



HARVEST NEW YORK GROWING NEW YORK'S AGRICULTURE & FOOD ECONOMY

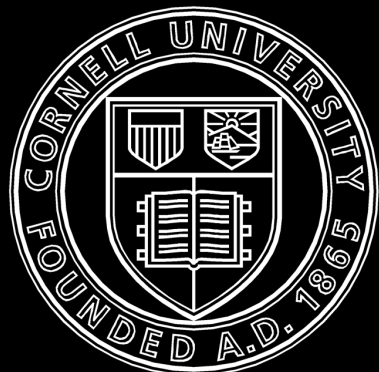
QUARTERLY HIGHLIGHTS July-September 2019

HARVEST NEW YORK

An innovative Cornell Cooperative Extension team that focuses on workforce development and business expansion projects that increase profitability and investment in key sectors of New York's agriculture industry.

MAXIMIZING CONNECTIONS

Harvest New York Specialists respond to emerging issues and develop new opportunities using the research of Cornell University, the resources of Cornell Cooperative Extension and relationships with partnering organizations statewide.



DAIRY FOOD PROCESSING & MARKETING

Rapid Response

Each dairy processor, large or small, has a profound impact on its local community. Therefore, it is critical to provide support when issues arise that can jeopardize the business as a whole. Recently, a Queens County cheese processor was facing the potential closure of their business due to food safety issues discovered by regulatory officials. When the processor's food safety issues were discovered, production at the plant came to a halt until the facility owners could find the root cause of their issues

"The experience we received was beyond superb. Anika and Rob were able to help us save our business. First by assessing the problem and finding the mediums to take to get to the root cause. Anika took time out of her day to do a complete walk-through and assess our possible cause for having listeria found in our plant. Her recommendations along with Rob were just what we needed."

- Dairy plant owner

While this may sound simple, there are crucial procedures that need to be followed to ensure that the facility can begin production again. HNY's Anika Gianforte and Cornell Dairy Foods Extension worked with the owners of this facility and New York State Department of Agriculture and Markets to help this plant understand the root cause of their issues, take corrective actions to target these issues, and develop updated programs to prevent these issues from reoccurring. A business family member stated, **"Anika and Rob were able to help us save our business."** First by assessing the problem and finding the mediums to take to get to the root cause. Anika took time out of her day to do a complete walk-through and assess our possible cause for having *listeria* found in our plant. Her recommendations along with Rob were just what we needed".

"We were in a very bad situation because of lack of production. However, by addressing this we were able to get the green light needed to re-open."

This plant was able to begin producing dairy products again after environmental testing was done and updated protocols were approved. If it were not for the

specific steps taken promptly, the facility would not have been able to remain open given the expenses of retaining the building, equipment, and employees without having a product to provide income for these expenses. They are currently processing between \$3,690 and \$4,800 worth of milk every week

URBAN AGRICULTURE PROGRAM

First Installation of Chamber Unit for Mushroom Production in NYC farms & gardens

In September 2019, project partners from Just Food, Harvest NY, and Cornell Small Farms met to install the first mini chamber for mushroom production in New York City at Prime Produce, an organization that focuses on environmental education and community building. This basic prototype is part of the larger research component of the USDA NIFA Grant “Expanding Specialty Mushroom Production on Urban and Rural Small Farms,” along with partners Farm School NYC, Just Food, and Grow NYC. This multi-year grant will engage growers, service provider organizations, and industry partners to enhance the collective knowledge base and capacity of farmers to grow specialty mushrooms and sell them profitably to local and regional markets within 250 miles of New York City.

The goals of the mini chamber design are as follows:

1. **Portable:** walls and parts can be disassembled and moved to a new location with a small truck/van
2. **Accessible:** All of the components can be found at local hardware stores or ordered online and assembled by anyone
3. **Consistent:** The unit offers a consistent growing environment for mushroom production
4. **Affordable:** Ideally keeping the cost around \$500 - \$600, which can be recouped after 6 - 8 months of growing at least 5 lbs/week

5. **Adaptable:** The design concept and materials allow for changes to be made to fit different contexts
6. **Open Source:** The complete design and construction plans will be made available to the public to replicate and adapt.

