

HARVEST NEW YORK

GROWING NEW YORK'S AGRICULTURE & FOOD ECONOMY

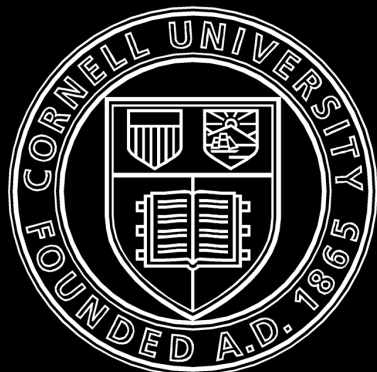
QUARTERLY HIGHLIGHTS October-December 2019

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.



LOCAL FOOD DISTRIBUTION & MARKETING

Harvest NY Receives Local Food Promotion Program Grant!

This three-year grant award will enable Harvest NY to expand its Local Foods program area, with the specific goal of increasing institutional procurement of local farm products. The funds will primarily be used to hire a Farm to Institution Program Coordinator to work with Harvest NY Specialist, Cheryl Thayer, and expand upon the work currently underway. The primary institution targeted through this project will be public K-12's, though assistance will be provided to any interested institutional partner. The Harvest NY Local Foods team will partner with eight county-level Cornell Cooperative Extension offices in Western NY to provide direct assistance and education to farmers and food producers interested in selling to institutional markets, and to institutions interested in localizing their food supply chain. Further, the Local Foods team will create resources and host educational workshops that will benefit stakeholders across the State. By expanding Farm to Institution programming across the region, the project will ultimately (1) strengthen the local economy via the institutions' investment of millions of dollars into the local food and farming sectors; (2) benefit tens of thousands of consumers through increased healthy food access; and (3) leverage millions of dollars in state reimbursement to strengthen individual school districts.



Pictured: Cheryl Thayer

Welcome Karen!



We are pleased to welcome our new Dairy Processing Specialist; Karen Ospina. Karen is a native of Colombia, and a graduate of Fundación Universitaria San Martín in Bogotá, Colombia. While in Colombia, Karen worked for Alquería S.A. specializing in milk production quality and control, and also worked for Bayer S.A. as a veterinary sales representative.

Karen will be working with Anika Zuber Gianforte and Dairy Foods Extension to support the NYS dairy processing industry, and will cover the eastern portion of the state. Her email address is karen.ospina@cornell.edu, and she can be contacted at 516-592-2578.

URBAN AGRICULTURE PROGRAM

Field Trial: Soil pH Management for Urban Agriculture

While conducting a soil survey spanning 21 urban vegetable farms in New York City, Harvest New York Urban Agriculture Specialist Sam Anderson found some distinctive characteristics that set these soils apart from many agricultural soils of New York. One common characteristic of urban agricultural soils is relatively high soil pH, with most samples registering between 7.1 and 7.5, and a few as high as 8.0. At these levels, particularly in soils with high levels of organic matter (another feature of most urban ag soils), plant growth and yield may be negatively impacted. However, in the absence of any clear recommendations for how to address the issue in their unique soils, Anderson found that few NYC producers were taking steps to lower soil pH.

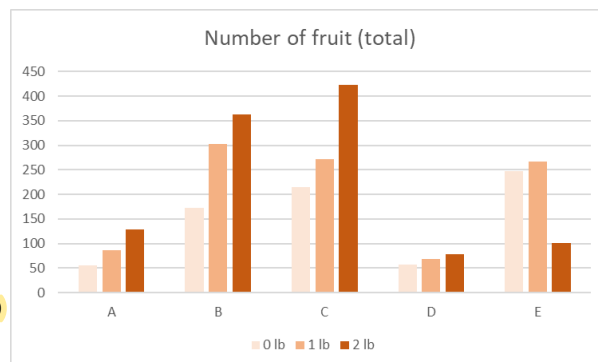
Sulfur amendments are known to lower pH in alkaline soils, with recommended application rates widely depending on soil type. In order to adapt these recommendations to urban agriculture, Anderson and Harvest New York colleague Yolanda Gonzalez set up a field trial, tracking the effectiveness of an elemental sulfur amendment for lowering pH and improving yields. They chose serrano peppers as a trial crop because hot peppers are ubiquitous across many NYC urban farms, and because many market gardeners grow and sell serrano peppers each year to Bronx Hot Sauce, a product of Small Axe Peppers.

Anderson and Gonzalez found that adding sulfur at rates of 1 or 2 pounds per 100 square feet significantly lowered soil pH compared to control plots in two different soil types common to NYC urban farms. Yield also increased in parallel with increased sulfur application rate; in three out of five replications, yield in plots with the higher rate of sulfur was at least twice that of the corresponding control plots, equivalent to one additional pound of peppers produced per plant. **For NYC urban farmers selling to Bronx Hot Sauce, this would amount to an additional \$264 per 100 square feet—at the cost of under two dollars' worth of sulfur amendment.**

These results allow Anderson and Gonzalez to make educated recommendations for sulfur application rates, and at least three urban farms will be conducting their own on-farm sulfur trials in 2020.



