance soil health, ultimately fostering more resilient urban farms and gardens. Many community gardeners are unfamiliar with the benefits of cover crops, often overlooking how they can improve soil health, increase fertility, and boost productivity over time. There is a common misconception that using cover crops like winter rye may lead to weed problems, as gardeners worry that the rye could spread uncontrollably. However, winter rye is well-suited for urban agriculture because it can be sown late into the season, allowing gardeners to extend their harvest period while still reaping the benefits of improved soil structure and nutrient cycling.

To help urban growers prepare for winter soil protection, Urban Garden Specialist Karen Guzman created a two-part workshop series focused on the use of cover crops in small-scale growing systems. The first session, held this fall, covered both early and late-season cover crops, including topics such as under-sowing, succession planning, and how to integrate cover crops into crop plans. The second session, scheduled for early winter, will teach gardeners how to properly terminate cover crops to prepare for spring planning. Both workshops are designed to be hands-on and serve as a community volunteer event, offering valuable learning opportunities while also highlighting the importance of nutrient cycling and the impact of sustainable gardening practices.

The fall workshops were held at four community gardens across the Bronx, Queens, and Westchester, drawing a total of 50 attendees. Participants expressed positive feedback, particularly about the hands-on activities following the information sessions. Many were especially excited by the concept of under-sowing cover crops, seeing it as a way to extend their harvest while enhancing soil health. These workshops were made possible through valuable partnerships with Greenthumb, the New York Restoration Project (NYRP), and the Charter School of Excellence.



Left: Harvest NY Urban Gardens Specialist Karen Guzman spreading compost over winter rye with a community gardener at New Roots, Queens. *Photo from Jaclyn of South Infinity Garden.*

Center: Guzman speaking to workshop attendees about under sowing cover crops at New Roots Community Farm, Bronx.

Right: Workshop attendees and Karen Guzman at South Jamaica Infinity Garden, Queens. *Photo from garden volunteer.*

# The Intersection of Soil Health and Climate Resiliency

An on-farm research project exploring the distribution, depth and severity of soil compaction on commercial dairy farms continued into its 6th year in 2024 and was highlighted in a presentation of findings to attendees of the 24th North American Manure Expo in Auburn, NY in July 2024 as well as additional farmer and ag professional audiences during winter 2024-25.

The project began in 2018 with an examination of the within-field variability in 7 key soil health indicators and was funded by the Northern NY Ag Development Program. Results from this initial study revealed serious soil compaction on all fields and led to an expansion of the project focusing solely on soil compaction as it is known to limit soil functions and crop responses. The 2023-2025 iteration of this project is funded by the NY Farm Viability Institute and has expanded to include farms and fields in Central and Western NY in addition to more Northern NY fields. Currently the Harvest NY and campus research collaboration is examining the relationship between soil compaction severity and historical crop yield and yield variability on individual commercial farm fields. Additionally, a new protocol permits a dramatically better description of the depth, severity and variability of the compaction compared with the initial 2018 study. Preliminary findings indicate that consistently higher yielding areas of these farm fields tend to be less severely compacted soils than the consistently lower yielding areas. Data collection and analysis will continue into 2025 in collaboration with Cornell Extension Specialists in WNY and CNY and with Cornell's Nutrient Management Spear Program staff and their new PhD student who is now dedicated to this project.

The project has gained visibility and has generated interest in sharing our findings with farmer and ag professional audiences. A highlight for the project in 2024 was an invitation to speak to attendees of the 2024 North American Manure Expo in July. The Expo was organized and hosted by both Cornell ProDairy and University of Vermont. The Expo had never been held in NY before, but over 1,000 farmers, custom manure applicators and nutrient management professionals from across NY and the Northeast attended the 2-day event which included farm visits, equipment demonstrations and educational sessions. Harvest NY's Dr. Kitty O'Neil spoke in an educational session, tying together topics of manure and equipment management, soil health and overall climate resilience. Soil compaction is a widespread, difficult and largely 'invisible' problem on most commercial farms, stemming from decades of heavy equipment traffic and is difficult to manage and remediate. It is a major barrier to climate resilience and deserves more attention. Dr. O'Neil addressed the main causes of compaction, its impacts to water movement and climate resilience, and diagnostic, preventive and remedial methods recommended for addressing it, how it is diagnosed, the promise of central tire inflation systems and controlled traffic farming for prevention, and potential remediation strategies. The crowd was highly engaged and asked extremely thoughtful questions. A smaller but similar presentation and discussion was also held with apple producers in Northeast NY in mid-August 2024, and with organic farmers in Vermont and farmers and ag professionals in Michigan during winter 2024-25.

