

Extension Day in Albany



Silage Truck Workshop



CORNELL COOPERATIVE EXTENSION LEWIS COUNTY

4-H Monday Night
Mind Blowers



Hemp Workshop



4-H Tech
Change
Makers



Highway of 2020 2020 Annual Report

Dairy Drive



Farm Bureau Albany



Hand
Sanitizer
Dive



Bucket Gardening



Corn Moisture Testing



CCE is:
♦Responsive
♦Adaptive
♦Supportive

Youth Tie Dye
Workshop





Connecting



Cornell Campus to our Community

Cornell Cooperative Extension of Lewis County serves as a dynamic educational organization that uses Cornell University's world-class research and Cooperative Extension network to enhance the lives and well-being of all Lewis County residents.

Cornell Cooperative Extension's dedicated team works with Cornell faculty, agriculture, parenting and 4-H youth development teams to put research to work to grow, strengthen and sustain a healthy, vibrant and economically strong Lewis County.

Cornell Cooperative Extension of Lewis County



A Spotlight on 2020 Accomplishments

Our programs have demonstrable **impact**, providing high **value** to participants and the public-at-large because of our unique **connections** to stakeholders and to Cornell.

For CCE Lewis, 2020 started off normally... administrative and financial year-opening tasks, Winter Maple School, Dairy Day, and 4H's Monday Night Programs and Club Meetings. And then out of nowhere - **LOCKDOWN!** Suddenly we had to completely change course "midstream"! Where and how we work every day, how we deliver relevant, timely and high-impact programming – all completely changed overnight. With input from our Board of Directors and Programming Committees, we quickly **re-focused to deliver** the most current resources to our county in a very **dynamic** situation. Extension staff went the extra mile to provide residents, businesses and farmers with accurate and up-to-date news on COVID-19, **ever-evolving** regulations and critical assistance programs.

To this end, CCE Lewis quickly **re-tooled** to deliver online communications and programming. Our social media presence and email campaigns have become key to marketing efforts. As Cornell and other associations have taken programming on-line, we **connect** our community to these expanded educational opportunities. We continue to **monitor and communicate** regulatory developments so our farmers and businesses can adjust to comply to new requirements. Our youth programming adapts to the needs and circumstances of county youth in areas such as Ag in the Classroom for schools and homeschoolers.

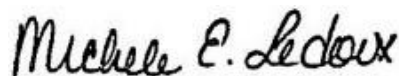
Cornell Cooperative Extension of Lewis County enjoys a unique partnership with federal, state and our local governments help leverage additional resources for the county. We extend our sincere appreciation to the agencies and individuals that provide funding and resources throughout the year. We are deeply grateful for the continued financial support provided by Lewis County residents through the Lewis County Board of Legislators.

Please enjoy reading about the work of your Lewis County Cooperative Extension team. We hope you discover a new opportunity to participate and grow with us in the upcoming year. Sign up for our Newsletters and News Flashes. Visit our enhanced website and follow us on Facebook for all the latest. Many of these resources are not available from any anywhere else!

In 2021, we look forward to offering relevant, unbiased and helpful information to all residents of Lewis County as we partner with each of you for this county's continued growth.



Andrew Reid
President, Board of Directors



Michele Ledoux
Executive Director

Cornell Cooperative Extension of Lewis County

Cornell Cooperative Extension believes in shared leadership through locally elected Board of Directors and active program development committees. Cornell Cooperative Extension applies research from Cornell University to strategically develop and implement programs to meet the county's priorities and critical community issues.

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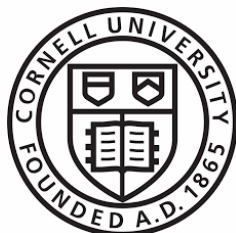
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NNY Regional Field Crops Specialist

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Harvest NY Dairy Processing & Marketing

Some of CCE Lewis’s COVID-19 Response



During this unpredictable and uncharted pandemic, your extension staff took a very timely and proactive response to answer the needs of this county. We were involved in helping the local Farm Bureau with a very successful Dairy Drive where staff volunteered their time and expertise in the development of Facebook social media ads and coordinated key services that day. We helped to gather donated products, along with volunteering the day of the event bagging items, giving away face coverings, setting up tables and handling lots of gallons of milk. We also assisted the Lowville Food Pantry with their Boxed Food Drive that distributed meats, vegetables and dairy products to residents in Lewis County.

Staff monitored the State and Agricultural channels to provide continuous updates to farmers, green houses, farmers markets and u-picks on regulations so that they could comply in order maintain their businesses. These timely updates were sent out through emails, mail and phone calls. We have seen an incredible push for Local Foods and a Buy Local campaign, we will continue to work with our local producers so that they can participate in this.



At the request of the Lewis County Government we informed two Mennonite groups in the county of school closings protocols and provided updates and public health information. We have continued that relationship with hand sanitizer, mask and other guidelines as needed during the pandemic.



With our already established contact with the Amish Community in the county we have done weekly visits to provide updates on the COVID 19 situation in the county, school closing guidelines along with reopening guidelines. The staff have delivered hand sanitizer, face coverings, COVID 19 farm plans, CDC – Public Health materials to their farms. We will continue our farm visits till the pandemic situation resolves itself as needed.

This has been a time of great stress for all families in the county and our Parenting Educator has continued to meet with her families throughout this time period utilizing all safety protocols from Public Health, providing support in a variety of ways to help parents and children make it through the new school guidelines, remote connections and everyone being home together.

1109 LEWIS COUNTY FARMERS & FARM EMPLOYEES WITH



3090 FACE COVERINGS



108,160 OUNCES OF HAND SANITIZER

*Supplies provided by the NYS Department of Agriculture and Markets

Extension has been and will continue to be **timely, innovative** and **responsive** to the needs of the county residents during this ongoing pandemic and any future issues.

Agriculture

Growing Lewis County

Bees The Lewis County Beekeepers group has grown tremendously and continues to increase during these trying times. Many individuals are becoming homesteaders and this is just another way to provide food for their families and know where their food is coming from. We plan to continue in the near future with Elwin Stillman; Master Beekeeper who presents every month on beekeeping management at our Beekeeping Group.

Local Foods Michele Ledoux and Mellissa Spence were guest speakers for the *Issues in the Food Industry: Why Buying Local is more Important Now Than Ever Before*; part of the Reboot LC campaign discussing how the consumer can locate local foods; via Meatsuite, Local Food Guide, North Star Food Hub, etc.

Container Gardening We conducted a tomato container gardening workshop at the Lewis County Educational Center in July. If you have sunlight and a small space to hold a bucket, then container gardening will work. Individuals were looking for things to do and this was a fun, educational event with 10 participants; perfect for social distancing.

FMNP This nutritional education table event was held at the Lowville Farmers Market and the Lyons Falls Farmers Market by handing out free nutritional recipes with the vegetables and fruits available at the market. It allowed us to educate consumers about COVID 19 food safety information. This was available from the CCE Farmers' Market Nutrition Program Outreach funded by NYS Department of Ag & Markets to encourage consumers to be introduced to fresh produce and new recipes.

Apple IPM Mike Basedow; Eastern New York Cornell Horticulture Program Tree Fruit Specialist spoke about the recent developments in integrated pest management options available to fruit growers for combating pests and diseases in apples and other tree fruits.

Family Farm Day Last October, the Family Farm Day was held at Hans & Corien Vanderveeken and Mike & Jamie Foster Farm in Castorland. There were over 900 people in attendance during a chilly day. The wet fields meant we had to use the Lewis County Transportation

Buses to transport families from a nearby parking lot to and from the farm all day. This was a unique challenge but everyone seemed to enjoy the day and learn about the dairy industry.



Hemp Kitty O’Neil; Field Crops Specialist presented at the Hemp Workshop providing updates on current federal and NYS regulations, production and harvest, supply chain, processing and products for Industrial Hemp in NY.

North Star Food Hub Outreach We have assisted North Star Food Hub in locating proteins, vegetable and fruit producers encouraging them to sell their product on the website. Making the connections with the Amish Community and other producers has made a big impact with the distribution of product to other locations thru the Food Hub. The Food Hub works with wholesale and retail consumers to promote the “local foods initiative”.



Vegetable IPM Elisabeth Hodgdon and Jud Reid; Cornell Vegetable Specialists discussed common insect pests and diseases in the North Country. They presented about topics for using Integrated Pest Management (IPM) on the farm and garden, identifying tomato diseases and how to treat them, managing potato beetle, cucumber beetle, cole crop caterpillars, and more, invasive species to look out for next season, and season extension and high tunnel research updates.

Juneberry and Honeyberry Production Research Mike Davis; Farm Manager for the Willsboro Research Farm located along Lake Champlain at the base of Willsboro Point reached out to Lewis County in search of a few producers to experiment with Juneberry and Honeyberry production to test which do best in the Northeast climate. The blueberry look-alike is praised for its flavor, nutritional value and commercial potential. Lewis County now has producers involved in this research that was provided from a grant by the Northern New York Agricultural Development Program (NNYADP).

First Annual Farmer’s Fall Harvest Luncheon

It’s hard to remember the Pre-COVID world sometimes, Isn’t it?! Here is a throwback Our 2019 Winter Luncheon was such a success, that we decided (of course with the encouragement of our generous sponsors) to hold a Fall Harvest Luncheon in October. In the middle of a very rainy October, the day of the luncheon was a dry day and farmers were racing to get their chopping done, but we still had almost 80 people come out. Many thanks to our “Gold” sponsor - Gold Star Feed to our “Silver” Sponsors- AgroLiquid, Farm Credit East, Lowville Producers’ Co-op, and Lowville Farmers’ Co-op. As all things do, COVID will also pass, and we are very much looking forward to holding another luncheon as soon as possible!