Whether inoculated into logs, directly into the soil or incubated in a chamber, mushrooms have the potential to grow in a variety of production systems in gardens and farms all across New York City. Through a partnership with Seeds to Soil, a program of Prime Produce, we will be able to understand better the necessary light, humidity, airflow, and temperature conditions needed to fruit specialty mushrooms indoors, with minimal startup costs using low-tech methods.



Pictured: Harvest NY Team Specialist Yolanda Gonzalez and Cornell Small Farms install the first mini mushroom chamber at Prime Produce (Left), and Shiitake and oyster mushrooms growing in the chamber unit at Prime Produce (Right)

LOCAL FOOD DISTRIBUTION & MARKETING

New York Farm to School Institute's Inaugural Year

On August 12-14th, six nascent Farm to School (F2S) teams journeyed to the Omega Institute in Rhinebeck, NY to kick start their participation in the NY Farm to School Institute, an intensive year-long program offered through American Farmland Trust. Modeled after Vermont-FEED's long-standing New England Institute, selected schools attend a summer retreat, at which they participate in a wide array of educational workshops and receive dedicated time to work on their F2S action plan, with the support of an onsite coach. Participation in the program reaps multiple benefits:

- The completion of a comprehensive F2S action plan, including goal development centered around the 3 C's of farm to school: cafeteria, classroom, and community.
- Coaching provided throughout the school year by an experienced F2S practitioner.
- Networking and information sharing with F2S practitioners from around the state, both those in the early and advanced stages of program development.
- A \$5K grant to assist Institute schools in executing their F2S action plan.

Harvest NY Specialist, Cheryl Thayer, was asked to serve as an onsite coach to the NYC team, an opportunity she eagerly said yes to. The NYC Department of Education Office of Food and Nutrition Services (OFNS) is the largest foodservice operation for students in the U.S., serving 1.1M students daily and operating on a yearly food budget of ~\$175M. Currently, F2S is delivered through their Garden to Café program, an impressive program that connects approximately 142 schools and community gardens with school lunch meals through harvest events and educational activities. Team members, which included senior members of the OFNS office, educators, researchers, and consultants, brainstormed ways in which the OFNS could participate in the F2S movement, given challenges unique to them given their sheer size. With a vision statement that intertwined themes concerning equity, food justice, sustainable local procurement practices, and education, this dedicated team has the ability to funnel their massive purchasing power through a value-based purchasing initiative, the result of which could have a tremendous positive impact on the NY food and agriculture economy and the public health of millions of students.



Pictured: New York Farm to School Institute group photo, featuring F2S teams from: East End Farm to School Project (Southampton Union Free School District, Bridgehampton School District, Tuckahoe Common School District), Forestville Central School District, New York City Department of Education Office of Food and Nutrition Services, Perry Central School District, Tri-Valley Central School District, and Windsor Central High School.

Photo Credit: American Farmland Trust

3rd Quarter Berry Production Update

Across New York State, many berry growers continue to employ the time-honored matted row strawberry production methods perfected at Cornell. A large number have also started using plasticulture, low-tunnels, and other more intensive production techniques. However, around the globe, there has been a movement towards more high-intensity, soilless strawberry (and other berries) production systems. These are commonly used in Europe, and the practice is being adopted in Canada as well, especially in Quebec. Esther Kibbe, Harvest NY's berry specialist, traveled to Quebec in August to attend several tours and meetings showcasing these new production systems. She learned about the challenges and opportunities associated with them, by conversing with the growers and other extension staff who were on the tours. Soil-less or substrate production under tunnels or greenhouses allows for season extension, reduced chemical inputs, and higher quality fruit, potentially enabling local growers to compete with California berries. Bringing this technology to New York growers is challenging, as it entails new skills and equipment. Harvest NY is partnering with the New York State Berry Growers Association, the Eastern New York Commercial Horticulture Program and Cornell University to bring a global expert on substrate berry production to Ithaca to teach a workshop for growers in February. While still in the planning stages, interest in the workshop is high among growers who have been looking for innovative ways to address some of the challenges they are having growing berries in the soil. This could also be a valuable training opportunity for regional and county extension specialists, to give them the tools to share with growers who may not be able to attend a 3-day workshop. Enrollment for the program will be managed by the Berry Growers Association and will be advertised through all of the available extension channels.