This on-farm soil compaction project will continue to evolve and contribute to our overall understanding of the factors contributing to soil health, crop performance, greenhouse gas emissions and climate resilience. Several presentations of our findings in the context of NY agriculture are scheduled for this 2024-25 winter program season to a range of audiences.

2024 North American Manure Expo, Auburn, NY.  
*Photo by Oswego County Business Magazine.*





Belle Center outdoor Buffalo Farm Share Market.



Community Action Organization volunteers with Bridget O'Brien Wood, Harvest NY Farm Shares Coordinator (third from right), at the Masten Resource Center.

## The Buffalo Farm Shares Program Supports New York State's Small Farms and Highest-need Families

In 2023, Buffalo Public School District was awarded a \$2M NY Food for NY Families (NYFFNYF) grant—part of the USDA Local Food Purchase Assistance Cooperative Agreement Program—which they used to launch the Buffalo Farm Shares program in February 2024. The district uses NYFFNYF funding to purchase fresh and minimally processed produce, dairy, meat, poultry, and grains from small NY farms for distribution to families in Buffalo's lowest income communities. In 2024 the district purchased \$1,114,783.69 of fresh and minimally processed NY food products from 39 small producers and vendors. The district focused on purchasing food from small and socially disadvantaged businesses: \$451,016 of food was purchased from five Plain Community producers, \$135,411.80 from five urban (city of Buffalo) producers, \$23,454.91 from two BIPOC producers, and \$133,880.50 from three women-owned businesses. Throughout the course of the year, 25,600 “farm shares” were distributed to families at 184 distribution events which were held at 22 schools and 10 community sites. Buffalo, NY is one of the state's poorest cities, and access to fresh, minimally processed food is a challenge for many of its families. The program is designed to meet families where they are: at school-sponsored Saturday Academies where families gather to benefit from free breakfast and lunch and resources provided by community organizations; and food pantries, community centers, and Community Action Organization.

The success of this project was contingent upon a close relationship between CCE Harvest NY and the district. Harvest NY hired a Buffalo Farm Shares Program Coordinator who identified what products would be purchased and from whom, and how, when, and by whom these products would be delivered to distribution sites; developed a monthly “menu” based on seasonality that was also balanced across food groups; managed volunteer engagement and scheduling; coordinated the program's education and evaluation aspects; and worked with community partners to distribute any excess food. During the first few months of the program the Program Coordinator gathered feedback on the food offered to ensure it was appealing, practical, and culturally appropriate. In the second half of the year the Program Coordinator worked with CCE's WNY SNAP-Ed program to provide samples of recipes prepared using ingredients offered through the Farm Share program at distribution sites.

The Buffalo Farm Shares program will continue through May 2025.



Conference speakers Qiana Mickie, Executive Director of NYC Mayor's Office of Urban Ag, Michael Kincaid, CCE Monroe County and Harvest NY, Joe Kurtz, Buffalo urban grower, Tonya Noel, Rochester urban grower, and Kayo Green, Syracuse urban grower.

## **Rochester Urban Agriculture Working Group Collaborates Statewide & Expands Impact In Rochester**

The Rochester Urban Agriculture Working Group, with facilitators from CCE Monroe and Harvest NY, built on a decade of experience to greatly expand impact in the community and extend reach in 2024.

Rochester is home to almost 100 community gardens, with an incredibly diverse set of individuals, schools, non-profits, religious organizations, and neighborhood groups engaged in growing food, flowers, and community. The experiences, aspirations, and histories of these gardens vary widely, with most operating independently. The Rochester Urban Agriculture Working Group seeks to unite these growers to offer educational and networking opportunities, expand access for urban farms and gardens, and support a flourishing agriculture scene in the City of Rochester. The working group serves as a connector between growers, community members, and policymakers to promote and expand urban agriculture within the City of Rochester.

The Urban Agriculture Working Group of Rochester has held an annual conference for the past 9 years to offer urban growers a space to network, organize, and provide and receive evidence-based education on successful growing. In 2024 the group, led by organizers Mallory Hohl and Michael Grady Kincaid from Harvest NY and CCE Monroe, brought together advocates and experts from Rochester, Syracuse, Buffalo, and New York City to address attendees on policy barriers and solutions, access educational workshops, and network to create stronger regional and statewide urban agriculture.

The 2024 Spring Conference hosted a record 150 attendees, 22 tabling organizations, and offered 8 workshops on exciting topics ranging from Advocacy 101, Insights from Black Urban Growers, Home Canning, and Urban Beekeeping. Qiana Mickie, Executive Director of The Mayor's Office of Urban Agriculture in New York City shared her experience as the keynote speaker and participated on a panel with representatives from New York's four largest cities, "Building a Thriving Urban Agriculture: How to Develop Urban Growing throughout New York State." The conference additionally hosted representatives of Rochester City Government and the USDA.