Maple January’s Annual Winter Maple School was held at the Maple Museum in Croghan with the Friday night workshop for beginner’s giving them the basics of maple sugaring. Saturday’s all-day program covered a wide variety of educational subjects providing Tubing Design, Marketing, Value Added Products, Maple Diseases and the latest Cornell Research Topics. While Maple Weekend was not held in March this year producers can participate in the new Fall Maple Tour. Also new this year was a Fall Maple School in October providing speakers and workshops on optimizing syrup quality and flavor, tubing updates and boiling practices, to list a few of the workshops provided to our maple producers.

Lewis County Agricultural Sustainability Council:

During its first year Roundtable, the Lewis County Board of Legislators has commissioned the Agricultural Sustainability Council and tasked it with developing and implementing strategies to address the current challenges in dairy, as well as those that will help support agriculture more broadly. The Council meets every month, hosted and coordinated by CCE Lewis. It's Dairy Subcommittee also meets monthly, hosted by Countryside Veterinary Clinics and coordinated by CCE Lewis.

| Action Items | Key Areas |
|--|---------------------------------|
| • LC Advisory Council (producers, Ag Business, Town/ village) | • INFRASTRUCTURE !!!! |
| • Quarterly Tax Payments (coming in 2019) | • Tax & Regulations |
| • Marketing/ Advertising (Digital & Mobile) | • Marketing & Positive Advocacy |
| • Farm-to-School & Institution | • Youth & Adult Education |
| • Funding for a Strategic Plan | • Job Transition/ Training |
| | • New Processing Capabilities |
| | • Other Ag-Related |
| | • Horticulture/ Animals ? |
| | • Meat Processing? |
| | • Start-up Funding? |

Farm-to-School: One of the key strategies of the Council was to encourage agricultural diversification by developing a strong farm-to-school and institution program and network. Toward this goal, CCE Lewis applied for and won a 2-year NYS Farm-To-School Grant of nearly \$100,000 toward hiring a Farm-To-School Coordinator and implementing a county-wide farm-to-institution program effort. Unfortunately, due to COVID-19 related budget issues at the state-level, and disruptions to institutional food service, this contract is being held in abeyance. We are hopeful that this important initiative will resume in the coming program year.

Silage Truck Workshop This year we were very fortunate to have a State DOT presentation on new and current regulations for the agriculture industry regarding silage trucks. Beyond an impactful power point for the over twenty participants they also did an actual walk-around a local silage truck for compliance in the FAB Lab looking at all the requirements that are DOT required with the representative.

Local Food Sustainability: COVID-19 has had a lot of negative impacts on our lives and the economy, but one silver lining has been strong interest in and demand for locally produced foods. This helped accelerate another key focus of the Ag Sustainability Council – diversifying Lewis County's Agricultural economy. One of the challenges for local producers as we come out of pandemic lockdown is how to sustain growth in revenue even as consumers return to their normal stores, and go on-line more than ever before. CCE Lewis partnered with Harvest NY, REBOOT LC and Coughlin Printing to bring local food producers the valuable tools and resources they need to enter the world of on-line sales and marketing. This two-part, multi-episode series of webinars provided an introduction to the world of web design and content development, and the basics of marketing products online, and managing an online business. Lewis County participants also learned how to access some terrific local web resources and talent at very attractive prices through an innovative new program through Coughlin and REBOOT LC.

Dairy Advancement Program (DAP) Grants: These grants are designed to enhance long-term viability of New York dairy farms while maintaining a commitment to environmental stewardship. This program is funded by NYS Ag & Markets and administered by Cornell's ProDairy with DAP providing 80% of the cost of these projects (up to a specified cap amount) while farmers fund 20% (plus anything above the cap). Through CCE Lewis, 15 farms in Lewis and Jefferson Counties have applied for and received DAP funding this year. 12 Farms applied for and received DAP Funding of up to \$2,500 for implementation of recordkeeping systems on their farms. Recordkeeping systems include Financial and Herd Management systems. Financial Recordkeeping Systems funds can be used to purchase software programs like Quickbooks or Centerpoint, and fund accounting services to help get their records organized and input to their program, and to train them on using the software and basic accounting and financial management principles. Herd record management has been very popular as well. Using these funds, farmers were able to implement DairyComp on their farms, giving them access to enhanced functionality and information to help better manage and care for their cows.

Six Farms took advantage of Business Planning Grants, which provide up to \$5,000 toward Farm Business Consulting Services. This has been an excellent way for smaller farms to access top tier industry consultants to help with projects including succession planning, diversification, and long-term business planning. It is also an excellent way to tap expert knowledge in all areas of dairy farm management to help identify ways to improve profitability and business practices on the farm. Four Farms received funding of up to \$ 6,000 for Environmental Planning and Comprehensive Nutrient Management Planning (CNMP) and implementation. One Farm applied for and received up to \$3,000 in funding for an advisory team. These projects are intended to help a farm address a specific issue on their farm that requires a team of professionals to address. CCE's role is to facilitate the application process, participate and provide support and expertise for the duration of the project, and complete documentation when each project is finished.

Agricultural Education: Another focus of the Council, CCE has been involved in a multi-agency group that is addressing barriers in this area. Although interrupted by COVID, this effort has come back strong at the end of the program year. What started as a way to do our traditional Family Farm Day “virtually” has become an Ag Education and Outreach

success! CCE Lewis applied for and received a Farm Credit AgEnhancement Grant for a Virtual County Farm Tour. As of this writing, this project is still in the planning phase, however the goal is to show all the different kinds of production agriculture in Lewis County from dairy to grapes to bees. It will highlight not only the agricultural science side of farming activities, but also all of technology and know-how and the local family farm stories that go along with it!



Communication and Marketing: This year has turned out to be especially important for Communications. What used to be in-person meetings and gatherings have gone ‘virtual’ either via zoom meetings, webinars and podcasts, or more robust web-based content. One of the advantages to this has been that users can access content when it is convenient for them. Another is that workshops and educational events are no longer limited by geography. During COVID we have quickly changed gears to provide resources to our county in new (for us) ways. We have adapted workshop and meeting formats to ‘virtual’ mode, become more active on social media, begun ‘marketing’ events and disseminating information differently. This year as part of an initiative of the Ag Sustainability Council, CCE Lewis has been compiling and delivering a printed monthly calendar of events and summary of resources in cooperation with Countryside Veterinary Clinic and Lowville Dairy Producers Co-op, who have been distributing this via post in their monthly communications to farmers. Additionally, we have been sending out a (pretty much) weekly dairy news flash via email. This is a round-up of the latest relevant news, current articles, and upcoming educational events from around the state and the country, and on-line resources available to dairy farmers. It has been an important way of keeping farmers informed of developments that are COVID-related from relief programs to workforce related regulations. Thanks to these new on-line opportunities, Lewis County farmers were able to access relevant and timely information from CCE and Cornell experts from across the state to help with farm operations.

Managing Forages Through a Season of Drought: It seems like every year has its own weather challenges that impact farmers. 2020 was 'one higher' in this respect. Starting with a late planting season due to a prolonged winter that turned almost immediate into an extremely dry summer, this crop season was particularly challenging. In response to this challenge, in cooperation with CCE NCRAT and PRO-Dairy, a two-part webinar series was held to discuss managing forages through drought and into the next planting season. There were over 100 sign-ups and participation from all over New York, and even out-of-state.

NYS Beef Extension Educator of the Year

Mellissa Spence, CCE Lewis County



Congratulations to Mellissa Spence, Agricultural Outreach Educator at Cornell Cooperative Extension of Lewis County for receiving the New York State Beef Producers Association Extension Educator of the Year Award. This award is given by the State Association to an educator who goes above and beyond to help educate producers about the Beef Industry. Mellissa has organized and set up many different educational programs covering Beef Quality Assurances Programs for Producers, BQA for Transportation and a Marketing of your Beef Workshop. A Basic Cow Reproduction 101 Course was done with Dr. Deanna L. Fuller of Countryside Veterinary Clinic which was very well received along with an All About Beef program held at Millers Meat Market, where producers were able to have a first-hand experience with seeing carcass

quality and grading standards given by Dr. Mike Baker from Cornell University. She has worked with the NYS Beef Industry Council to provide factual and helpful information not only to beef cattle producers but to consumers through county fair displays. She has been very responsive to helping producers find valuable information that helps them stay on top of the latest research based information from Cornell University and other land grant universities.

Looking forward
to seeing you
all in
person in
2021 !!



4-H Youth Development

4-H Grows Here

The new 4-H year in October kicked off with the Agriculture in the Classroom Food for Thought program. Through this program, Lewis County Extension educators had the opportunity to further the common goal of increasing agricultural literacy throughout classrooms by providing educational outreach through formal classroom programming. Offering hands-on interactive classroom experiences, Cornell Cooperative Extension of Lewis County provided educators with a Blue Apron inspired educational program called Food for Thought created for Pre K – 5th-grade classrooms.



Through this program, educators signed up electronically for a free lesson plan, including all necessary lesson materials required to incorporate various agricultural concepts into their classroom curriculum. Educators & students alike explored a fresh menu of themed lesson plans each month, connecting students to local food and agriculture.

Fortunately, thanks to the Dairy Industry Building's generosity, additional funds have been awarded for the upcoming school year, allowing for continued programming, enabling Cornell Cooperative Extension of Lewis County to continue to provide additional resources & materials about agriculture to educators within Lewis County.

