DIRECTOR'S MESSAGE

Cornell Cooperative Extension (CCE) is a dynamic educational system by which research at Cornell University is translated and placed into the hands of New York State citizens in order to enhance their lives and well-being. Highly committed campus faculty and extension associates, agriculture teams, and local educators in a variety of fields, working together with community partners, are uniquely positioned to help apply Cornell’s world class research to meaningful programming.

CCE programs are available in every county and the five boroughs of New York City, engaging NYS citizens, providing educational experiences and helping them ask the right questions.

- CCE reaches 1.9 million people directly each year, and 15 million indirectly through print and social media, websites, broadcast, and traditional mailings
- Employs 1,011 local and regional staff and educators
- Relies on 45,000 volunteers to help advise, plan, teach and mentor
- Partners with 276 Cornell faculty and staff, primarily from the College of Agriculture and Life Sciences and the College of Human Ecology
- Deploys 53 specialists in the areas of integrated pest management, dairy, grape, fruit, vegetable and field crop production and management
- Develops programs using information and experience from communities to inform research, which then further informs programming
- Includes 57 distance learning centers across New York State, and is fully equipped to deliver instruction through various modes including webinars and on-demand videos

CCE’s future lies in the successful integration of our program areas with local needs. Agriculture, a major part of our effort, is key to nutrition for New York State citizens, but must be carried out in an environmentally sustainable way and integrated with the conservation of natural resources. Successful farming, whether small or large scale, is community development.

Bright employment prospects for New Yorkers are tied to healthy, well-educated young people. We are increasingly connecting our programs with students, providing real life opportunities for research. Extension internships have resulted in a number of students accepting positions in our system after graduation.

As we move forward, we must continue to engage the next generation in our incredible system. How do we best reach new, millennial farmers— those growing up with the internet at their fingertips? How do we help them formulate the right questions to ask and explore? Dynamic programs must incorporate new research, new technology, and new ways of thinking about complex problems.

These pages highlight some of the great work of CCE. I am proud to be part of this vibrant educational system, and ask for your continued support as volunteers, at State and County Government levels and anywhere else that you feel you can make a contribution.

Chris B. Watkins, Ph.D.

Director, Cornell Cooperative Extension
Associate Dean, College of Agriculture and Life Sciences and College of Human Ecology
Herman M. Cohn Professor, Department of Horticulture
CORNELL COOPERATIVE EXTENSION IS

A partnership between the federal, state and county governments, Cornell University, and the citizens of New York State.

Practical. Programs are designed to solve real life problems, helping to transform and improve communities.

Integrated. A network of professionals includes campus-based faculty and staff, regionally deployed specialists, county-based educators and professional employees.

Locally-rooted. Citizens are key to identifying and creating programs which serve the needs of communities, businesses and individuals.

Extensive. High value educational programs are offered in every county and the five boroughs of New York City.

An education system which extends Cornell University’s land grant programs to citizens across New York State.

Research-based. Educational programs are developed through interpretation and practical application of research conducted at Cornell University.

Comprehensive. CCE programming covers five primary mission areas: Agriculture, Community, Environment, Nutrition, Youth and Families.

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PRO-DAIRY is an educational program which facilitates economic development in NYS by increasing the profitability and competitiveness of the dairy industry. Through research, discussion groups, workshops, financial analyses, websites, publications and personal contacts, the Cornell University-based program reaches thousands of dairy professionals annually.

Reiners is the Cornell liaison to grower organizations, keeping tabs on industry priorities. He mentors new faculty and CCE educators. He organizes the annual Empire State Fruit and Vegetable Expo and is the co-leader of the CCE Cornell Vegetable Team.
REVIVING HOPS GROWTH

A little over a century ago, New York was home to more than 40,000 acres of hops. Disease, pests and Prohibition saw that number dwindle to zero. A revival of the industry is underway, and 250 new acres are under production today, thanks to an increasing number of eager yet often inexperienced growers. Many of them turn to CCE for help.

“We have a real mix of people,” said Steve Miller, CCE Hops Specialist. “There are only a couple of growers who’ve had hops in for more than 10 years in the state. The vast majority of growers have only had them in for a year or two.”

Many attendees at CCE hops programs have experimented with growing just a few hops plants for personal use but are looking to expand due to the popularity of craft brewing in New York. They learn that growing the hops is only half of the battle – processing and storing hops is a major undertaking in and of itself.

Last year alone, nearly 20 hops programs took place in Dutchess, Madison, Ontario, Seneca, Steuben, and Suffolk Counties. Conferences, summits, workshops and field days help identify opportunities for spurring industry growth. Participants learn about the hops industry from the perspectives of both farmers and brewers, and from experts on topics from processing and pest management to sales.