The conversations sparked at the conference continued throughout the summer, culminating in meetings between the Urban Agriculture Working Group, the City of Rochester, Rochester Black Urban Growers, and Cornell Cooperative Extension to update and revise the city's permitting process for urban gardens. The new document for the first time allows for year-round gardening, establishes clear timelines and communication responsibilities between the city and permit holders, permits season extension tools like greenhouses and high tunnels, and expands gardens' ability to compost and host gatherings on site. These changes will continue to support urban growers in Rochester for years to come.

## Biochar in the Bronx: Advancing Nutrient Sovereignty

In October 2024, a transformative trip to Cornell University brought together urban agriculture advocates, researchers, and community leaders to explore the potential of biochar in revitalizing urban gardening practices.

The trip, meticulously planned by Kwesi Joseph and Karen Guzman, Urban Community Garden Specialists with Harvest NY, in collaboration with Dr. Rebecca Nelson of Cornell, aimed to equip the team with practical knowledge and strategies for producing biochar and scaling its use downstate in New York City gardens. This initiative is part of an ongoing effort to advance nutrient sovereignty—a concept that empowers communities to take control of their soil health and food production systems through sustainable and regenerative practices.

Joining Harvest NY on the trip was Sheryll Durrant, a prominent urban farmer and food justice advocate who leads New Roots Community Farm in the Bronx; Ranya Perez, a Ph.D. student in socio-cultural anthropology at Cornell University who works at New Roots in the Bronx alongside Sheryll; and Mirem Villamil, the New York City County Executive Director for the Farm Service Agency, who has previous experience producing biochar and owns a pyrolysis machine. Together, this team represented a unique blend of expertise and passion for sustainable agriculture and community empowerment.

The visit focused on learning from two distinguished Cornell experts. Dr. Johannes Lehmann, the world-renowned biochar expert, shared his insights on biochar production and its applications for improving soil health, increasing water retention, and supporting microbial activity. Dr. Rebecca Nelson, known for her pioneering work in nutrient recycling, provided valuable perspectives on creating closed-loop systems that recycle nutrients to improve soil fertility and sustainability.

The day began with a meeting on soil health with Judson Reid, Team Leader for Harvest NY, highlighted biochar's role in enhancing urban soils. The team also toured Dilmun Hill, Cornell's student-run farm, where they observed sustainable agricultural practices that could inform future initiatives in the Bronx. The trip concluded with a catered dinner at the Soil Factory where Dr. Nelson led a hands-on demonstration of biochar production, using two different container systems to showcase methods adaptable to small-scale urban settings.

The insights gained during this trip will directly inform a series of biochar workshops to be held at New Roots in the Bronx. These workshops, led by the trip attendees, will teach community members how to produce and use biochar to improve soil health, increase plant nutrient density, and build regenerative food systems.

With these efforts, Harvest NY is opening up the resources of the nation's only dual Ivy League and Land Grant institution to the people growing food in the urban centers of New York.



## Urban Farms Adapting to New Pressures

You have to be adaptable to run a farm in New York City. Every year, Harvest NY's Urban Agriculture Specialists help NYC farms change their crop plans when a new building casts shade on their site, or find the right contact to reconnect their water in spring, or look for new land when they lose tenure.

On top of all that, each year seems to bring new pests and diseases. Spotted lanternfly may be the most famous recent arrival—and CCE has worked extensively with urban farms and gardens on managing it—but 2024 brought some unexpected under-the-radar arrivals that may have had an even larger impact on vegetable farms in the NYC area.

Urban Agriculture Specialist Sam Anderson works on the pests and diseases of urban agriculture, responding to farmers' concerns (and many text-messaged photos) and visiting farms to identify problems and recommend responses. In August, he identified—for the first time in at least seven years—the appearance of pepper maggot on seven farms in NYC. A single larva can decimate a pepper or eggplant fruit; by the time it's detected, most of the crop may be lost. Although it was too late for this year's crops, and most of these farms lost 50 to 90% of their peppers or eggplants, they have all started prevention strategies for next season, potentially saving entire crops.



Pepper maggot in African eggplant (left) and sweet pepper (right).

Sometimes a pest or disease may simply have—from its perspective, anyway—a big year. Aster yellows had such a year in 2024, perhaps due to unusually large swarms of aster leafhopper, the insect which carries this disease from plant to plant. This disease can cause enormous losses for cut flower growers (and there are many of them in NYC), and can spread to certain other crops, causing unusual symptoms that most urban farmers have never seen before. Anderson identified aster yellows on four urban farms the past year—again, after never seeing it on a farm in the seven years prior—including a site that lost nearly 75% of its lettuce and 25% of its carrots to the disease, a loss of at least \$6,000. After taking the important preventative measure of removing all affected perennial asters, these farms may prevent its appearance entirely in 2025.



