Cornell Cooperative Extension

Eastern NY Commercial Horticulture Program

Quarterly Highlights

January—March 2020

CCE ENYCHP Response to COVID-19 Pandemic—Fruit & Vegetables Farmer Outreach in Eastern NY

The regional Eastern NY Commercial Horticulture program transferred to working at home in mid-March. Due to ongoing calls and field research, CCE Director Chris Watkins provided team members with essential worker verification letters allowing travel to farms for critical visits only. This has enabled CCE in all of the 17 counties that the program serves (with the critical support of those CCE county associations) to visit farms and help with troubleshooting production issues. Fortunately, all of our winter field meetings had been completed at this time, with the exception of Special Permit Training (SPT). SPT is an annual required training for workers that allow them to continue to apply pesticide protection to orchard crops while under the direction of a certified pesticide applicator. This meeting has been moved to an on-line format – the first time this has ever been allowed by NYS DEC – and will continue to meet the needs of nearly 300 workers region wide. Dan Donahue, Michael Basedow, and Sarah Elone have worked for many weeks to make this happen.

Farm Business Management specialist Elizabeth Higgins has been busy assisting growers with accessing funds through the CARE Act – Congress' response to the economic downturn caused by COVID-19. She helped create resources that are posted on the Cornell Extension Disaster Education Network (EDEN) and has been helping with web-based workshops and podcasts on many farm business topics.

All of the CCE ENYCHP staff have been helping growers consider alternate worker arrangements as H2A workers from some countries have yet to arrive in the US. A resource of worker training information has been assembled and will be available to farmers for the purpose of training new and veteran workers for tasks unfamiliar to them. Despite the very challenging circumstances and the uncertainty across the region, there are some bright spots. Jim Meyers reports that local wine sales have surged despite tasting rooms being closed and farms with winter storage crops or high tunnel vegetables have experienced high demand.

Some additional COVID-19 response topics are listed below. This information, along with seasonal production information, is available in podcasts, newsletters, e-alerts and weekly announcements that are sent to growers on a daily or weekly basis, depending on crop. Educators have pivoted from field meetings to on-line webinar meetings and virtual office hours in an attempt to meet the need for timely, accurate information during the NYS PAUSE. These new adaptive approaches to outreach demonstrate

COVID-19 response:

Need information?

View the following Cornell CALS and CCE Resource Pages Updated Regularly

General Questions & Links:
https://eden.cce.cornell.edu/

Food Production, Processing & Safety Questions:
https://instituteforfoodsafety.cornell.edu/coronavirus-covid-19/

Employment & Agricultural Workforce Questions:
http://agworkforce.cals.cornell.edu/

Cornell Small Farms Resiliency Resources:
https://smallfarms.cornell.edu/resources/farm-resilience/

Financial & Mental Health Resources for Farmers:
https://www.nyfarmnet.org/

Cornell Farmworker Program
www.farmworker.cornell.edu and
www.trabajadores.cornell.edu (en espanol)

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the ability of the ENYCHP team to continue providing timely, research based guidance to growers in support of the agricultural sector. The effort has paid off; the first tree fruit webinar hosted by Mike Basedow had over 50 attendees, and the podcast series hosted by Ethan Grundberg added 151 listens in the first week of April alone.

- Providing NYS Dept of Ag and Markets with guidance for You-Pick farms.
- Educators are working to help growers with supply chain problems – specifically the lack of PPE required for agricultural workers. PPE of all types, from respirators to dust masks are in short supply.
- Helping growers understand COVID-19 and how to specifically address worker health and safety.
- Helping growers communicate to customers that food is safe, and making sure that they are using the appropriate sanitizing and cleaning materials.
- Assembling material for mental health outreach through NY FarmNET and other avenues.
- Supporting farm requests for new platforms to sell product.
- Answering questions about Farmers Market and Retail Farm Stand Guidance as well as farm vehicle registration in light of closing of NYSDMV offices.
- Helping the Mohawk Valley Produce Auction transition to running under current mandated limitations.
- Framing normal agricultural questions concerning the safety and importance of locally grown food to reflect concerns surrounding the pandemic.

For more information about CCE ENYCHP, please visit the website at: https://enych.cce.cornell.edu/ or follow us on Facebook or listen to podcasts on SoundCloud.