Erie County’s Hoptoberfest, a two-day workshop taught by Miller, along with CCE Crop Specialist Bill Verbeten, and Extension Associate Chris Gerling, attracted 64 participants from three different states. Extension programs like Brewery and Cidery Start-Up Workshops in Seneca County help a new crop of entrepreneurs navigate all phases of making and selling their products.

A statewide effort is underway to expand the production of hops. Cornell researchers are evaluating 30 varieties of hops to determine which are best suited for growing in the region. Working with the Northeast Hops Alliance, Cornell researchers helped brew a beer from hops grown entirely in New York State - perhaps for the first time in more than half a century.

REGIONAL AGRICULTURE TEAMS

CCE partners with Cornell University and County Associations to provide research-based information, programs and technical assistance to dairy, field crops, vegetable, tree fruit, and grape producers all around New York State. Specialists and educators work closely with Cornell faculty members and local growers in support of the state’s agriculture industry.
FARMING IN THE BIG APPLE

Partnering with Manhattan borough president Gale Brewer, Cornell Cooperative Extension-New York City (CUCE-NYC) will help to sow innovative urban agriculture projects in New York City schools, senior centers and public housing facilities during the next year.

“Manhattan is home to an array of urban plots, hydroponic farms, greenhouses and more than 170 community gardens,” said Brewer. “Urban agriculture yields tremendous benefits for our neighborhoods, our economy and the environment. It teaches valuable skills and produces fresh, healthy, locally grown food.”

CUCE-NYC extension associate Philson Warner developed a 40-unit Hydroponic Learning Model curriculum to teach students at Manhattan’s Food and Finance High School the New York State Regents “Living Environment” curriculum. Student interns serve as technicians, working in a laboratory setting and supplementing classroom lessons with hands-on work.

“Our hydroponics technology quickly and cleanly produces high-quality fresh vegetables, but it also produces a better quality of learning for the students who work with it,” Warner said.

“We already engage hundreds of New York City youth each year in experiential learning about science and entrepreneurship while supplying schools and local communities with high-quality produce – many varieties of lettuce, herbs and Chinese cabbage – as well as fresh fish,” said Jennifer Tiffany, CUCE-NYC executive director and director of outreach and community engagement for the Bronfenbrenner Center for Translational Research.

“IIt’s a joy to help students learn STEM (science, technology, engineering and mathematics) lessons through this experiential, inquiry-based, project-focused curriculum.”
–Philson Warner

NYC TEENS PROMOTE HEALTHY LIFESTYLES

CCE’s 4-H Choose Health Action Teens (CHAT) program integrates youth community action with efforts to encourage healthy lifestyles among New York City children, teens, and adults.

Over fifty 4-H teens were recruited from high schools in Queens, Brooklyn and the Bronx to participate in the Choose Health: Food, Fun and Fitness youth curriculum developed by the Division of Nutritional Sciences at Cornell University to promote healthy eating and active living.

The teens learned and practiced how to facilitate the program, reaching 623 children in after-school and day camp settings and 980 adults at health fairs and other outreach events.
AS FAMILIES EVOLVE, SO DO OUR PROGRAMS

For over a decade, CCE has been aware that relatives acting as caregivers are a growing segment of those raising children. Parenting a Second Time Around (PaSTA), one of CCE’s many diverse parenting programs, evolved to meet the specific needs of those providing kinship care.

A series of seminars which started in Ontario County grew to include a support group component in Orange County. Eventually a curriculum specific to grandparents raising children with developmental disabilities was developed by disabilities Broome County staff and partners. In 2000, these three counties partnered with the Human Development faculty at Cornell to develop and implement the program now known as PaSTA. The six-week curriculum is a series of workshops designed to address the specific needs of grandparent and relative caregivers who are parenting again.

Since the inception of the PaSTA curriculum, professional development with campus leadership has been offered to the CCE educators. Exchanges of ideas and experiences between campus and county are the key to fine tuning existing programs and creating new ones that are relevant.

Kimberly Kopko, Assistant Director of Cornell Cooperative Extension, College of Human Ecology, directs Parenting in Context, an initiative that integrates extension and research activities in the area of parenting education.

PARENTING IN CONTEXT
- Research-based resources for educators
- Enhances existing programs
- Identifies areas of collaboration

"The first workshop, helped me to deal with my own frustrations as a grandparent caregiver"

Researchers and educators share information, successes and challenges at in-service training

Kopko conducts research on grandparents raising teenage children, photo Mark Vorreuter
GROWING GARDENS

Gardening and CCE go hand in hand. Many New York State residents make their first connection with Cornell Cooperative Extension when they seek out the expertise of local master gardeners. Gardening is consistently one of the most searched topics on the CCE website.