Aster yellows symptoms on lettuce.

We also watch for pests that we expect to arrive, even if they haven't yet. Another pest made its first confirmed appearance in the city in 2024 when Anderson identified allium leafminer on a rooftop farm. Thanks to previous conversations with CCE colleagues in onion growing regions, we already knew to expect this one, what to look for, and some strategies to mitigate its impact. Similarly, although not yet confirmed in NYC, we are scouting closely for Swede midge, a devastating brassica pest already present across most of the state, with guidance from CCE colleagues who have worked extensively on its identification and management.

These connections within CCE and the Cornell community allow us to stay ready for whatever comes next. In turn, as we've done for northward-moving pests such as spotted lanternfly and cabbage whitefly, NYC's urban agriculture specialists provide advance notice and strategies to our upstate colleagues. It is, in other words, an excellent example of the work that makes CCE a uniquely valuable resource.

# Climate Resiliency Programming Spreads Knowledge on Climate Adaptation and Mitigation in New York State

This year, Savanna Shelnutt, Harvest NY Ag Climate Resiliency Specialist for the Hudson Valley, worked with eight non-profits and government organizations, two county associations, and three farms to host field days and workshops to improve producer and technical service provider knowledge of climate adaptation and mitigation strategies. We thankfully acknowledge our funding partner for this work: Scenic Hudson.

## Biochar 101 Field Day

The Biochar 101 Field Day, held on June 25 at Hearty Roots Farm in Germantown, NY, attracted 43 attendees, including local farmers, technical service providers, and elected officials including Assemblywoman Didi Barrett. The event introduced the basics of biochar and its soil health benefits. A key feature of the event was a live demonstration of biochar application, which kicked off a three-year trial evaluating changes in soil health. Organizing partners included Cornell Soil Health, Scenic Hudson, the Glynwood Center, NY Carbon, and the American Farmland Trust.

## Beginning Agroforestry Field Day

The Beginning Agroforestry Field Day took place on September 19 at Mastwood Farms in Kerhonkson, NY. This event offered guidance on funding for agroforestry, species selection, and starting a silvopasture operation to 45 attendees. A highlight of the event was a tour of the farm's multi-functional riparian buffer. Presenters included Ulster County Soil and Water, NRCS, Glynwood Center, Propagate, Orange County CCE, Wellaway Farms, and Mastwood Farms. The event was organized in conjunction with Scenic Hudson. Some individuals expressed interest in further technical workshops, and plans are now underway to coordinate another field day in 2025 focused on tree planting, grafting, and maintenance.

## Grow More Training

The National Wildlife Federation offered a Grow More training on September 24 in Ithaca. It focused on providing technical service providers from CCE and other farm-facing organizations with tools to better assist producers in adopting conservation practices like planting cover crops and reducing tillage. The training's 17 attendees were given social science-based resources to help restructure their programming to be more appealing to hesitant audiences. This was the first time the training was provided in the Northeast, and we hope to offer it again in the coming years.

Farmer Ben Shute discusses his farm operations during the 2024 Biochar Field Day at Hearty Roots.



# **\$10M Invested in School Food Infrastructure**

## **Champlain Valley Educational Services BOCES**

In 2024, Champlain Valley Educational Services (CVES) BOCES was awarded a \$5M grant in the first round of funding in the NY School Food Infrastructure Grant through NYS Department of Agriculture and Markets. This award will advance CVES BOCES' current Farm to School and scratch cooking efforts, as well as support school cafeterias across the North Country. CVES operates a shared food service program in 8 districts, 16 cafeterias, throughout Clinton and Essex Counties. The focus of their program is on nutrient dense, scratch cooked meals made from local ingredients. Key features of their meal programs are fresh baked breads, sauces, soups, and homemade pizza.

The primary outcome of the grant is the creation of a commissary kitchen in Plattsburgh, NY. This kitchen will allow for increased efficiency in the preparation of the labor and time intensive products, as well as provide a centralized location for local producers to deliver their products. Though the commissary kitchen will only be housed at their Plattsburgh location, CVES will outfit both their Plattsburgh and Mineville sites to have state of the art teaching kitchens for their culinary arts programs. Each location will also have a food pantry for the students to access, as Clinton and Essex Counties have rates of students qualifying for free and reduced-price lunch.