Another new program series offered to 4-H members and their families this year, which we would like to highlight, includes Monday Night Mind Blowers, a bi-weekly program highlighting a continuously changing topic and activity for members to participate in each month. Several programs offered include an egg drop challenge, painting with a twist, botanical bulbs, and an escape room challenge.

Ongoing annual programs that continue to be a popular success include Dairy Bowl, Public Presentations, Tractor Safety, 4-H Cheese Sale & the Dairy and Beef Calf Enhancement Program, & the Lewis County Fair.

Horse and Dairy programs have remained strong thanks to the dedicated volunteers and group leaders on the respective committees despite the COVID-19 Pandemic restrictions. Without their time and commitment, many of our great clubs

and programs would not be as successful. Also, several Walmart grants have been awarded to Cornell Cooperative Extension of Lewis County. With these funds, the Extension office plans to provide educational learning opportunities. Allowing youth, the opportunity to gain knowledge and experience from seminars, demos, trainers, and industry experts on various disciplines and topics.

Lewis County Extension is also proud to highlight its Tech Changemaker program's accomplishments, whose goal was to equip 4-H members with the knowledge, resources, and empowerment to lead in their



communities. Through several workshops and electronic tutorials, Lewis County 4-H youth, known as the Digital Ambassador team, educated members of their community about various forms of technology and the many applications they had to offer. Workshop topics ranged from Google Duo, Google Documents, Online shopping, Phone Applications, and many more. Through this program, youth were able to help many within the community and countless others through their in-person workshops, and virtual tutorials posted online.

We are incredibly grateful and proud of the time and commitment they had put into making this program a success, especially with the continually evolving ways in which they had to adapt to teaching and reaching out to the community during the Pandemic.



Following the footsteps of our Digital Ambassador's Cornell Cooperative Extension of Lewis County hosted its annual tractor safety course for 4-H youth virtually. This yearly program ensures that youth know the latest safety techniques and driving skills; and is designed for youth (ages 14 and up), new and beginning farmers, and employers and employees of agricultural operations looking to enhance their knowledge of tractor and machinery safety. Through this six-week virtual classroom program, participants covered core content areas, including safety basics, agricultural hazards, connecting, and using implements with tractors and materials handling. This core curriculum was learned through passages from the National Safe Tractor and Machinery Operation Program (NSTMOP), Student Manual, online modules, and videos, which enriched the virtual learning experience.

With summer and the 4-H year slowly coming to an end, 4-H families enjoyed the last remaining rays of the summer heat & 4-H year by participating in Lewis County's Outdoor Adventure Day program. During this event, members could go wild and experience nature through a different lens through hands-on experiences. The Outdoor Adventure Day program, which was held every Wednesday during August, included a new program each week, which consisted of Shelter Building, Fishing, Backpacking Essentials, and Campfire Building. Through this program, youth and families could have the unique ability to experience and participate in environmental activities with their children with all the required materials provided. Allowing youth to engage in outdoor activities with family and socialize with peers in a safe environment. These programs were held at the New York State Department of Environmental Conservation site in Dadville, New York.

Lewis County 4-H has countless opportunities and is continuously expanding its resources and subject matter available for those within its community. We encourage all who are interested in exploring all the wonderful opportunities 4-H has to offer at our website <http://ccelewis.org/>



Family Development

Growing Positive Changes

It would be fair to say **everyone** has had a different experience this past year. Our day to day has been redefined as ever changing. As a positive, I have observed many families adjust. Their children were very resilient and managed to transition from virtual learning to face to face and then back to a hybrid situation.



In the last 6 months I have had the opportunity to participate in many different community activities to help families. The food distributions were greatly appreciated. A grant from Cornell to provide digital thermometers and face masks to families came at a time when thermometers could not be purchased. Community outreach became very important for families to adjust to the new life we all were living.

I have been very busy with families who had difficulty adjusting to the new life style. Majority of my families were referred from school counselors. Parents were having difficulty setting up their children's Chromebooks, getting internet or just understanding what remote learning meant. Children had difficulty being isolated and home all day. Chaos was building within families which created mental health issues and limited resources.

Majority of the parents had not completed High School and now were in the position of teaching their children. The additional stress triggered mental health issues, substance abuse and domestic violence. I spent time setting up internet, parental controls on Chromebook, helping parents communicate with school, structure and routines in the homes and most important support for the parents who were struggling.

I continue to work with the families referred from school in addition to the families referred to me from DSS and Family Court. Prior to Covid-19 I worked with around 12 families a month. On average since April, I have 22 families monthly.

I continue to work closely with the Department of Social Services. We are working together to add evidenced based programs to meet upcoming requirements for DSS.

"Covid-19 has changed our lives in many different the ways. Some of my families have managed to adjust and continue to be resilient. Some of my families are learning new skills and how to work with them, and some of my families continue to suffer. The families who are struggling are working hard."

Kelly Kunz, Parenting Community Educator



North County Regional Ag Team 2020 in Review

2020 has probably surpassed all previous years for challenges and curveballs thrown at North Country farms and agribusinesses, yet our CCE Regional Ag Team continues our mission - to improve the productivity and viability of agricultural industries, people, and communities in Jefferson, Lewis, St. Lawrence, Franklin, Clinton, and Essex Counties. Despite the curveballs and challenges, our farms need to seize every advantage to adapt to changing markets, to become more efficient, and to keep costs down and productivity up. Our daily work is providing technical support for productive, safe, economically, and environmentally sustainable ag management practices, and we assist industry, government, and agribusinesses to do the same. Our team of Ag Specialists works closely with county Extension associations and ag professionals, with Cornell faculty, and with Extension Specialists all across NYS to provide accurate and relevant education, research, and consultation on the important current issues for NNY farms. This year, we adapted to “NYS on PAUSE” and “NY FORWARD” mandates, beginning in March, as we simultaneously worked to help large and small farms of all types to do the same. We developed extensive programming and outreach plans in response to each state and federal mandate and as opportunities to access markets and loans were announced. We continued to help farms and agribusinesses optimize business decisions, advised dairy farms on strategies to enhance animal management and accommodate new regulations, responded to field crop drought and pest problems, and even had our research results shared with broad audiences, but often with new remote communication methods and while also addressing responses to COVID.



From L to R: Kitty O’Neil, Kelesy O’Shea, Mike Hunter, Tatum Langworthy, Lindsay Ferlito, and Casey Havekss.

Adapting to remote and distanced working methods during “NYS on PAUSE” was seamless for us. The team met this new challenge by first relying on electronic communications in new ways.

- We made creating a team YouTube page and blog a top priority. Our new NCRAT YouTube channel was initially populated with videos from recent educational programs, and then by generating new relevant content. By September 30, the CCE North Country Regional Ag Team channel listed 35 edited and titled original videos and podcasts that had been viewed over 1500 times. Our video titled “How to Access CCE NY Forward Business Safety Plan Resources” has been viewed almost 400 times.
- By April 1, our NCRAT blog was fully implemented, linked to the 6-county email list, and hosted 15 posts on a range of topics. By September 30, 85 posts have been published and the subscriber list stands at close to 1200 readers. Email announcements are sent weekly to all subscribers, summarizing the week’s blog activity.

With these new electronic communication methods in place, the team turned to improving its reach among the portions of its ag constituency that do not use electronic communications, beginning with the many Amish and Mennonite communities across NNY. In early June, a multi-pronged strategy was implemented to connect with and identify leaders and central communicators in each community to share NYS Business Safety templates and to connect them with mask, sanitizer, and food distributions led by county CCE offices.

Though COVID-19 precautions hastened each of the communication efforts listed, they have brought a new robustness to the team’s regional impact that will persist going forward. Please read about some of our accomplishments and impacts over the past year inside this report and contact any of our Specialists for more information on our program.

Transition to Digital Creates Easier Access for a Growingly Diverse Farmer Base

When COVID-19 first hit in early March, the prevailing school of thought was that the changes would be temporary or short lived. However, by May/June it became clear that the changes were going to be more permanent than previously anticipated. With this in mind, the CCE North Country Regional Team took the time to strategize on how to get more resources into the hands of farmers in both the short and long term. One way of doing this was taking a bulk stock of existing media including recordings of programs, talks, and shorter educational videos, cleaning them up, and hosting them on a centralized easy to search platform. It was decided that YouTube was the home for these resources as farmers could access them from any device at any time without downloading an additional application or software.

The Regional Team came together to edit previous programs, as well as record and edit every new program that was offered over the summer months in order to ultimately compile a library of over 35 original videos or talks that are just a click away for farmers in the region whenever it is convenient for them to watch the information. The subject areas are divided into playlists, so if a farmers so chooses, they can just start a playlist while working in the tractor or on another area of the farm and it will continue to play through the list of resources. These areas include: Dairy Management, Farm Business and Accounting, Crops and Soil Health, FARM/Safety, COVID-19 Topics, as well as other playlists from collaborators such as Harvest NY, PRO-DAIRY, and other CCE Regional Teams. This model of making programs available in perpetuity after their original delivery not only allows us to reach a higher number of farmers in the region, but also accommodates those farmers and employees on farms that do not have as much schedule freedom to leave the farm for an in- person program.

Since May 1, 2020, the educational resources on the NCRAT YouTube channel have been viewed 1,100 times with a total hours watched of 69.9 and 44 subscribers gained. The thumbnails or links/previews of the YouTube video resources have been seen by 9,000 individuals over that time; that is almost 8 times the number of individuals on our newsletter list. The two most popular resource videos were on the topics of “NY Forward Safety Plans” and “Feed Efficiency” with those two original videos alone racking up over 500 unique views. The primary way people are reaching these videos are from “external links” with the most popular external sources being “cornell.edu pages”, Facebook posts, LinkedIn posts, and Google searches.