Pictured: Serrano Peppers in the field trial



Pictured: Total peppers produced from each row of the trial, showing higher yields in plots where sulfur was added beforehand at the equivalent of 1 or 2 lb per 100 square feet.

Harvest NY Helps Urban Growers Enter New Markets

In New York City, growers typically sell their produce directly to their consumers through farm stands, Community Supported Agriculture (CSAs), as well as small grocery stores and nearby restaurants. While direct marketing sales have been profitable, urban farms in Brooklyn and Queens have not been able to enter larger retail outlets and distributors, such as Wegmans and Fresh Direct. These market channels generally require a food safety plan and some form of certification. Before Harvest NY's presence in New York City, an urban farmer that wished to attend a food safety plan and Good Agricultural Practices (GAPs) training would have to travel upwards to 2.5 hours to an extension office in upstate NY, Long Island, or New Jersey.

To address the need for formal food safety training and hands-on assistance for growers in New York City, Harvest NY Specialist Yolanda Gonzalez, in partnership with the National Young Farmers Coalition and the National Farmers Union hosted a Food Safety Modernization Act (FSMA) Grower training and Food Safety Plan Writing Workshop on October 1-2nd, 2019. Over 20 urban growers, both hydroponic and soil-based, received the education they needed to meet the training requirement for GAP certification, which will ultimately position them to sell to a wider range of customers.

In addition to larger retail outlets and distributors, more restaurants are seeking to protect their food supply and reduce their risk of food-borne pathogens by purchasing from suppliers that have a food safety plan and have GAPs certification. According to one farmer, **"GAPs certification will also increase our ability to maintain our existing accounts, as they will have additional confidences that we are taking steps to keep our produce food-safe."** Overall, farmers found that these valuable training opportunities helped them understand best practices and ways to customize these practices to best suit their unique farm operations—all without having to leave New York City!



Pictured: Sign of the new Wegmans location in the Navy Yard (Brooklyn, NY)



Pictured: Participants of the FSMA Grower Training held at 55 Hanson Place on October 1st, 2019 (Brooklyn, NY)

Farm-Based Beverages

Harvest NY Co-Hosts 3rd Empire State Barley & Malt Summit

Over 100 craft beverage stakeholders gathered in Liverpool on December 16-17 for the annual Empire State Barley & Malt Summit, the theme of which was the “Value in Local.” The primary audience for the Summit has always been growers and maltsters, though the conference committee strongly encouraged breweries and distillers to attend. This Summit drew in repeat attendees and a fair amount of new attendees, which included growers, maltsters from the Northeast region, brewers, and distillers. Debuted at the Summit was a video* produced by Cornell Cooperative Extension Communications. The video illustrates the curricular and symbiotic partnership between Cornell CALS plant breeders and pathologists, Extension specialists, farmers, maltsters, and farm brewers. When asked if the attendees would attend a 4th Summit in 2020, a resounding YES was expressed by the majority.

Pictured: David Skeval, CCE Onondaga, participates in a malt sensory exercise, led by Aaron MacLeod, Hartwick College Center for Craft Food & Beverage. In this session, attendees dove into an exploration of malt flavor and aroma. They learned how flavor is created in the malthouse and the potential impacts of genetics, growing conditions and processing, as well as how malt contributes to beer flavor and how it can be assessed.

* To view the video in its entirety, visit <https://youtu.be/s5ln1Foewcl>



Pictured: NY Brewing Value Chain from Grower to Consumer Panel. Pictured from L-R: Francis Domoy (Domoy Farms), Ted Hawley (New York Craft Malt), Dan Palladino (Heritage Hill Brewhouse), Joe Ori (All Who Wander), Dan Chapman (All Who Wander), Paul Leone (NY Brewers Association).



AGRICULTURAL BUSINESS DEVELOPMENT & MARKETING

Educational Marketing Outreach Northern New York

In Northern New York, there are limited available markets for local farm products. Farmers are looking to seek other options outside of Northern New York. However, before jumping into finding additional markets, farmers are attending HNY educational workshops to prepare their operations.

Harvest NY worked with the local Cornell Cooperative Extension offices to support and provide training on marketing education to farmers across Northern New York. This support included teaching and facilitating a variety of marketing programs across the region. These workshops focused on:

- Agritourism
- Farmer market
- General marketing
- Finding new markets
- Evaluating markets
- Developing a marketing plan
- Digital marketing
- Value-added products
- Industrial hemp

The programs have reached approximately 97 farmers across Northern New York and have led to the participants finding additional markets inside and outside of Northern New York.