The grant will also allow CVES to purchase three vehicles to streamline delivery efforts of local food and the products prepared in the commissary to school districts across the North Country. The award will bolster the CDL training program that CVES offers to students. This essential workforce development will allow for more skilled graduates to remain in the region working in demand jobs.

CCE Harvest NY has been a proud partner of the CVES BOCES Farm to School program for many years, and looks forward to future collaboration in the North Country.

## **Buffalo Public Schools**

CCE Harvest NY has worked closely with the Buffalo Public School District (BPS) on Farm to School efforts for over a decade. What began as a small pilot project serving three locally sourced vegetables in nine of the district's buildings grew exponentially to become one of the most successful Farm to School programs in the nation. The Harvest NY team continues to be integral in helping the district establish long-standing relationships with dozens of local vendors and producers; developing and updating annual local food bids; securing funding for staff training, materials, field trips, and special programming including Local Food for Schools, NY Food for NY Families, and the School Food Infrastructure grant; program evaluation, and more. The growth of the district's Farm to School program and more specifically its commitment to local sourcing and a shift to scratch cooking—both supported and encouraged by Harvest NY—brought the district to a point where they needed to expand their capacity to receive, store, prepare, and deliver locally sourced foods. When the NYS Department of Agriculture and Market's School Food Infrastructure Grant was announced, CCE Harvest NY worked closely with the district to develop an ultimately successful application: BPS was awarded \$5M in the first round of funding!

Part of the district's larger project to build a new Central Commissary, the funding will be used in the new facility to establish a vegetable preparation and processing area, ingredient room, packing system, and the infrastructure necessary to establish contracted delivery of ready-to-use foods prepared and packaged using locally-sourced ingredients like NY Garden Vegetable Paella, NY Sofrito, NY Tomato Sauce, and NY Salsa. It will also be used to purchase two 100-gallon kettles that will continuously run, preparing new recipes using fresh, local produce. The new Commissary will enable the district to work with raw NY proteins as opposed to relying on processed proteins. The central facility will have a skilled labor team to receive, process, and prepare an expanded NY product inventory that will serve not only the district's students, but area districts as well. It will also include a test kitchen, which will be utilized to provide training to the district's food service staff as well as food service staff from other area school districts, and residents of the surrounding communities.





## NYC Department of Education's Investment in Farm to School

The NYC Department of Education (DOE) Office of Food and Nutrition Services (OFNS) made significant strides towards increasing local food procurement in 2024. Following the \$8.4 million Local Foods for Schools (LFS) grant award from the NY State Education Department, OFNS worked closely with Harvest NY to competitively identify and procure 12 new minimally processed vegetables from small, local producers. These items began their rollout across schools citywide in the spring of 2024.

The quick and diligent efforts of the OFNS team to procure and menu these products has created significant economic opportunities for New York State producers – **this partnership has resulted in over \$2.8 million directly invested into New York's local food economy to date, in addition to local food spending beyond the LFS grant totaling nearly \$7.6M in 2024.\***

In addition to the LFS program, Harvest NY's collaboration with OFNS and the NYC Mayor's Office of Urban Agriculture (MOUA) led to the development of a comprehensive, DOE-specific procurement training and food business development program, NYC School Food EATS (Enhancing Accessibility, Training, and Support). This program, funded by the NYS Department of Agriculture and Markets Farm to School Grant, provides a cohort of historically under-resourced farm and food businesses with resources and capacity building to be able to respond to future OFNS procurement opportunities. NYC School Food EATS launched its pilot in the fall of 2024 and will continue into the spring.

\*Note: This figure excludes the purchase of New York fluid milk, which NYC OFNS does purchase.



## Welcome Kate Preston, Farm to School Education Specialist

We are thrilled to welcome [Kate Preston](#) as our Farm to School Education Specialist—a new role within the Harvest NY team made possible through our partnership with the New York State Department of Education, with funding from the U.S. Department of Agriculture. In this position, Kate will work to strengthen Farm to School collaborations among cafeterias, classrooms, and communities.

Before joining Harvest NY, Kate served as an Agriculture in the Classroom Educator for CCE Madison County. Her passion for education and agriculture began in her youth when she participated in the Otsego County 4-H program, where she raised and showed her own herd of dairy goats, as well as beef cattle and horses. Driven by her dedication to agriculture, Kate earned a Bachelor's degree in Agricultural Business Management from SUNY Cobleskill, followed by a Master's in Agricultural Education, Communications, and Leadership from the University of Missouri.



## Standing Room Only at Workshop on Nutrient Sovereignty

The 2024 Black Urban Growers (BUGs) Conference in Houston, Texas, saw an overwhelming response to the workshop ‘Using Rock Dust and Biochar to Improve Soil and Plant Health’. Led by Karen Guzman and Kwesi Joseph, Harvest NY Urban Gardening Specialists, the session drew 92 attendees, filling the room to capacity.