Looking ahead, the team recognizes the power that this platform has to increase reach and spread of important information related to agriculture production, management, and regulations. However, they also recognize the need to create value for farmers and others to attend programs (digitally) live. This is why the goal moving forward is to have programs made available on YouTube 1-2 months after the actual date of the program, to provide some incentive to tune in live and interact with speakers and peers, but also not deprive any farmers of the much needed information during these times. Although COVID-19 has disrupted farmers and those who serve agriculture, it has simultaneously provided the much needed push to develop organized and centralized online resources to increase the accessibility and reach of the hard work that the CCE Regional Teams put in to provide programing. This is especially helpful in a large, spread out region such as the North Country, where it can be challenging to host multiple sites or to travel to certain locations.



Helping Producers Navigate Critical Calf Health and Management Issues

Many producers have expressed that they experience challenges with pre-weaned calf care and management. Colostrum management, cleanliness of calving area, plane of nutrition, and ventilation, to name a few, are some of the areas that play a critical role in the calf's successful rearing. In some lucky circumstances where producers are faced with calf challenges it can be simple to identify the problem and relatively simple to implement a solution. However, in most cases, there are a variety of factors contributing to poor performance of pre-weaned calves and because they are such a finicky group, it can be difficult, frustrating, and time consuming to identify the problem and find a solution. This was the case for one Northern New York dairy producer who approached the CCE NCRAT Regional Dairy Specialists in September of 2019 looking to troubleshoot a serious calf health issue.

For the weeks following the initial conversation, the Dairy Specialists worked very closely with the farm owner to identify potential causes of the issue. The Dairy Specialists were on the farm once a week for several months in attempt to identify any trends in the sick calves, and to identify any potential issues in the feeding regime. Due to the severity of the issue, the Dairy Specialists reached out to Dr. Rob Lynch on the PRO-DAIRY team for further guidance. Dr. Lynch has many years of experience as a veterinarian and is a trusted resource for the Dairy Specialists. In December 2019, Dr. Lynch, Rodrigo Molano Torres (a PhD student studying calf nutrition), and the team spent several hours at the farm measuring passive transfer levels, reviewing protocols, and discussing strategies to improve calf health. Following the meeting in December, the farm carried out many of the changes that were discussed and recommended by Dr. Lynch, Rodrigo, and the Dairy Specialists. Despite making these changes, unfortunately the severity of the issue persisted. Dr. Lynch returned to the farm in early February 2020, and again virtually via Zoom in April 2020.

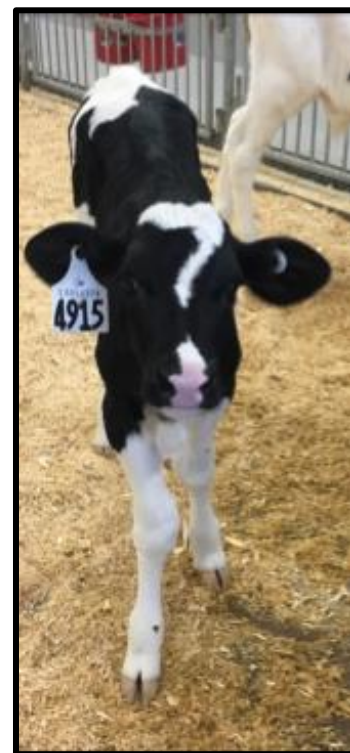


Photo credit: C. Havekes.

After several months of discussions, testing, and consultations, the calf health issue has successfully been resolved. The team of Dairy Specialists, Dr. Lynch, and Rodrigo identified colostrum management resulting in poor passive transfer and the calf housing facility as major contributing sources to the calf health issue. The Dairy Specialists are still working closely with the farm and check in periodically to ensure calves are still doing well. In fact, this herd has signed up to participate in an intensive calf management discussion group where they can continue to improve their calf rearing program. In early September of this year, the Dairy Specialists followed up with the farm and were pleased to see many positive changes being made. For example, the farm implemented a new colostrum warming system to ensure that frozen colostrum was being thawed correctly. Additionally, the farm has sent in fecal and colostrum samples through a separate research project led by the NCRAT Dairy Specialists. The results from these samples will be used to assess the current management strategies and troubleshoot any issues as needed.

In response to these efforts the farmer has said the following: *“With the help of Casey, Lindsay, and Dr. Lynch we were able to pinpoint our major areas for improvement and work with them to fix our problems. They were very diligent and stuck with us through our struggles. With their help, our calf health problems have been resolved yet they still continue to check in and help us as needed!”* This situation is a great representation of the collaboration that exists between the NCRAT Dairy Specialists and PRO-DAIRY. Through combining ideas and experiences, this Extension Team was able to provide the farm with concrete, scientific-based recommendations that positively impacted this farm's calf rearing success.

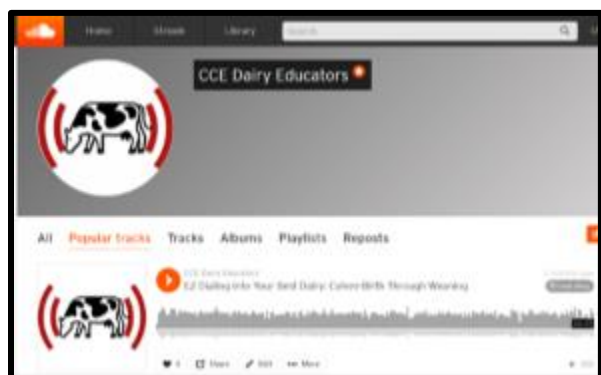
Diary Programming Successfully Offered Digitally

Despite the new stressors of COVID-19 challenges and regulations, in addition to the existing high demands of field and farm work, North Country dairy farmers continue to reach out to the CCE NCRAT Specialists for dairy management resources and programming opportunities. At a time when in-person meetings have all but been eliminated, the NCRAT Dairy Specialists were creative in coming up with multiple ways to continue offering dairy programming across the region, but now in a digital format.

Over the last 6 months, the Dairy Specialists have created 15 videos housed on the NCRAT YouTube channel. These videos include recordings from past in-person program presentations and webinars, in addition to new content featuring interviews with researchers and industry experts on hot topics ranging from feed efficiency to calf care and reproduction. One important benefit of this type of programming is that these videos will continue to be available online for producers to access whenever and however often they would like to revisit the content. In a sense, the reach with this type of programming can be even greater than a one-off in person program. For instance, one of the more popular interviews has been viewed over 200 times in just 4 months.

Additionally, the Dairy Specialists have teamed up with other Regional Specialists across the state and PRO-DAIRY to generate two unique podcast series. The first one, titled “Dialing into Your Best Dairy”, has 8 episodes on optimizing management from birth through lactation in order to reach a herd’s genetic potential. Combined, the episodes have been listened to almost 2000 times, with the most popular being viewed over 460 times. The second series was a timely 4-part podcast on “Corn Silage Harvest Considerations”. This podcast featured expert advice on corn silage harvest and the first episode focused specifically on additional considerations given this year’s drought challenges. In under one month, episodes in this series have also been listened to hundreds of times. The statewide group and PRO-DAIRY are currently working on another podcast series that will focus on troubleshooting common on-farm herd health challenge areas, and the NCRAT Specialists are looking forward to launching this podcast later in Fall 2020.

Adapting to these new circumstances through creativity and collaboration highlights the strength of the North Country Dairy Specialists to increase the value of educational resources available to North Country dairy farmers. The Regional Dairy Specialists are excited to continue offering North Country dairy producers with a wide selection of valuable learning opportunities including more podcasts and webinars, and interactive virtual programs throughout the upcoming Fall and Winter programming season.



Transition Cow Diet Recommendation Leads to On-farm Success

The transition period (the 3 weeks before and 3 weeks after calving) is one of the most challenging times for dairy cows, and therefore one topic area that regularly generates questions from producers. In Fall 2019, one of the CCE NCRAT Regional Dairy Specialists was approached by a farm with the concern of high milk fever incidence rates. When the Dairy Specialist followed up with more detailed questions, she also learned that the farmer wasn't happy with fresh cow performance.

Given the Dairy Specialist's nutrition background, the first thing that she evaluated was the current dry cow diet. She quickly identified that dry cows were over consuming energy relative to their requirements as demonstrated by over conditioned dry cows. It has been well documented in research that over conditioned dry cows are more susceptible to developing metabolic disease (including milk fever) post-calving, so she recommended making a change to the dry cow ration and suggested implementing a "controlled energy" dry cow diet. This type of diet contains a large amount of straw (which has very low nutritive value) in an attempt to reduce the energy density so that cows can consume as much feed as they would like without running the risk of overconsuming energy. In this particular situation, the farm did not have a straw supply but rather an abundant supply of finely chopped hay. Hay can work well in these diets, provided the potassium levels aren't too high. Through several follow up discussions the Dairy Specialist recommended that the farmer reach out to his nutritionist to get the hay tested for nutrient content. Following this, the farmer worked with his nutritionist to get a diet formulated specific for the dry cows which mainly included dry hay, some corn silage, and dry cow mineral.



Photo credit: C. Havekss

Since implementing this new dry cow diet, several cows have calved and the milk fever issue has gone away. When the Dairy Specialist followed up with the farm to discuss cow performance following the diet change the farmer responded: *"with the new dry cow diet, cows are maintaining good body condition. There have been no metabolic issues following freshening. The biggest thing I've noticed following the diet change is the improved transition – cows take off on the lactating ration right away, which is an improvement from what they were doing before. I've also noticed udder swelling is decreased following the diet change!"*

The transition period is a very vulnerable time for the dairy cow and success can be impacted by nutrition, management, and cow comfort factors. This is a good example of how the Regional Dairy Specialists are working with producers across the North Country one-on-one to improve performance on their herd.