DAIRY FOOD PROCESSING & MARKETING

4th Quarter Update

The 4th quarter of 2019 boasted both regional and national programming for the Harvest NY Dairy Processing Program.

In October, Harvest NY and the Dairy Foods Extension Program held a Vat Pasteurization and Basic Cheese course. Pasteurization is a key regulatory concern for dairy processors. During the vat pasteurization portion of the course, participants utilize Cornell's Food Processing Development Laboratory (FPDL) for hands-on learning of different pasteurizer components and key factors for successful pasteurization.

For the cheese-making portion of the course, participants have classroom time to learn key cheese-making factors before continuing on to the hands-on portion of the course in the FPDL. This year, the participants made swiss, cheddar, and farmer's cheese. Participants are in charge of keeping track of the cheese's temperature, pH, culture addition, and cutting. During the process, instructors point out key things to identify for cheese quality. 23 participants earned certificates in these areas after demonstrating knowledge of cheese making during this workshop.

Harvest NY also partnered with Dairy Management Inc. (DMI) on hosting the inaugural Dairy Beverage Symposium in Rosemont, IL. DMI is the National Checkoff organization funded by the nation's dairy farmers. The Dairy Beverage Symposium highlighted key innovations in the dairy beverage space, including:

- Artificial Intelligence (AI) trend prediction utilizing social and other big data sources
- The Milk Plant of the future
- New Farm-to-Table data analysis tools to improve the quality and shelf life of dairy-based beverages
- Processing Innovation Panel - Using Milk as an ingredient to add value
- Milk's Customers of the Present and Future Panel
- Innovation in Packaging

This national symposium was key to identifying specific focus areas for dairy beverage manufacturers. As the technology space continues to advance, New York State dairy processors need to be aware of what is happening at the national level to stay ahead of the curve. Forty individuals from companies across the U.S. attended the symposium, including 5 individuals from NY.

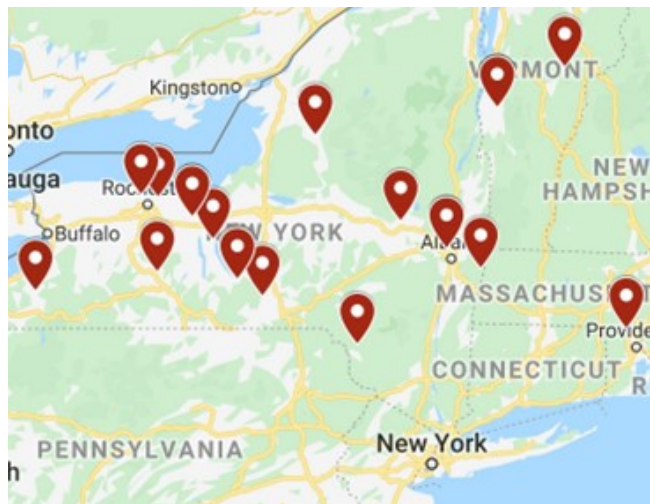


Figure 1. Map of Vat Pasteurization and Basic Cheese Course attendees



Figure 2. Left to Right: Hari Meletharayil (DMI: Vice President-Product Research), Kimberly Bukowski (Cornell Dairy Foods Extension: Certificate Program Director), Anika Gianforte (Harvest NY Dairy Processing Specialist), Bill Graves (DMI: Senior Vice President- Product Research and Food Safety)