Third Annual Eastern NY Fruit & Vegetable Conference

Charles Bornt, Vegetable Specialist

Attendees of the conference had the opportunity to visit over 50 vendors at the trade show that took place throughout both days of conference.

On February 25th and 26th, 2020, before the COVID-19 pandemic came to light, nearly 350 growers, 52 companies, 15 CCE Eastern NY Commercial Horticulture Program staff and 51 guest speakers attended the third Annual ENYCHP Fruit and Vegetable Conference at the Desmond Hotel and Conference Center. This year saw the return to a two-day format with tree fruit programming on both days, a full day of vegetable programming and a Food Safety Modernization Act (FSMA) training along with ½ days sessions of small fruit, grape and hemp education. Day two of the Tree Fruit session focused on variety selection and information from a grower panel on what they see as where apple varieties are heading and what they are planning on planting for the future. Many Cornell faculty and CCE ENYCHP staff joined us for presentations in many of the sessions as well as growers, and speakers from around the northeast including Connecticut, Vermont and Massachusetts. We continue to have excellent industry support with 51 companies represented at the trade show this year, with lots of positive comments from the vendors on the success of this meeting. Plans for the 2021 ENY Fruit and Vegetable Conference are already underway.

Elisabeth (right) observes post-harvest water chlorine testing using a titration method. Photo courtesy of the Produce Safety Alliance.

Preparing to Train Growers on Water Testing for the Produce Safety Rule

Elisabeth Hodgdon, Vegetable Specialist

In January, I traveled to the University of Florida Citrus Research and Education Center to attend a Produce Safety Alliance Advanced Training Course. Course participants included extension educators from around the country, from Alaska to Georgia. We benefited from the sunny course locale by being able to do hands-on outdoor activities during the center's citrus harvest, such as irrigation system inspections and water sampling, determining how to know if compost is adequately finished, and conducting packing house equipment assessments. Water testing procedures for irrigation and post-harvest water are new for many growers. The PSA Advanced Training allowed us to practice our own testing skills and learn from each other so that we can better help growers with federal Produce Safety Rule requirements this summer.

Produce Auction Hits Million Dollar Mark, Brings in New Growers

Crystal Stewart-Courtens, Vegetable Specialist

Growers attending winter Produce Auction meeting learned about greenhouse tomatoes, pumpkins, and water testing/quality.

Last year the Mohawk Valley Produce Auction in Montgomery County exceeded one million dollars in annual sales, and this spring started a $250,000 infrastructure expansion to continue the positive trend. The winter grower meeting supported by our vegetable team had record attendance this year, with many new faces looking to start growing produce in the Mohawk Valley. To support the expansion by new produce farms entering the state, Crystal has committed to holding office hours at the auction every Tuesday from 10-11 am. This steady presence will provide growers from the plain community with easier access to timely, research based information. The Auction also has a membership in the team, and receives newsletters which are posted on a bulletin board.

The auction plans to proceed despite challenges posed by Covid-19, and will be supported by our team in training workers and buyers in practicing proper social distancing techniques and providing proper cleaning and sanitizing equipment at the auction. Local food will be more important this year than ever, and helping the auction provide that to grocery stores and farms stands has a wide-ranging impact.

Growers attending a meeting in a high tunnel.

Spanish-speaking farmers and farmworkers participating in a breakout group.

High Tunnel Tomato Production Meetings Bring in a Crowd

Natasha Field, Technician

Studies have demonstrated that tomato production in high tunnels can be three times more profitable when compared to open-field production. At the same time, production costs, especially labor and maintenance increases substantially in high tunnel systems. Managing production costs and pests can be challenging for growers especially for those with less experience. In response, two day-long high tunnel tomato production meetings were held in Poughkeepsie and Ballston Spa to support growers in optimizing their tunnel production. Ethan Grundberg, Teresa Rusinek and Crystal Stewart-Courtens brought together a group of specialists and farmers to talk about current tomato research, considerations for high tunnel designs and locations, and irrigation systems. Balancing tomatoes with winter greens, foliar sampling, insect and disease management were all discussed as well. Breakout sessions included tomato variety selections, grafting and pruning, and integrated pest management.