NY Forward Safety Plan Resources- A Collaboration with Ag Workforce Development and CCE Regional Teams

After re-opening from the COVID-19 Pause, it was made clear that farms (even those that were deemed essential and had not closed) would have to complete the Reopening Safety Plan laid out by NYS. While it was recognized this was for everyone's safety, this requirement came at a difficult time for farmers right in the thick of spring planting and first hay crop harvest. This is when Cornell Ag Workforce Development and various members from CCE Regional teams that focus on employees or food/public safety came together to quickly and judiciously create resources that would be helpful to farmers in completing their plans. The NCRAT Farm Business Management Specialist was asked to be a part of this team. The group focused on first creating examples and considerations for each industry area, with Dairy, Greenhouses, Fruit Tree/Vegetable, Other Crops/ Livestock, and Vineyards all being identified as industries to be addressed. However, upon working through the plans and the guidance, it was clear that there was so much overlap that one consolidated commercial agriculture document should be used as the situations addressed were concerning employees that all had at least somewhat similar experiences on farms. This is when the larger group consolidated down to a team of 5-6 individuals who focused on combining all of the industry guidance documents into two primary resources: Examples and Considerations for Commercial Agricultural Businesses and for Retail Agricultural Businesses that should be added onto a farm's primary plan should they interact with the public directly.

This group transferred the Safety Plan Templates into easy to use fillable PDF and Word documents, while also making the Examples and Considerations Resource documents to follow the format of the template. This made it easy for farmers to get access to example protocols, signage, and various linked resources as they completed the plan section by section. The group recognized though, that while having these resources available was the first step, the next step was education and dissemination of this information. As a participant on this important workgroup, the NCRAT Farm Business Management Specialist volunteered to present and help organize a series of webinars that addressed the new rules, as well as how to use the resources and industry specific considerations. The group first decided to host an in-service webinar for those in the Cornell system so that educators could help further spread the work on the new rules and resources. This webinar had 72 attendees who can now further engage with farmers, and help promote the industry specific webinar series. Each industry used the resources created and had the following attendances during their respective live webinars: Dairy/ Livestock/Crop = 150 participants; Fruit/Vegetable = 253 participants; Retail = 99; Greenhouse/Landscaping/ Ornamental = 49; and Equine = 60. This means that over 600 farm businesses were directly engaged with the live webinars and the recordings of these webinars already have over 100 views.

Finally, the Farm Business Management Specialist also focused on creating a promotional video that explains the basic requirements and resources, as well as CCE's commitment to helping farms through these difficult times. This video was used on various social media platforms and has been viewed over 100 times. The group recognized that farmers sometimes struggle with utilizing this type of technology, so the Specialist put together an instructional video for how to use Box (sharing drive), how to download and save PDF and Word documents, and how to use the hyperlinks included in the CCE resources. That video has been viewed at least 380 times. The NCRAT Specialist is now following up by creating a fully printable binder for the Plain Community that will be distributed to the churches in the six North Country counties so hard copies can be made as needed of safety plans, signage, or other resources.

This project highlights the strong relationship the NCRAT Farm Business Management Specialist has with other Specialists and groups across the state, and how this work has a large impact on helping farmers meet new guidelines and regulations while keeping their businesses operational in both the North Country and across NY.

Resources Developed: <https://agworkforce.cals.cornell.edu/ny-forward-business-safety-plan/>

Instructional Video: <https://www.youtube.com/watch?v=V2PH3wCgdhc>

Promotional Video: <https://www.facebook.com/watch/?v=286286982511746>

Farm Business Management Office Hours: Providing Farms with the One-on-One Attention They Need Most Right Now

This will be the second full year that the CCE NCRAT Farm Business Management Specialist has instituted and maintained regular office hours in each of the six counties across Northern New York. In January through March alone, she met with 15 individual farms businesses across the six counties. These included mature businesses she has met with before, existing businesses looking for new assistance, and three new farm businesses. The premise of office hours is a time and/or space that farmers can come and get their business questions answered without having to have an appointment. Most farms in the January through March time frame are looking for assistance and guidance in making sure their financial records from the previous year are accurate and complete, to then begin the budgeting and planning process for the next year. These meetings usually involve taking it one step further by setting a new management or performance goal that will be evaluated and monitored throughout the year.

In working with existing businesses, the Farm Business Management Specialist met with seven businesses that she has worked with now over the course of two years. The primary topics over the last 12 months were labor management and overall evaluation of profitability. With those businesses, there are usually at least two meetings to cover the desired topic, if not more on-going meetings. The unique part of working with these businesses for the second year, was the ability to compare those farms' data against the previous year's data which is one of the most useful ways to continue to improve. For those farm industries that there is a readily available benchmark, the Farm Business Management Specialist also employs that as a tool to evaluate overall performance. The farm businesses worked with in the first part of 2020 range across four primary industries or products and also range from very small to relatively large farm operations.

One growing industry met with this spring were those newer farm businesses that are selling retail products with the marketing angle of 'farm to table'. With those businesses, the focus was primarily on diversified outlets for products in addition to strong marketing campaigns or plans. This includes evaluating more diversified outlets for sales given the lack of farmers markets due to COVID-19. Another primary focus with these younger businesses is ensuring that their record keeping systems are thorough and correct from the very beginning giving them a huge advantage when scaling and evaluating their business after the first year of operation.

Towards the middle of March, with the onset of COVID-19 and mandatory social distancing, office hours moved to a digital format. Although there were concerns that this would decrease attendance or participation, it has had the opposite effect. With the NCRAT Farm Business Management Specialist able to serve a higher number of farms in one day with reduced travel time, more farms reached out to make specific appointments using Zoom or other technologies. It is helpful and crucial at times like this to touch as many farm businesses one-on-one to assist them. In addition, from the original meetings during office hours, four to five farms are now meeting weekly with the Specialist to keep on track during these uncertain times and to continue to brainstorm new ideas. Although there are many uncertain times ahead, the CCE North Country Regional Ag Team will continue to offer altered versions of offices hours throughout the rest of the year using technology to make sure businesses can get the one-on-one attention they need.

Cutting Edge Research Leads to New, Farmer-Friendly Application Method of Biocontrol Nematodes

Research funded by the Northern New York Agricultural Development Program has shown that biological control with entomopathogenic (insect-attacking) nematodes (EPN) is effective in reducing snout beetle populations to sub economic levels in alfalfa fields where the native NY-adapted nematodes have been established. Ongoing research in Northern New York and New York State has indicated these same biocontrol nematodes have the potential to control corn rootworm, a significant pest of field corn in NY.

The current recommended application method of biocontrol nematodes is to rinse the biocontrol nematodes with high volumes of water through fine mesh screens into a holding tank. The biocontrol nematode solution is then placed into a field sprayer equipped with streamer nozzles or drop tubes and applied using high volumes of water per acre. This is a vast improvement over earlier-tested application methods, yet it is still a very time-consuming process. This water-based application technique has been utilized to inoculate 25,000 acres in NNY to date.

In response to farmers asking for a simpler and more farmer-friendly method to apply biocontrol nematodes to their fields, one of the CCE NCRAT Regional Crop Specialists established a replicated, small plot field trial on a farm in Jefferson County using liquid manure as the “carrier” of biocontrol nematodes in 2016. Soil samples were taken several weeks after the manure/nematode treatments to determine if biocontrol nematode establishment was successful. While the establishment results were not as good as with a water/nematode application, this initial trial certainly showed that application via liquid manure may be a viable method of biocontrol nematode application.

In 2018 and 2019, the NCRAT Crop Specialist expanded on the earlier small plot research trying to determine if large scale field applications of biocontrol nematodes applied with liquid manure was a viable option. Research conducted on 12 farms in NNY proved that biocontrol nematodes can be effectively applied to fields via liquid manure as the carrier and delivery method using EPN rates similar to the currently recommended application rates.

The success of this multi-year research project provides farmers with a simpler, more cost-effective method of applying biocontrol nematodes. It will foster greater adoption of this integrated pest management approach that will ultimately protect crops from certain insect pests of economic importance.

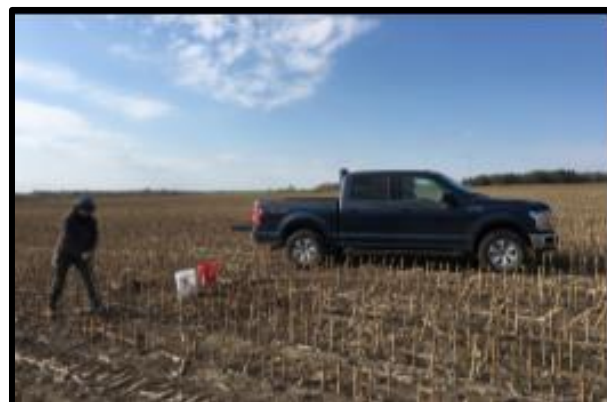


CCE NCRAT Field Crops Specialist loads biocontrol nematodes into manure tanker for field application. Photo credit: Elson Shields, Cornell University

Soil Health Testing Research Yields New Sampling Guidance

In collaboration with CCE County Association staff and Soil and Water Conservation District offices, the North Country Regional Ag Team recently completed an important soil health research project. Soil health is a concern for farmers and has been an area of focus for CCE research and outreach efforts across NYS. Farmers and crop consultants recognize that properly functioning soil is critical for long term farm viability and have begun making management changes to both improve and protect it. Farms have started using reduced- and no-till methods for planting and incorporating cover crops to protect soil between main crops. After implementing these sorts of changes, many farms want to evaluate their impact. They often wonder: what is the overall effect of these management changes on soil health? Slow and steady improvement is expected, but which practices are making the largest or quickest impact?