LOCAL FOOD DISTRIBUTION & MARKETING

Berry Workshop Held in Alfred

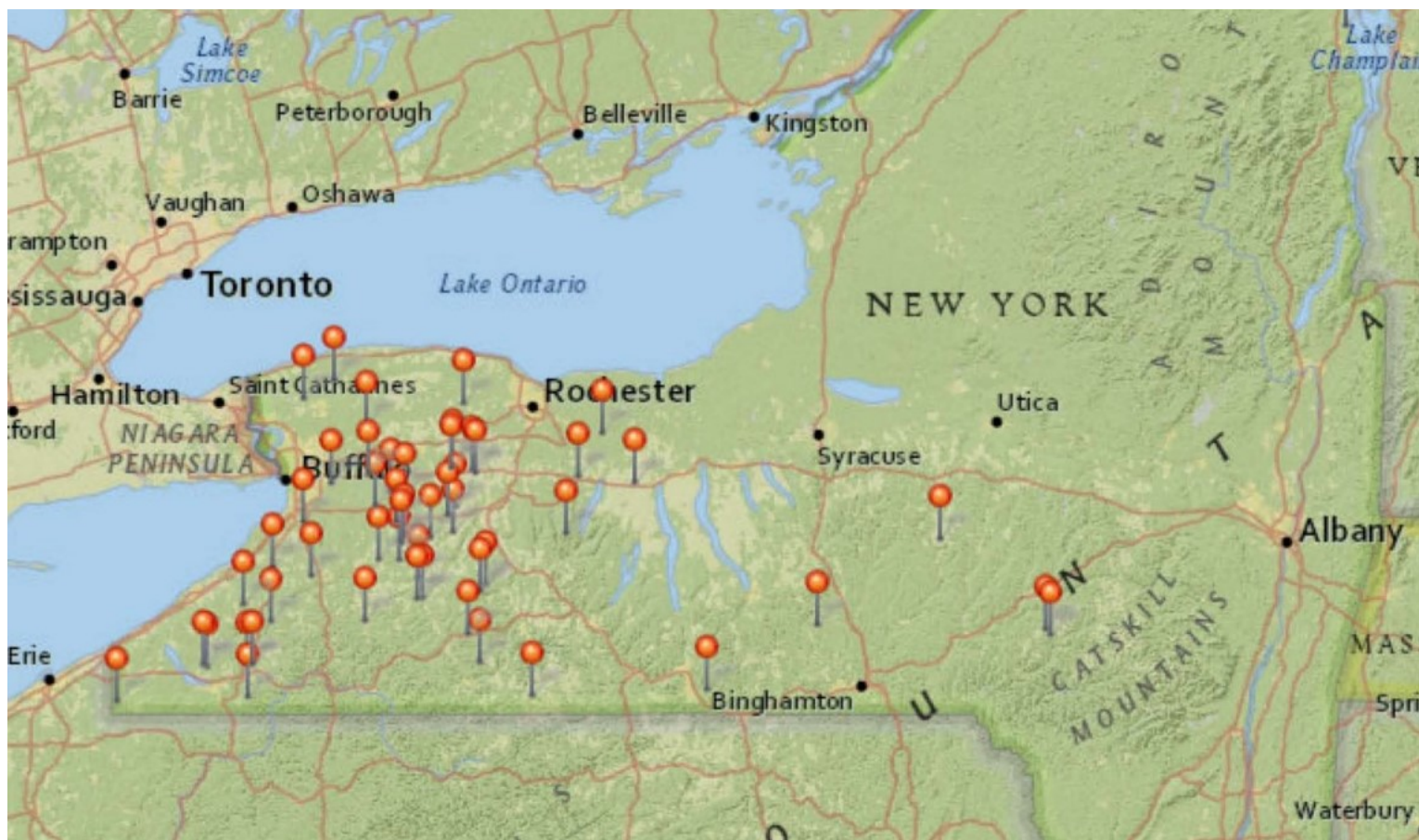
On November 14th, at Alfred State's College Farm, Harvest NY's berry specialist Esther Kibbe gave a workshop on strawberry and blueberry establishment and nutrition management. The workshop was organized in collaboration with Lynn Bliven, Agricultural Educator in Allegany County, and Ariel Kirk, Ag Educator from Steuben County. The workshop was well attended, with 26 participants from Allegany and Steuben County, as well as from Cattaraugus, Wyoming, Erie and Monroe counties. The class included lively discussions and practical examples for managing soil issues and fertility management. Most of the attendees were small scale or beginning growers and appreciated the focus on the fundamentals. An attendee, Chris Przemielewski, commented on the event, "Thank you for holding the class. As we always continue our education, the goal is to pick up at least one significant tip or idea. I can say that I picked up several good ones!"



Photo Credit: Oak Hill Bulk Foods

FARM STRATEGIC PLANNING

2019 By the Numbers



Fiscal Year 2019 has closed out and here are the final tallies:

- Direct assistance provided to 53 farms or other agricultural enterprises (see map above). Assistance provided through 415 emails, texts, phone calls, on-site visits, and even a few video conferences to more distant operations.
- 31 projects in various stages of design and implementation, representing almost \$4.7 million of investment in the upstate economy. Almost \$100,000 of additional funds were leveraged from various state, federal, and private grants. This number will likely rise in the coming months as grant applications are submitted and approved. The numbers here are derived from cost estimates, contractor bids, or actual turnkey project costs.
- With the prolonged stagnation of the dairy industry, only a little over half of these projects were dairy-related – counting goats. The remainder included a cidery, greenhouses, high tunnels, farm storefronts (maple, beef), drip irrigation, and fresh vegetable packing facilities. Not to mention an original design livestock pavilion and show ring for a County Fair Association in western New York.
- 12 monthly articles to a readership of almost 650 subscribers. Many of these articles have been picked up and reprinted in other periodicals across New York State. Co-authored an article on farmstead planning for Pro-Dairy's *The Manager* (12/2019), which has an even greater distribution (~50,000).

Cornell Cooperative Extension
Harvest New York

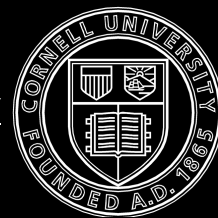
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