Pictured: Strawberries being grown in raised troughs in a greenhouse in Quebec.

FARM STRATEGIC PLANNING

Peer-to-Peer

A little over a year ago, we reported on a maple producer who was rebuilding from the ashes of a catastrophic barn fire (see Phoenix Rising, July 2018). This project – a new storefront, commercial kitchen, cold storage, and farm shop -- was completed in October of 2018 and officially opened for business during the 2019 sugaring season.

Since then, another couple has sought assistance from Harvest NY to plan their storefront where they intend to showcase their grass-fed beef, as well as other local products like maple syrup, seasonal produce, and maybe even some goat dairy products. In addition to the planning of the structure, Harvest NY facilitated an introduction between the two entrepreneurs which yielded a very fruitful exchange of ideas and experiences. The discussion also provided the name of a third contact who graciously opened his doors and offered his knowledge and experience.

This exchange of knowledge and experience is invaluable and can't be created in the classroom. Harvest NY will continue to use past projects as "learning labs" to network farmers and disseminate ideas.



Pictured: Horizon Ridge Farms, early planning stages



Pictured: Smith's Maple Farm, March 2019

URBAN AGRICULTURE PROGRAM

Addressing Plant Diseases on Urban Farms

The majority of urban farms in New York City are small mixed vegetable operations. Whether on city land or a rooftop, these farms are subject to most of the same pest and disease pressures that impact other New York vegetable operations—plus a few that are less common upstate.

Harvest NY Urban Agriculture Specialist Sam Anderson spends much of the growing season working directly with urban farmers on these issues, leveraging the Extension system and Cornell researchers to identify and address arthropod pest and plant disease challenges. After seeing crop losses from several key plant diseases in 2018, Harvest NY worked with farmers to reduce those diseases' impacts in 2019. Nearly all urban farmers in NYC use only organic practices, making cultural controls and other integrated pest management (IPM) strategies paramount.

- At one farm, where hot peppers are a major cash crop, bacterial leaf spot caused significant losses in 2018, reducing revenue by at least \$3,500. After consulting a Harvest NY specialist, the farm implemented a longer crop rotation and planted resistant jalapeño varieties, and in 2019 bacterial leaf spot was nearly absent from the peppers and caused no yield losses.
- Basil downy mildew caused complete loss of sweet basil at many NYC urban farms and gardens by late August last year. With Harvest NY consultation, several farms made adjustments to prolong the season for sweet basil. One farmer planted a variety with intermediate resistance and reduced planting density to encourage airflow; as of late September, that farm continues to harvest basil with no sign of downy mildew, with enough product to begin selling for the first time to a nearby restaurant.

Two farms experienced black rot on kale and collards for the first time, a disease that spread quickly in June and threatened an early end to the season for some of their most important crops. After a Harvest NY specialist identified the disease at both sites and provided recommendations, the farmers removed the affected plantings and switched from overhead to drip irrigation. At both sites, black rot had an only minimal impact the rest of 2019, potentially saving both farms several thousand dollars through the course of the season.