At the Poughkeepsie meeting, an emerging approach was taken to reach Spanish speaking farmers and farmworkers that might not have previously gone to meetings. Live, simultaneous translation of the speakers was sent to small headphones that the Spanish speaking folks were wearing thanks to the support and partnership of the Language Justice Team at the Hudson Valley Farm Hub. Spanish language resource booklets were also available along with the English language booklets.

Between the two meetings, over 100 people attended.

Winter Learning with New Educational Tools

Michael Basedow, Tree Fruit Specialist

This past quarter we provided extension trainings in tree fruit pest management and horticulture, utilizing a combination of novel educational outreach tools.

An Apple IPM Intensive school was presented in January 2020 at the Empire Producer's Expo, OnCenter Syracuse, NY. The intensive reviewed the key insect, disease, and weed pests found in apple orchards across New York, and provided attendees with key management tactics for managing the pest complex. Speakers included Dr. Art Agnello, Dr. Kerik Cox, Dr. Lynn Sosnoskie, and Dr. Juliet Carroll. We had 214 attendees across the four session workshop, representing growers from across New York State. Attendees included farm owners, farm managers, independent private consultants, agrichemical company personnel, cidery owners, and crop insurance personnel.

Poll Everywhere software engaged the audience in interactive learning via text or smart phone mediated responses. We asked the audience to answer 20 questions before and after the workshop to gauge their changes in IPM tactic adoption. Before the workshop, for all 20 questions there were respondents who indicated they "Don't Do" the IPM tactic, but after the workshop, eighty percent of the questions no longer had any respondents indicating they wouldn't do the IPM tactic, and most also indicated they would do the IPM tactic across the entire orchard.

Attendees also received a 100-page book of workshop materials, and a USB drive with digital copies of the written materials to aid accessing online resources. Materials from the workshop are now hosted online at the following website: https://nysipm.cornell.edu/agriculture/fruits/apple-ipm-intensive-workshop-2020/

Following the success of the Apple IPM Intensive, we held an online Stone Fruit pest management webinar. This webinar included materials on the major insect, disease, and weed pests of stone fruit orchards, with particular emphasis on pests of peaches and cherries. The webinar was held on March 16, and was live attended by 26 people. Attendees came from across the Eastern New York region. We also pulled in a larger audience, including growers from Western New York and New England. Poll Everywhere was also utilized throughout the course of the webinar to engage webinar participants. The webinar was also recorded, and was hosted on YouTube. As of April 2nd, the recording has been viewed 121 times. We also edited the recording into shorter videos by individual pest, and these videos are now also hosted on the team Youtube account. The entire playlist has received 22 views as of April 2nd.

On March 31st, we held another webinar on Bloom Thinning with the Pollen Tube Growth Model, with Dr. Greg Peck of Cornell University and Dam Olmstead of NYSIPM as our main speakers. This webinar was live attended by 45 individuals. Growers attended from across the Eastern New York region, along with additional attendees joining from Western New York, New England, and as far away as Minnesota and Western Michigan. Poll everywhere software was also used to engage the audience, and the recording of the webinar will soon be placed on Youtube.

With the recent COVID-19 outbreak and the inability to temporarily conduct field meetings, we intend to continue our efforts in developing quality online educational materials to meet the needs of our tree fruit growers here in Eastern New York.

ENYCH Labor Management Education Programs Recognized by USDA Extension Risk Management Education Program as Outstanding Project in the Northest Region for 2020

Elizabeth Higgins, Business Specialist

Labor cost, labor shortages, worker turnover and poor workplace communications are critical concerns for farm employers. Interviews of farmworkers by the Cornell Farmworker Program revealed that clear communication of mutual expectations over hiring, pay, promotions, training, performance criteria and benefits is often lacking on farms. These communication failures, often due to linguistic and cultural gaps or poor human resource practices, were a significant factor in workers' decisions to leave farms. In the past few years Liz Higgins and others on campus have been developing and offering programs to help farm owners and farm managers become more effective at managing their workforce.

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The first program offered by ENYCH, Good to Great in Ag Labor Management, was recently selected as the Outstanding Project in the Northeast Region by the USDA Extension Risk Management Education Program. The project helped almost 200 growers in NYS and the northeast learn HR management skills through a series of 4, half-day Good to Great in Ag Labor Management workshops held between December 2017 and March 2018 in 6 locations: Essex, NY, Ballston Spa, NY, Highland, NY, Oriskany, NY, Canandaigua, NY and East Aurora, NY and a series of 8 1 hour webinars held in April 2017. Participants had the opportunity to work on concrete skills like developing job descriptions and employee handbooks and discuss strategies for improved communication and incentivizing good performance at work.