A 2018-2019 research project, funded by the Northern New York Ag Development Program and finalized in early 2020, is helping farms answer these questions. The project made use of the Cornell Soil Health Assessment to assist farmers with monitoring soil health improvements on their farms. The Cornell Soil Health assessment is a very useful tool for assessing soil health and monitoring its improvement. This



Sampling a St. Lawrence County field in October 2018 with Jevonnah Foster, St. Lawrence County Soil and Water Conservation District office. Photo credit: K. O'Neil



Sampling a Jefferson County field in May 2018. Photo credit: K. O'Neil

assessment is an integrated set of chemical, physical, and biological measurements and interpretations available to farmers of any scale for monitoring soil health. The project focused on the sampling procedures needed for reliable commercial farm-scale results.

Appropriate sampling protocols for farm-scale fields must permit detection of small and slow changes in soil health parameters over a few years, despite potential for large variability of some of these indicators within each field. To have confidence comparing soil health test results on a field before and after a few years of management changes, this variability within a field must be overcome with sufficient subsampling to detect a small change. To figure out how variable NNY farm fields are, 9 fields were intensively sampled across 5 NNY counties. Fields ranged in size from 6 to 80 acres, and were sampled 6 to 36 times. A total of 171 samples were submitted to the Cornell Soil Health Lab for analysis.

As hypothesized, the results showed tremendous variation within and among fields. Each component of the soil health analytical package had its own variable nature with some components being relatively

consistent across a field, while others varied tremendously. Subsample numbers required for a farm to be able to detect a subtle 10% change in an average field for each parameter ranged from just 9 to more than 1200. Based on these results, it is now recommended that small- and medium-sized fields be subsampled at least once per acre while larger fields should be subsampled up to 40-50 locations per field. This recommendation will be shared by the CCE NCRAT Crop Specialists with farms, crop consultants, and Soil and Water District offices going forward. Using this approach, farms will be able to feel confident that any differences measured between soil health analyses on their fields over time are most likely to reflect real changes rather than inherent sampling variation.

North Country research Projects Provide Roadmaps to Progress

Cornell research has a long and strong history of helping further agricultural production and sustainability across NYS and beyond. The North Country Regional Ag Team has continued this important tradition by partnering with Cornell faculty and staff, with local government and non-governmental agencies, and agribusinesses to bring applied and timely research results to North Country farms. Recent NCRAT research topics have ranged from soil health and field crop pests, to dairy replacements and transition cow nutrition, and even to a survey of labor practices on NNY dairy farms.

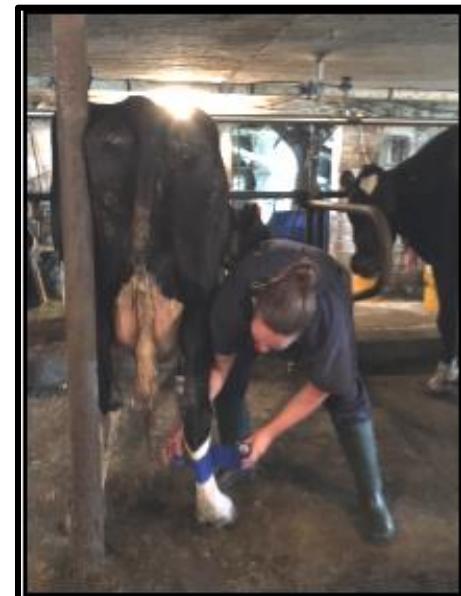


Our recent field crops and soils projects have contributed to important understandings. The Crop Specialists monitor Western Bean Cutworm (WBC) moth trap counts across the North Country each summer. In the North Country, populations of this harmful corn pest are much higher and more problematic than for the rest of NYS. This year, several seasons of the WBC trap data contributed to a prediction model of WBC flight completion by the Network for Environment and Weather Applications and NYS Integrated Pest Management. The Crop Specialists also monitor 43 traps for 7 other insect pests that threaten NNY corn and soybean crops across 6 counties. A 2020 trial, funded by the Northern New York Agriculture Development Program, brought spring and winter malting barley variety comparisons to NNY for the first time. The trial was a collaborative effort between the NCRAT Crops Specialists, Willsboro Research Farm, and Dr. Mark Sorrells (Cornell plant breeder), and will yield useful results to any farm wishing to enter the young malting barley market in NYS. Additionally, Glyphosate-resistant horseweed (or marestail) popped up as a new problem on several farms in NNY in 2019. In response, an on-farm herbicide trial was designed, funded, and conducted in 2020 to seek additional information on the control of resistant horseweed and other important annual weeds in soybeans. Seven additional on-farm herbicide trials in NNY in 2020 focused on corn and soybean weed management and interactions between herbicides and cover crop establishment.

The NCRAT Dairy Specialists have been busy generating applicable on-farm data from several projects designed to further dairy animal health, welfare and productivity. A collaborative project with the CCE South Central NY Dairy Team collected data to develop a benchmark of cow comfort and lying behavior on 22 tie-stall dairies in NY. Each farm was provided with feedback on their herd, facilities, and management practices relative to this benchmark to inform future management and facility changes to improve cow comfort. After receiving an on-farm evaluation and individual farm

Continued on Page 24

report showing their data and how they compare to the benchmark, several farms made changes to their facilities or management including utilizing more bedding, adding more sprinklers to reduce heat stress, or retrofitting stalls to make them larger and increase cow comfort. The approach to data collection and benchmarking, to identify subsequent routes to improvement on individual farms, is also being applied to calf and transition cow management in a second project – a collaboration with CCE SCNY and NWNYS Team Dairy Specialists. A large effort was also focused on a forage variability project being led by Professor Kristan Reed. This project aimed to capture variability from load-to-load and field-to-field during harvest and feed-out on dairy farms—a perennial challenge for nutritionists on dairies of all sizes. One of the farms involved in this project was a large NNY dairy, and one of the Dairy Specialists was in charge of facilitating data collection for this particular farm. Additional dairy research projects have focused on calf health and management. Calf health and weight gain data and diarrhea pathogen samples are currently being collected on several NNY farms, in addition to colostrum management evaluations. Outcomes of this work will promote successful rearing of dairy replacement heifers. Finally, through another research project, the Dairy Specialists focused on Salmonella Dublin given its potential to significantly negatively impact the North Country dairy industry. The project enrolled 27 dairy herds across the North Country and tested the bulk tank four times, over a six month period. This project was successful as it raised awareness locally with dairy farmers about a challenging and potentially economically devastating disease, it strengthened the relationship with individual farmers, and brought value to specific farmers that received follow-up assistance. CCE NCRAT research findings are communicated broadly, via written articles and in-person presentations at meetings within NNY, across the state, and sometimes across the country. Written articles are published in the North Country Regional Ag Team’s “Ag Advisor” newsletter and have been picked up by local and regional newspapers, and industry publications. The NCRAT Specialists also present findings at national scientific professional meetings, and as part of industry webinars. The collaborations with other CCE Regional Teams, the W.H. Miner Agricultural Research Institute, and with other agencies and ag professionals across the region are critical to the NCRAT team’s success. The team would like to recognize the funding agencies for making this work possible – Northern New York Agriculture Development Program, New York Farm Viability Institute, Northeast Sustainable Agriculture Research and Education, the New York Corn and Soybean Growers Association, and others.



CCE NCRAT Dairy Specialist attaching a lying behavior transponder to a cow’s leg. Photo credit: A. Bond.

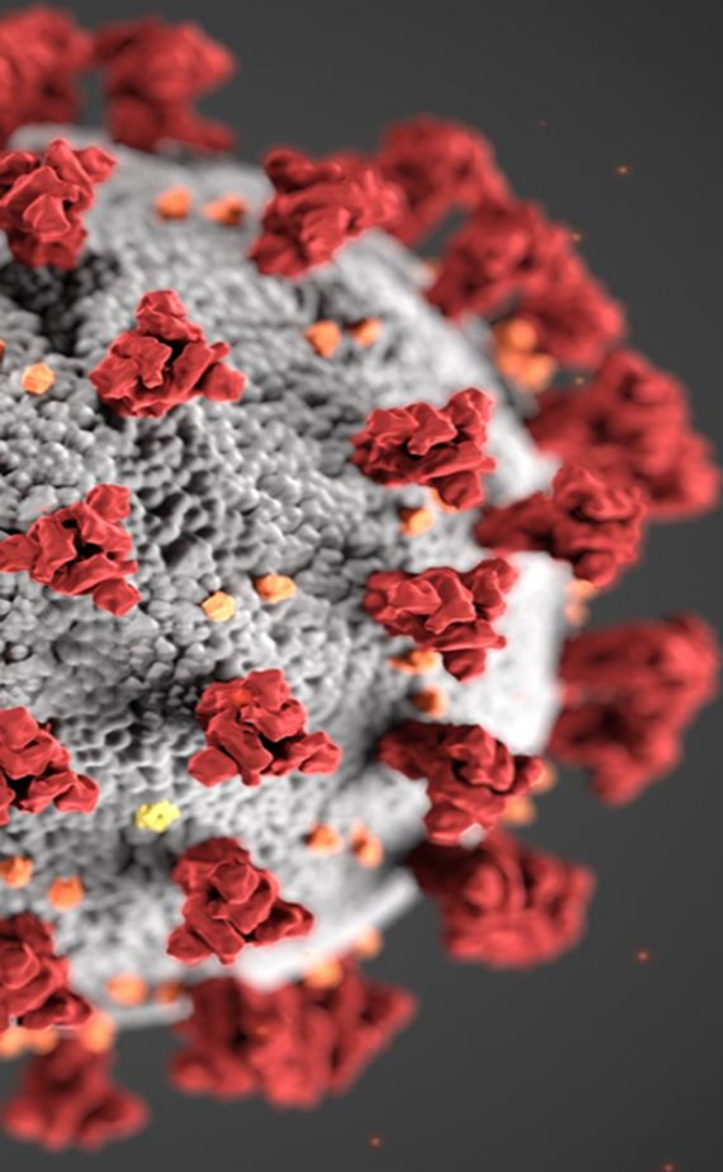


Harvest New York

Quarterly Highlights Q2 2020

"Funding for Harvest NY has not been continued and the future of this program is in jeopardy. If you support this work and would like to advocate for the team please contact us".