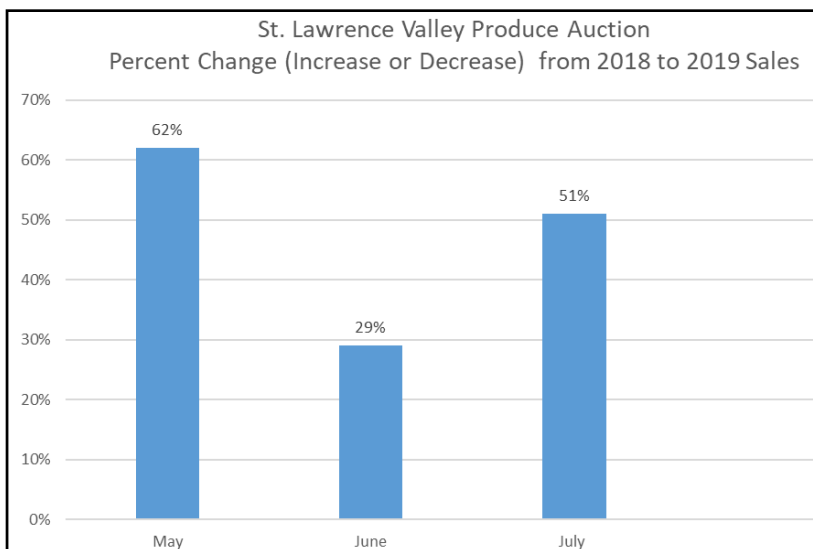
Pictured: Bacterial leaf spot on peppers.



Pictured: Basil downy mildew spores on leaf underside (left), and basil downy mildew on an urban farm (right).

AGRICULTURAL BUSINESS DEVELOPMENT & MARKETING

3rd Quarter Program Updates



St. Lawrence Valley Produce Auction: Harvest NY continued to work with the St. Lawrence Valley Produce Auction throughout the third quarter. During the third quarter, Harvest NY tracked overall vegetable and fruit sales, which included the timing of sales, lot size, and average sales prices. The purpose of tracking sales is to help farmers make informed decisions on approaches to receive a higher average sales price than they are currently receiving for their products. The auction which runs from May until the beginning of November has seen an increase in sales from 2018 to 2019 for May (62%), June (29%), and July (51%). At this point, August and September sales totals have not been computed for 2019.

Farm Visits: Harvest NY arranged for outside CCE regional specialist to provide educational support through 32 farm visits. Farm visits included helping farmers with production issues related to disease, pest, and plant fertility. When CCE regional specialist

is unavailable for farm visits, Harvest NY provides support in meeting with farmers and working with a regional specialist to solve production issues.

Annual Production Summer Meeting: Harvest NY hosted the annual production summer meeting, which included information regarding invasive pest, season extension, and 2018/2019 produce auction sales. The annual production summer meeting had a turnout of 42 participants. This program was supported through the Northern New York Agriculture Development Program funding.

Industry Outreach

On September 12th, Harvest NY Specialist Anika Gianforte participated in a panel held at the Northeast Dairy Foods Association annual conference in Cooperstown, NY. The focus of the panel was Labor Issues at dairy processing facilities in the Northeast. Over 150 attendees were present at the conference, representing dairy manufacturers and supporting businesses. Key themes included:

- Importance of retention
- Providing value for the up and coming Millennials and Generation Z
- Working collaboratively as an industry to focus on improving and attracting a strong workforce.



Pictured: PR consultant Susan McLennan leads a panel of dairy processors.

From left, Susan McLennan; Nathan Pistner of Great Lakes Cheese; Valerie Wasielewski, senior human resources manager at Chobani; Kevin Peter, dairy plant manager at Wawa; Anika Gianforte, Harvest NY Dairy Processing Specialist; and Greg Sharpe, a food processing instructor at Genesee Community College.

Photo by Philip Gruber

Cornell Cooperative Extension
Harvest New York

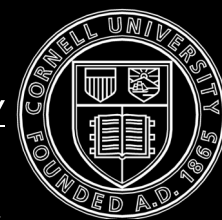
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