We also held a two-hour webinar, Navigating the Ag Labor Maze, on resources for managing foreign-born migrant workers that linked participants to other resources in New York State led by Mary Jo Dudley the Director of the Cornell Farmworker Program.

A goal of the project was to move discussions of labor issues in agriculture beyond just legal compliance to more effective management and creating better workplace environment. We wanted to help farmers do a better job retaining good employees and also in training and providing feedback to their employees. We recognized that many farm owners and managers have not had formal training on being an effective manager, and most small farms don't have employees with HR management experience in their HR roles.

The program was successful! We surveyed participants 7-11 months after most of them had participated in workshops or webinars to see what changes had been made as a result of their participating in the ERME-funded project. We documented changes, based on the ERME-funded project, in 58% of survey respondents. In the first season farms had made improvements to their employee manuals, made workplace environment improvements including improvements to their standard operating procedures or training programs, and made legal/compliance improvements. 85% of respondents indicated that they were likely to make a change, based on information from the programs in the next 12 months.

This program has led to the development of further education opportunities for farmers in the region. Following this program Higgins and Grunberg collaborated with the Cornell Small Farms Program, the Cornell Ag Workforce Development Program and the Lake Ontario Fruit Program on additional farm management training programs targeted to beginning farmers, farm managers, next-gen farmers moving into management and farmworkers looking to gain management skills. In 2020 ENYCH, LOFT and the Ag Workforce Development Program will be offering additional management training workshops as well as a new program on best practices in on-boarding and training new workers.

Podcasts Provide Rapid Support to Produce Farms Facing COVID-19 Challenges

Ethan Grundberg, Vegetable Specialist

Cornell Cooperative Extension
Eastern NY Commercial Horticulture Program

Eastern NY Vegetable News Podcast

In response to grower feedback to develop audio resources that could be used while completing other tasks on the farm, the vegetable specialists on the team introduced the Eastern NY Veg News Podcast in early 2019. Early episodes focused on the results of field trials conducted by the specialists while in-season episodes highlighted current pest and disease issues being faced by growers in the region. The podcast was listened to 1,539 times in 2019 alone.