Harvest New York is 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.



Swift Response to COVID-19

Harvest NY Assists in Developing New Materials for New York’s Food Industry During the COVID-19 Pandemic

Harvest NY has played a critical role in protecting New York’s vulnerable food industry during the COVID-19 crisis. We took urgent action, in collaboration with partner organizations and subject matter experts, to address issues the food industry was facing. These actions included developing guidance documents for businesses, providing educational resources for employees, and conversing directly with food industry management.

As we continue to learn more about the virus causes COVID-19, we will develop additional informative guides for the food industry.

Harvest NY thanks New York food producers and manufacturers for working tirelessly to ensure our families are fed with exceptional and safe products.

Making “Virtual” a Reality

Dairy and Food Safety Workshops Moved to Online Platforms

Physical distancing has not stopped our dairy processing extension activities. Our team has embraced virtual learning by moving critical workshops to online platforms, and by providing relevant content to the food industry through webinars. Our online workshops have reached 141 individuals from over 50 companies, and our webinars and videos have reached over 1,000 people since their release.

Self-paced online workshops (such as Dairy Science and Sanitation and HACCP food safety) have allowed food industry employees from multiple shifts to learn at a time that is convenient for them. So far, 87 individuals have started or completed our self-paced courses.

We held our first online Preventive Controls for Qualified Individuals (PCQI) workshop from June 16-19. This real-time course had tremendous participant interaction, and each of our 54 participants earned a certificate from the Food Safety Preventive Controls Alliance, which means they are qualified to oversee a facility’s food safety plan.

Dairy specialists have also seen an increase in interest related to on-farm dairy processing during the pandemic. Harvest NY partnered with New York State Department of Agriculture and Markets and the Southwest NY Dairy, Livestock, and Field Crop Team to deliver an On-Farm Dairy Processing Webinar. This webinar covered business considerations and regulatory requirements for on-farm dairy processing, and reached over 168 people. Participants were able to ask questions and speak directly with presenters after the webinar. A recording of the webinar is online.



SELF-PACED LEARNING

- HACCP Food Safety
- Dairy Science and Sanitation



LIVE ONLINE WORKSHOPS

- Preventive Controls for Qualified Individuals



SPECIAL TOPIC PROGRAMMING

- Considerations for On-Farm Dairy Processing



COVID-19 EDUCATION

- COVID-19 Training for Food Industry Employees
- Background Information on COVID-19
- Consumer Office Hours

“I was very pleased with the [Preventative Controls for Qualified Individuals] program as we had three of our key people that can now help me with instituting PCQI into our Food Safety Plan.”

- Lynette Swendsen, Quality Control Manager
Yancey’s Fancy, Inc., Corfu, NY

DAIRY FOOD PROCESSING

Training Materials Developed to Help Reduce Virus Transmission in the Food Industry Workplace and Beyond

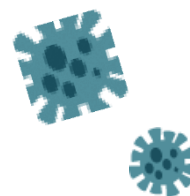
Harvest NY has assisted in creating guidance documentation for food industry best practices in English and Spanish. Documents such as decision trees, standard operating procedures, and checklists are available on the [Institute for Food Safety at Cornell University](#) website.

These documents are capable of being adapted to any facility in the food industry.



Though the virus that causes COVID-19 is not foodborne, food industry employees need training on how to reduce virus transmission in the workplace. Working with partner organizations and subject matter experts, Harvest NY produced educational training videos in English and Spanish emphasizing the steps individuals can take at work and in their personal lives to minimize the spread of the virus. Individuals who watch the video and complete a knowledge-check receive an email of completion that can be used as a company training record. More than 150 people have used these

videos since their release as free training material. In addition to the employee training video, Harvest NY also created a bilingual informational video about COVID-19. The video shares factual information about the virus and identifies mitigation strategies to control the spread of the virus. These videos have more than 1,090 views on Cornell Cooperative Extension's YouTube Channel and can be found through the [Institute for Food Safety's COVID-19 Resources](#) web page.



Our collaboration with the Cornell Institute for Food Safety (IFS) further extends to live Q&A opportunities for producers. IFS has been hosting Industry Office Hours a platform designed to help resolve concerning questions from the food industry. These office hours have drawn over 2,000 attendees. This method of outreach has not only helped us interact directly with food businesses to provide support, but also informs our team about which resources are most needed.

COVID-19 Training for Food Processing Facilities

Cornell Cooperative Extension | Harvest New York | Cornell CALS Dairy Foods Extension | IFS Institute for Food Safety at Cornell University



Anika Gianforte
Dairy Processing Specialist

"Thanks! I have 98% of my personnel trained for COVID-19 using the video in English and Spanish."

— Herminia Pena,
Production Manager
Roonybrook Farm Dairy,
Ancramdale, NY

Capacitación del COVID-19 para La Industria Alimentaria

Cornell Cooperative Extension | Harvest New York | Cornell CALS Dairy Foods Extension | IFS Institute for Food Safety at Cornell University



No hay evidencia de que el COVID-19 se transmita a través de los alimentos.

DAIRY FOOD PROCESSING

Berry Extension During a Pandemic

Even before COVID-19 turned everything upside down, Esther Kibbe, Harvest NY's Berry Specialist was planning to spend a significant portion of her time scouting berry fields and sharing that information with growers to help them make timely decisions about pest and disease management. Once the pandemic made it unadvisable to interact with growers and hold live meetings, Kibbe's focus turned even more to solo field visits, writing reports and recommendations for various grower communication outlets.

Berry Blog

The [berry blog](#), on Cornell's fruit page, was started this year and already has over 70 subscribers. Kibbe has published 14 blog posts...and counting!

Berry Update in the Lake Ontario Fruit Program Newsletter

The CCE Lake Ontario Fruit Program has a weekly newsletter, sent to over 200 subscribers, where Kibbe has a regular column. To date, Kibbe has contributed 17 posts.

Berry Update in VegEdge Newsletter

Additionally, the CCE Cornell Vegetable Program has a bi-weekly/weekly newsletter where Kibbe has contributed 9 berry management articles since early Spring. These articles have brought berry content to growers who may focus on vegetable crops but grow berries as a side project.

New U-Pick Guidelines Developed

With COVID-19 changing how people can gather, shop and recreate, the U-pick farm model became a concern. Kibbe worked with a multi-agency team to create a set of [recommendations for U-pick](#) operations to reduce risk of infection for customers coming to their farms, and to the owners and employees of the farm as well. This document has been widely distributed and many growers have mentioned using the resource as they are planning their harvest seasons.



Customer following new
COVID-19 U-pick protocols

BERRY PRODUCTION



Supporting New York's Essential Produce Auctions During COVID-19 Pandemic

Produce Auctions are aggregation and distribution nodes for farmers to participate in the wholesale economy of vegetables, fruit and flowers. Eight NYS produce auctions conduct more than \$8.1 million in business, between an estimated 6,000 growers and buyers. At the outset of the COVID-19 outbreak in New York, Cornell Cooperative Extension (CCE) actively reached out to our contacts in NYSDAM to ensure that the produce auctions were considered an essential business. Once confirmed, a group of CCE educators divided the auctions amongst themselves to serve as primary contacts to ensure compliance with NYSDOH and CDC guidance. By educating auction management, these businesses began their season on the right side of the regulations. CCE educators reached out to law enforcement and local public health agencies to ensure common understanding. Signage, COVID-19 policy, and NY Forward Business safety plans were provided with support to implement compliance. Today all eight auctions are operational, following health guidance and experiencing robust sales. Further, we have worked with the auctions to operate as distribution points for hand sanitizer and face masks for the agricultural community.



Exploring New Marketing Options Due to COVID-19

Since the start of the COVID-19 pandemic, farmers have seen an increase in the local food movement in their communities. Farmers had CSA shares fill up quickly, saw an increase in farm store traffic, and u-pick operations are still operating. However, farmers have had to find different ways to market their products than in the past. Harvest NY has been working one-on-one with farmers to find ways to market their products and provide information on other markets during COVID-19. Harvest NY has helped farmers with their websites, social media marketing, online stores, and finding alternative methods of operating.



AG MARKETING & DEVELOPMENT

Farm to School Continues Through School Closings

Lunches Changed to Unitized, Pre-Portioned Meals Compromised Largely of Pre-Processed and Pre-Packaged Items

By March 18, per Executive Order, all K-12 schools were closed due to COVID-19, causing a major disruption in the execution of child nutrition programming. School Food Authorities pivoted from (largely) hot lunch, served cafeteria-style to hundreds of children at a time, to unitized, pre-portioned meals comprised largely of pre-processed and pre-packaged items. This change in service style and meal content were functions of the crisis. Safe food handling, distribution, food cost, product availability, and labor all factored in.