Central to the workshop was the introduction of “nutrient sovereignty,” a transformative concept championed by Dr. Rebecca Nelson, Professor in the School of Integrative Plant Science at Cornell University. Guzman and Joseph emphasized the foundational role of cover crops in achieving nutrient sovereignty, explaining how these plants enrich soil with organic matter, prevent erosion, and recycle nutrients from deeper layers.

Building on this foundation, the presenters highlighted the complementary benefits of rock dust and biochar. Joseph detailed the purpose of rock dust, explaining how it replenishes critical trace elements and micronutrients essential for plant and microbial health. Guzman followed with insights into biochar, emphasizing its ability to enhance water retention, improve soil structure, and boost microbial activity. Together, these practices create a closed-loop system that reduces dependence on external agricultural inputs while maximizing soil fertility and crop quality.

The audience was energized by the session, engaging in lively discussions about the practical applications of nutrient sovereignty in their own gardens. The session provided a renewed sense of purpose for creating sustainable and regenerative food systems in their communities.

## Harvest NY Initiates Pilot Urban Agriculture Trainings to Inform National Curriculum Development

The USDA has identified a need to increase access to and awareness of its programs for urban agricultural producers. Cornell Cooperative Extension’s Harvest NY is a partner of the National Urban Agriculture (NUag) Initiative, which was established to “bridge the gap” between the USDA and urban growers. As part of NUag, Harvest NY is developing an urban agriculture curriculum for USDA employees.

In 2024, Harvest NY educator Kyle Karnuta and the curriculum project team conducted a needs assessment intended to inform curriculum development: insight about what training content to prioritize, how to structure the training format, and identified potential barriers to training participation or implementation. For example, many USDA respondents stated that they were not yet working with a diversity of local stakeholders but were interested in learning how to do so when “starting from scratch” with their urban agriculture communities. A belief persists among some respondents that the USDA has “one chance” to succeed with urban growers, and a failure to manage stakeholder expectations could lead to long term reputational harm for the USDA. The assessment included 38 responses, reaching over 90% of the intended audience.

In response to this needs assessment, the curriculum development team facilitated two pilot trainings intended to inform curriculum development while addressing the needs of two distinct audiences: USDA employees, and urban growers/Extension educators. These included a virtual urban agriculture policy primer for New York farmers and Extension educators in April (reaching 33 direct contacts) and a stakeholder engagement workshop at the National Urban Agriculture Conference in Detroit, Michigan in early August (reaching 30+ direct contacts).

Feedback captured from all activities was analyzed and applied to curriculum development, and has been shared with the USDA to inform future changes to programs and outreach strategies.

# Statewide Agritourism Program

According to the 2022 USDA census, in New York there were 947 farms that offer agritourism with earnings of \$55.5 million in income. This number of farms has tripled since 2007 when there were only 372 farms offering agritourism. The New York State Agriculture and Markets define “agricultural tourism” as “activities conducted by a farmer on-farm for the enjoyment and/or education of the public, which primarily promote the sale, marketing, production, harvesting or use of the products of the farm and enhance the public’s understanding and awareness of farming and farm life” in the NYS Safety and Agritourism Act.

In 2024, Lindsey Pashow (CCE Harvest NY), Laura Biasillo (CCE Broome County), and the CCE Agritourism Program Work Team hosted several events across the state including a monthly webinar series, regional networking events, and bus tour/mini conference.

## Monthly Webinar Series

The agritourism monthly webinar series for agritourism operations had a variety of topics including grant writing, staffing, business planning, urban agritourism, cut flowers, handling difficult customers, creating value added experiences, implementing outdoor recreation, and accessibility. Over the year, the webinar series had 783 people attended the live webinars and 346 views on the Agritourism YouTube channel. The webinars and fact sheets that accompany the webinars are available under the [CCE Agritourism Resources webpage](#). This event is part of the current (9/23-9/26) USDA Beginning Farmer and Rancher Grant Enhance Beginning Farmer Agritourism Operations in New York.

## Regional Networking Event

In May and June, there were four regional networking events held. These events were held in the Hudson Valley, Central NY, Western NY, and Northern NY. The event focused on bringing together agritourism operations and tourism agencies. There were over 80 participants for the program. This event was possible through funds provided by Cornell Cooperative Extension Program Work Team.