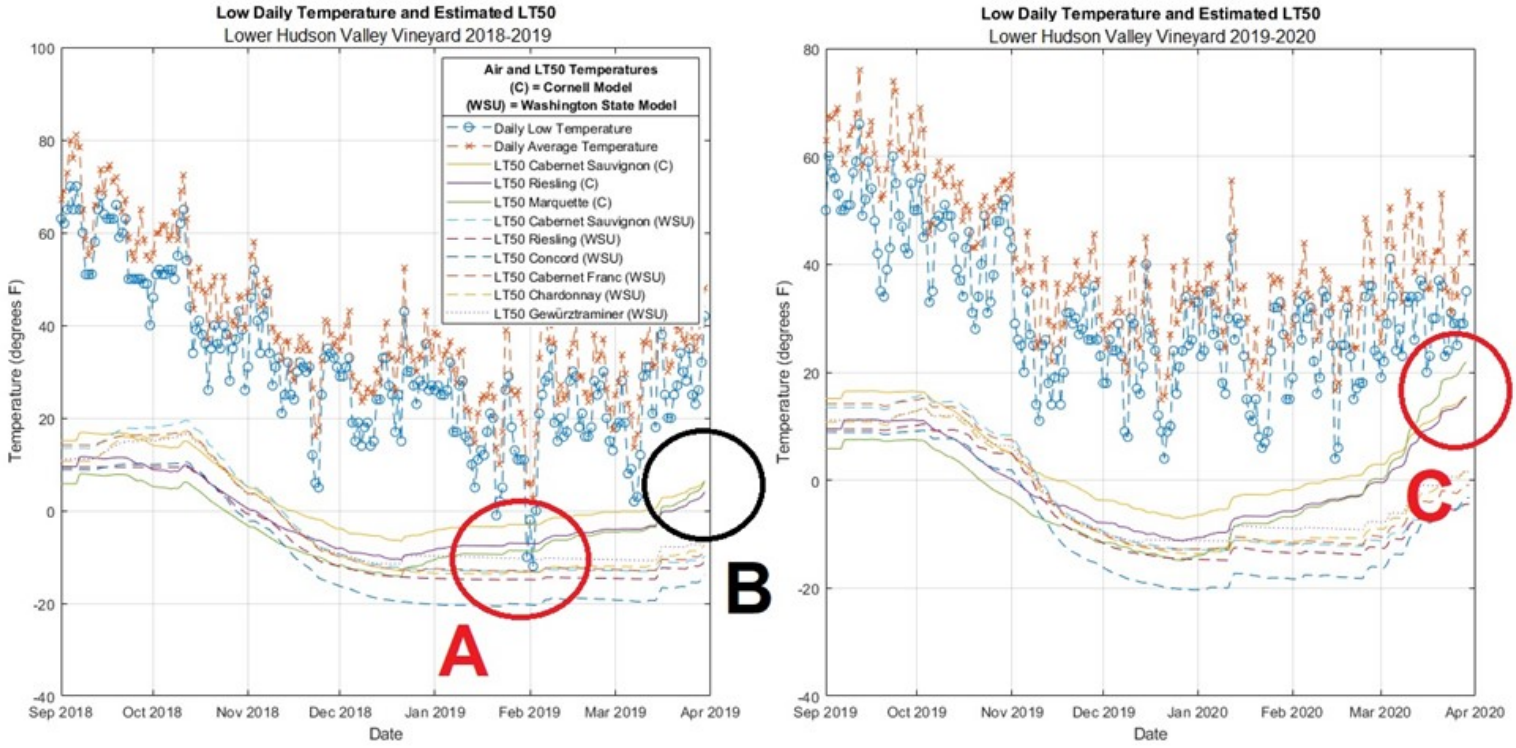
As the COVID-19 pandemic placed constraints on providing in-person training and growers had pressing question and concerns that were difficult to address in a timely manner through newsletter articles, vegetable specialist Ethan Grundberg worked to develop a series of podcast episodes to discuss impacts of the pandemic on vegetable farms in the region. In the last week of March, Grundberg interviewed Agricultural Business Management specialist Liz Higgins about some of the impacts of COVID-19 on H2A visa holders, market closures, and more. That same week, Grundberg interviewed Erin Enouen, the owner of Long Season Farm in Kerhonkson, Ulster County, about her quick pivot to pre-ordered online sales of her produce. Other episodes in the series that were released in April include a conversation on sanitation protocols and employee hygiene with Elisabeth Hodgdon, an episode on employee management and changes to sick leave and the Paycheck Protection Program with Ag Workforce Development Specialist Dr. Richard Stup, and an interview with SUNY Cobleskill faculty member Stephen Weir on managing cash flow in a crisis. All episodes are edited by one of the team's technicians, Sarah Tobin, before being published on SoundCloud and distributed via an RSS feed to both podcast apps and the ENYCH website.

The podcast was listened to 378 times between January 1st and April 1st 2020 and has an additional 151 listens in the first week of April alone. This new adaptive approach to outreach demonstrates the ability of the ENYCHP team to continue providing timely, research based guidance to growers at a time when there is critical need for access to accurate information to support the agricultural sector.

New Tools for Better Predicting Bud Cold Hardiness and Budbreak

James Meyers, Viticulture Specialist

Researchers in Geneva have recently developed a new grape physiology model for predicting how buds acclimate to winter temperatures and subsequently de-acclimate. These models were added to the ENYCHP daily vineyard reports this winter, giving every grower daily information about potential winter damage, and budbreak estimates. Since each of the approximately 150 farm reports in Eastern New York is customized with farm-specific weather data, growers are better able to assess their specific risks, rather than using regional models. Predicted winter injury events can be used to guide pruning practices to compensate for potential losses. This spring, a prediction of early budbreak has been used to inform decisions regarding frost mitigation activities, such as dormant spraying to delay budbreak and sprays that may temporarily increase bud hardiness prior to a predicted cold event. The tools have also been used to improve site selection recommendations. Previously, historical low temperature data was used to assess site suitability and recommend cultivars. Now, the model is run on 10 years of historical weather data for the potential site, resulting in much more precise estimations of cultivar suitability.