Incorporating local foods into child nutrition programs efficiently and affordably is a signature challenge of Farm to School (F2S) during normal times, only to be amplified during a crisis of this magnitude. Many of us that support F2S efforts were left unsure of how to be helpful in a changed school food environment and what that meant for continued F2S programming. It should not have come as a surprise that our dedicated School Food Directors from across New York still planned on going for the 30% Purchasing Initiative, even though many lost ~3.5 months of eligible purchasing time.

The NYS Department of Education (State Ed), being responsible stewards of public money, require rigorous documentation to attest that a product purchased by a School Food Authority (SFA) is in fact, a “NYS Food Product”¹. SFAs overwhelmingly struggled during the 2018-19 school year to provide accurate attestation, costing many their increased State reimbursement. Recognizing that and knowing that diminishing school food budgets would greatly benefit from the increased reimbursement, the Harvest NY F2S team, with the support of State Ed, drafted 30% guidance documents. As part of this, we verified frequently purchased NY 30% eligible items, ensuring proper paperwork was on file. It came as a huge surprise when all but one NY eligible product had insufficient paper trails behind them, which at worst, would have cost an SFA their 2019-20 reimbursement, or at best, significantly increased the work required of SFAs to verify product eligibility. In addition to correcting documentation, we created [a suite of 30% guidance resources](#) to assist SFAs in accurately determining a product’s eligibility and ensuring they have proper attestation. All guidance materials can be accessed on Harvest NY’s website.

Part and parcel to the guidance resources, we are thrilled to announce the official release of the [NY 30% Initiative Product Eligibility Database](#), which lists all known 30% eligible items, sans seasonally available, minimally processed produce. While we elected to leave these items off for now, we do intend to add them in the near future, so stay tuned. A public link to the database and companion training resources can be found on Harvest NY’s website.

We’re not sure what the fall of 2020 will mean for F2S programs but we’re optimistic that between our dedicated SFAs, our responsive food and farm community, the F2S village at large, and these newly released resources, that F2S will continue in some capacity, though it’ll likely look a bit different than in recent years past.

¹ New York State Food Product” is defined as: (1) a food item that is grown, harvested, or produced in New York State (NYS); or (2) a food item processed inside or outside NYS comprising over 51% agricultural raw materials grown, harvested, or produced in NYS, by weight or volume.

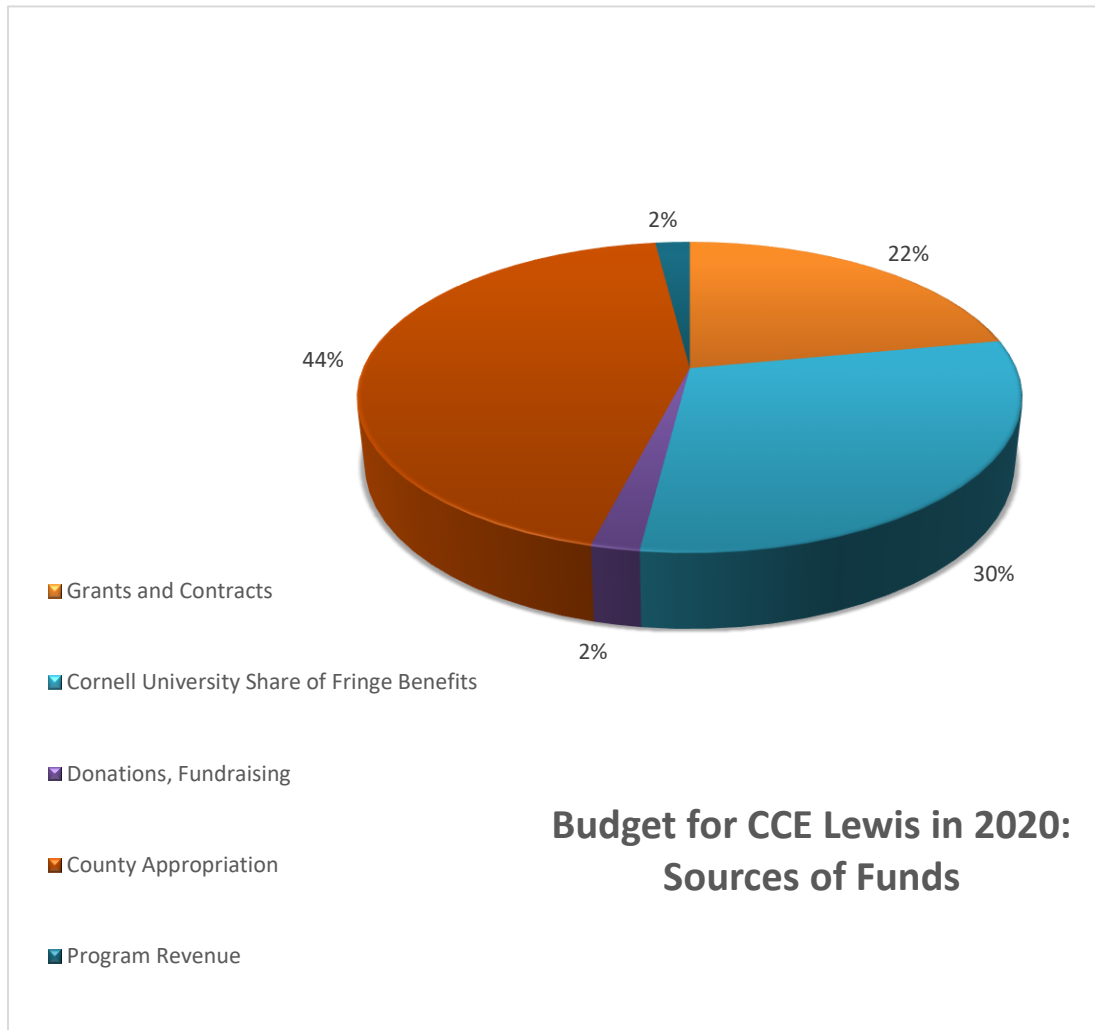
| Product | Category | Sub-Category | Manufacturer | Distributor Code | Manufacturer Code | Item Description | Pack Size |
|---|----------|-------------------|-------------------------|------------------------------|-------------------|------------------|---|
| <div> <div>CATEGORY</div> <div>Produce</div> <div>Count 26</div> </div> | | | | Unique 23.08% | | | |
| 240 Concord Grape Juice | Produce | Juice | NY Juice Co | Sysco SUPC: 7089850 USF... | | 4 oz. | 96/cs |
| 241 Concord Grape Juice (with Apple Juice) | Produce | Juice | Welch's/Cool Tropics | USF: 6787894 | 17001 | 4 oz. | 96/cs |
| 242 Concord Grape Slush | Produce | Juice | Welch's/Cool Tropics | USF: 2533611 | 14501 | 4 oz. | 60/cs |
| 243 Apple Slices | Produce | Fresh Fruit | Peterson Farms | | | 2 oz. | 100/cs |
| 244 Apple Slices, Bulk | Produce | Fresh Fruit | Foodlink Food Hub | | N/A | 3 lb. bulk bag | 8/cs |
| 245 Apple Slices, Portion Controlled | Produce | Fresh Fruit | Foodlink Food Hub | | N/A | 2 oz. | 100/cs |
| 246 Apple Slices, Commodity | Produce | Fresh Fruit | Zee Zee's Sliced Apples | | | 2 oz. | 100/cs |
| 247 Bakeable Straight Cut French Fry | Produce | Frozen Vegetables | McCains | Sysco SUPC: 2545937 USF... | | 6 lb. bag | 6/cs |
| 248 Lettuce, Hydroponic: Baby Romaine, Butterhead, Green Incised, ... | Produce | Fresh Vegetables | Wheatfield Gardens | | | Head | 30 heads/cs (butterhead); 5-6 heads ... |
| 249 Lettuce, Hydroponic: Romaine, Butterhead, Trio Mix | Produce | Fresh Vegetables | Kenneth Henry and Son's | | | | |

FARM TO SCHOOL

Finance Overview

2020 Financial Support and Funding Sources

Cornell Cooperative Extension of Lewis County leverages Lewis County tax dollars to benefit the county's economic vitality and residents



■ Value of employee fringe benefits covered by Cornell University is \$219,608.28

■ Volunteer support – 127 volunteers donated over 3,454 hours valued at \$53,121.60

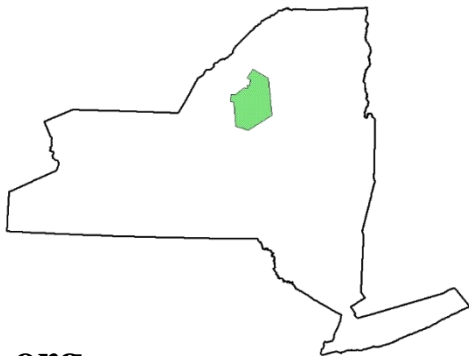
CCE Lewis County is a subordinate governmental agency with an educational mission that operates under a form of organization and administration approved by Cornell University as agent for the State of New York. It is tax-exempt under section 501(c)(3) of the Internal Revenue Code.

The association is part of the national cooperative extension system, as educational partnership between County, State and Federal Governments. As New York's land grant university, Cornell administers the system in this state. Each Cornell Cooperative Extension association is an independent employer that is governed by an elected Board of Directors with general oversight from Cornell. All associations work to meet the needs of the counties in which they are located as well as state and national goals.

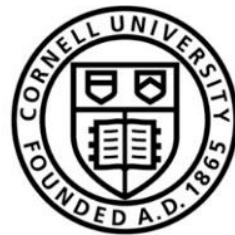
Building Strong and Vibrant New York Communities

Cornell Cooperative Extension is an employer and educator recognized for valuing AA/EEO, Protected Veterans, and Individuals with Disabilities and provides equal program and employment opportunities.

Cornell Cooperative Extension | Lewis County



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