## Bus Tour/Mini Conference

In October, there were two bus tour/mini conferences held in Western and Central NY. These programs were for one and a half days. On the first day we visited five agritourism operations and had a farm to table dinner at an agritourism operation. The second day focused on presentations on customer service, making affordable adjustments to agritourism operations, and feedback on future agritourism support across NY. Between the two events there were over 50 participants from agritourism operations, tourism agencies, and municipalities. The event was made possible by Stanley W. Warren Teaching Endowment.

In 2025, this work will continue with the agritourism monthly webinar series, six regional networking events, and a statewide agritourism conference in Saratoga, NY. Information on future events can be found at the [CCE Agritourism webpage](#).



Western NY agritourism tour. Photo by Molly McManus, CCE Broome County.



'Building Soil Productivity and Fertility' panel featuring urban grower project collaborators at the Urban and Small-Scale Grower Meeting in Buffalo.

## Connecting Urban Agriculturalists Across Western NY

Urban growers are diverse in terms of demographics and production systems, and face unique production challenges. Many urban growers strive to grow culturally relevant crops for their communities, however, these crops are not typically grown in this climate and little is known about effective production techniques for these new crops. In early 2024, we surveyed small-scale growers and community garden leaders across Western New York for input on peer-to-peer learning and in person workshop topics of interest. We had 41 people respond with resounding enthusiasm and topic ideas ranging from soil and pest management to farm economics to city water access strategies.

In response, Harvest NY Specialists Lori Koenick and Mallory Hohl and Cornell Vegetable Program Specialist Elizabeth Buck organized a full day Urban and Small-Scale grower meeting in April 2024 held at the Massachusetts Avenue Project farmhouse in Buffalo, NY. With 70 people in attendance, this event created a space for small-scale growers, community garden leaders and agriculture service providers from Buffalo, Rochester, Batavia and Syracuse areas to build community, engage in production-focused workshops, and share resources.

Highlights from this event include a "Building Soil Productivity and Fertility" panel, moderated by Harvest NY team leader Judson Reid, featuring three collaborating urban growers and an USDA-NRCS urban conservationist sharing best practices for managing high organic matter soils and building soil health using techniques such as cover cropping, pH adjustment, and soil testing. Vegetable farmer and CCE collaborator, Wil Moss of Moss Fresh Fruits & Vegetables, gave a talk on Improving Okra Earliness and Yield. For the "Choose Your Own Adventure" session, attendees could choose to participate in a hands-on weed management workshop, take a farm tour, or visit urban agriculture service provider tables and network. The event included plant pathology and tree fruit production talks from CVP Vegetable Specialist Elizabeth Buck and NYSIPM Extension Associate Anna Wallis, respectively.

Event feedback was overwhelmingly positive. Attendee comments on something they are taking away from this event in a post survey included "more confidence in managing pests and diseases", "being in community with other growers and ag professionals makes learning more fun", "connecting with helpful people and resources", "new techniques for pest and soil management and networking with other growers", and "the power of collaboration and community." Over 15 topics were suggested to cover in future events.

# Planning for Equitable Urban Agriculture Book Symposium in Buffalo, a Great Success!

Buffalo and WNY have over 100 community gardens and more than 15 urban farms. While Buffalo remains a robust urban growing community, the city still faces similar challenges compared to other urban centers when it comes to municipal support, funding, access to resources such as water and tools, and reliable, long-term land tenure. University at Buffalo's Food Systems Planning and Healthy Communities Lab was the location for the *Planning for Equitable Urban Agriculture in the United States* Book Symposium, welcoming urban planners and the like from across the US, in addition to highlighting Buffalo with panel discussions and showcases from local urban ag advocates. The book *Planning for Equitable Urban Agriculture in the United States* by Buffalo's own Dr. Samina Raja, et al. focuses on successes across the nation, common challenges, and possible solutions, all viewed through an equity lens. The book symposium main event had 91 in-person attendees, in addition to those organizers, tablers, and presenters, and 64 virtual attendees. It was part of a 3-day collaboration and celebration of urban agriculture in Buffalo and WNY: Visitors participated in a Slow Roll bike ride during a pre-event evening, then the main book symposium the next day, followed by an urban farm tour on the last day.

In addition to planning for the main event, Mallory Hohl, Harvest NY Urban Garden Specialist, organized the tabling setup for the evening, inviting seven urban growing-focused organizations to highlight how they support Buffalo's urban growing scene, also requesting a 'call to action' from each group asking attendees to think about how they can take part in local food system and farming resiliency. Hohl also coordinated the 5-stop tour including multiple urban farms, an indoor mushroom farm, and a municipal composting site, all culminating in lunch at a farm stop from a local chef the following day.

Takeaways from this event were many, and local attendees saw glimpses of successes from other cities in the urban ag arena, like Boston and Dallas, while allowing for space to showcase Buffalo's successes.