A demonstration of the bud hardiness model predicting (A) substantial winter injury during January and February in 2019; (B) a fairly typical budbreak date in Spring of 2019; and (C) a budbreak date for Spring 2020 that is well ahead of 2019.

The ENYCHP Addresses 'The Variety Question': What Apple Varieties Should I Plant for the Future?

Daniel Donahue, Tree Fruit Specialist

Cornell Cooperative Extension Eastern New York Commercial Horticulture Program tree fruit specialists Dan Donahue and Mike Basedow organized an educational program for Day 2 of the Cornell Cooperative Extension Eastern New York Commercial Horticulture Program 2020 Fruit & Vegetable Conference around the theme of "The Variety Question". Apple growers today are facing a rapidly changing retail marketplace where consumer expectations are increasing for something new. The grower's dilemma is that even under ideal horticultural conditions, the first phase business cycle of a modern high-density apple orchards is ten years from conception (ordering the trees) to a full bearing mature orchard. The grower can anticipate an additional ten years of quality production, for a total business cycle of twenty years. In contrast, the marketplace is always demanding something new, but it is a biological and economic impossibility for the apple grower to profitably function with a business cycle of less than twenty years. How does the grower choose what varieties to plant?

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Mike Basedow presenting to growers at the 2020 Eastern NY Fruit & Vegetable Conference.

To further complicate the variety question, university breeding programs, commercial breeding programs, and the patenting of variety "sports" (chance genetic mutations found in established orchards) are releasing into the nursery market new varieties at a rapid rate. Couple this with a proliferation of commercially available apple rootstocks in recent years, the possible rootstock/variety combinations to consider for future planting is overwhelming to even the savviest of commercial producers. Apple grower are communicating their frustration to regional extension specialists with increasing frequency.

Continued Innovation Moves Berry Industry Forward

Laura McDermott, Small Fruit Specialist

Labor shortages, pest challenges and market opportunity continues to drive innovation in berry production in eastern New York State. New York ranks 8th in the nation in strawberry production with over 1700 acres producing 3.6 million pounds valued at 8.5 million dollars. The vast majority of the state crop is sold from late May into early July as part of the traditional June crop, but many farmers are also relying on day-neutral or everbearers to help satisfy customers desire for locally grown berries.

Ever-bearing strawberries require a different production system, more akin to intensive vegetable production, using raised bed, plasticulture systems. Growers are increasingly using low or high tunnels to protect the soft fruit from the elements. To help reduce labor, farms are elevating the growing systems on tabletops, and exploring soilless media to reduce soil-borne pathogen problems.

During Jan-March 2020, Eastern NY berry growers were able to choose from a wide variety of informative workshops providing instruction on novel approaches of pest management including controlling disease with UV light, long-cane raspberry culture, excluding pests with netting. Farmers also learned about new methods of handling old problems like weed and disease management.

One of the most unique opportunities was the In-Depth Substrate Workshop held at Cornell in February. This workshop was sponsored by the NYS Berry Growers Association with organizational support from Cornell Cooperative Extension and facility support by Cornell University. We were able to bring international consultant Dennis Wilson from Delphy Int. to lead the hands-on workshop. This instruction normally costs hundreds of dollars per person, but was offered at an extremely low rate to NY berry growers.

The potential of growing berries in substrate is great. It's a unique and innovative solution to many existing problems with strawberry production and has the potential to improve farm profitability dramatically.

Attendees of the February substrate course learn about how different light wavelengths impact strawberry growth—part of ongoing research at Cornell.

January—March 2020

381 Phone Consults

415 E-mail Consults

99 Farm Visits

60 Field Meetings

3024 Field Meeting Attendees

23 Webinars/Distance Learning

808 Participants in Distance Learning

Daily, personalized, farm-specific vineyard report addressing weather and pests—delivered to **130** farms for a total of **8235** reports

ENYCHP

The Eastern NY Commercial Horticulture Program is a Cornell Cooperative Extension partnership between Cornell University and the CCE associations in Albany, Clinton, Columbia, Dutchess, Essex, Fulton, Greene, Orange, Montgomery, Putnam, Rensselaer, Saratoga, Schenectady, Schoharie, Ulster, Warren, & Washington.

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