In addition to Harvest NY, University at Buffalo Food Lab, and Gardens Buffalo Niagara, the multi-day event brought together 15+ collaborators, all in the spirit of supporting urban growing and local food system resiliency in Buffalo and beyond.



Source: University at Buffalo, [Planning for Equitable Urban Agriculture](#)

# Harvest NY Specialists

Growing New York's Farm and Food Industries

## URBAN AGRICULTURE

**Samuel Anderson**, Urban Agriculture Specialist  
(781) 366-5939, [swa39@cornell.edu](mailto:swa39@cornell.edu)

**Makela Elvy**, Urban Garden Leadership  
Curriculum Specialist  
(347) 804-5820, [mje55@cornell.edu](mailto:mje55@cornell.edu)

**Yolanda Gonzalez**, Urban Agriculture Specialist  
(516) 305-0358, [yg88@cornell.edu](mailto:yg88@cornell.edu)

**Karen Guzman**, Urban Gardens Specialist  
(929) 468-5179, [kg578@cornell.edu](mailto:kg578@cornell.edu)

**Mallory Hohl**, Urban Gardens Specialist  
(716) 880-0275, [mdh286@cornell.edu](mailto:mdh286@cornell.edu)

**Kwesi Joseph**, Urban Gardens Specialist  
(718) 809-2781, [koj7@cornell.edu](mailto:koj7@cornell.edu)

**Kyle Karnuta**, Urban Agriculture Curriculum  
Development Specialist  
(310) 739-8735, [kpk59@cornell.edu](mailto:kpk59@cornell.edu)

**Lori Koenick**, Extension Support Specialist  
(585) 469-5798, [lbk75@cornell.edu](mailto:lbk75@cornell.edu)

## EMERGING CROPS

**Anya Stansell**, WNY Small Fruit Specialist  
(607) 752-2793, [aco56@cornell.edu](mailto:aco56@cornell.edu)

**Daniela Vergara**, Hemp Specialist  
(812) 219-0172, [dv255@cornell.edu](mailto:dv255@cornell.edu)

## AG CLIMATE RESILIENCY

**Kitty O'Neil**, Ag Climate Resiliency Specialist  
(315) 854-1218, [kao32@cornell.edu](mailto:kao32@cornell.edu)

**Savanna Shelnutt**, Ag Climate Resiliency  
Specialist, in partnership with Scenic Hudson  
(518) 651-9617, [ss2655@cornell.edu](mailto:ss2655@cornell.edu)

## FARM TO INSTITUTION and LOCAL FOOD

**Cheryl Bilinski**, Farm to Institution Program Lead  
(607) 592-9507, [cbt32@cornell.edu](mailto:cbt32@cornell.edu)

**Kristy Apostolides**, Farm to School Coordinator,  
Lower Hudson Valley  
(845) 429-7085 x106, [kda4@cornell.edu](mailto:kda4@cornell.edu)

**Amy Bly**, Farm to School Coordinator, Long Island  
(631) 827-1015, [ab2353@cornell.edu](mailto:ab2353@cornell.edu)

**Lizzy Cooper**, Farm to School Coordinator,  
Central NY  
(315) 630-0405, [ec795@cornell.edu](mailto:ec795@cornell.edu)

**Meghan Dohman**, Farm to School Coordinator,  
North Country  
(518) 791-1888, [meb377@cornell.edu](mailto:meb377@cornell.edu)

**Bridget O'Brien Wood**, Buffalo Farm Shares  
Coordinator  
(716) 536-3887, [bmo34@cornell.edu](mailto:bmo34@cornell.edu)

**Becky O'Connor**, Farm to School Coordinator,  
Western NY and Finger Lakes  
(845) 706-0293, [rao84@cornell.edu](mailto:rao84@cornell.edu)

**Kate Preston**, Farm to School Education  
Specialist  
(607) 788-4188, [kep98@cornell.edu](mailto:kep98@cornell.edu)

**Katie Sheehan-Lopez**, Farm to School  
Coordinator, Upper Hudson Valley  
(845) 340-3990 x334, [kms369@cornell.edu](mailto:kms369@cornell.edu)

**SJ Whelan**, Farm to School Coordinator, NYC  
(929) 895-2257, [sw954@cornell.edu](mailto:sw954@cornell.edu)

## AG MARKETING & DEVELOPMENT

**Lindsey Pashow**, Ag Business Development &  
Marketing Specialist  
(518) 569-3073, [lep67@cornell.edu](mailto:lep67@cornell.edu)

**Judson Reid**, Vegetable Specialist, Team Leader – (585) 313-8912, [jer11@cornell.edu](mailto:jer11@cornell.edu)

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