In addition to the thousands of hours logged by master gardeners every year, programs involving Cornell researchers, extension educators, school children and communities are carried out in every corner of the state.

School gardens, created in partnership with CCE educators and programs, are sprouting up in both rural and urban counties. Evidence suggests that involving children in gardening has positive effects on learning, nutrition, physical health and relationships.

Cornell researcher Nancy Wells, an environmental psychologist in the Department of Design and Environmental Analysis at Cornell University’s College of Human Ecology, examines how school gardens can influence children’s understanding of nature, fruit and vegetable consumption, and physical activity. She studies school gardens in partnership with more than 30 extension educators in six counties.

Fifteen New York elementary schools participated in her research project “Healthy Gardens, Healthy Youth,” which investigated the impacts of school gardens on student nutrition, health and learning.

Campus-based extension educators like Marcia Eames-Sheavly in the Horticulture Department of the College of Agriculture and Life Sciences, keep campus and county connections tight. Her group provides statewide leadership and coordination of multidisciplinary garden-based learning extension programs for children and youth educators.

They recently awarded small grants to educators in Chenango, Columbia, Greene, Putnam, Rockland, Schenectady, Sullivan, Tompkins and Yates Counties. The Small is Beautiful mini-grant program is designed for educators around the state to kick start and sustain gardens.

In Rockland and Schenectady counties, retiree volunteers get trained and help conduct garden-based research through the Retirees in Service to the Environment (RISE) Program. RISE volunteer Ellen Spergel and her husband, Ron, created a garden-based learning program at Grandview Elementary in Monsey, N.Y.

Close to 200 students have learned about vegetable gardening and nature through hands-on activities and use of the project’s educational resources. “We have hit upon a wonderful model to continue the work with Grandview children in the garden – in cold weather, in the classroom – to continue the involvement with nature,” Spergel said.

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CCE programs from Buffalo to the Adirondacks to New York City help all residents connect with the abundance of local, fresh food available right here in New York State.

Healthy food incentive programs at farmers markets have been gaining momentum as a means to strengthen local economies, support local farmers and provide greater access to healthy foods for low-income families and individuals.

In Ulster County, CCE partnered with the local YMCA to launch a bicycle-powered mobile farmers market and produce stand. Over 200 young people planted and worked a quarter acre farm. From June to October, they took the traveling produce show on the road, making fresh produce available to a downtown Kingston hospital, housing complex and public library – a part of town considered to be a “food desert” or area where access to groceries is limited. The farm stand at the YMCA operated for 20 weeks, serving nearly 30 customers each week. They sold $6,200 worth of produce, 14% of which was purchased using public assistance benefits.

In Western New York, an eight-county region that is home to over 7,500 farms, fresh affordable food is hard to come by. The CCE Harvest New York Team, in partnership with the Field and Fork Network and Fair Food Network, responded to this need by developing the “Double Up Food Bucks” program. Supplemental Nutrition Assistance Program (SNAP) purchases of fresh fruits and vegetables at participating farmers markets were matched up to $20 per visit. Seven markets, business outlets to over 175 farmers, participated in the program providing access to affordable produce for low income residents in Chautauqua, Erie and Niagara Counties.

From speed dating for farmers and chefs, to farm tours, local foods guides and farm to institution initiatives, CCE’s multi-faceted programs are designed to meet the growing demand for local foods.
EMPOWERING WOMEN IN AGRICULTURE

Annie’s Project, a multi-state agricultural risk management education program facilitated by CCE in New York State, is designed to educate and empower the increasing numbers of women in farming.

The six-week comprehensive training program includes risk management, farm business planning, marketing, facilities and production insurance, human resources, and labor relations. The program has expanded to 13 CCE associations and is offered by 15 farm business management educators to more than 140 women farmers each year.

Besides helping them to become savvy business leaders and partners in today’s farming industry, participants report increased knowledge of risk management issues and plans to implement living wills, estate and power of attorney plans.

ADAPT-N: NIPPING LOSSES

Billions of dollars are spent every year on nitrogen fertilizer for corn crops. About half of the nitrogen is lost to the atmosphere as nitrous oxide or is leached through the soil where it can pollute groundwater. Determining how much nitrogen to apply is complicated, according to the developers of a free Web-based tool called Adapt-N.

Developed by an interdisciplinary team from Cornell, led by soil science professor Harold Van Es, Adapt-N draws on local soil, crop and weather data – including high-resolution climate data stored at the Northeast Regional Climate Center at Cornell – to provide better estimates of nitrogen fertilizer needs for corn, in real time, throughout the season.

CCE offers Adapt-N information and trainings to growers in 24 counties through workshops, webinars, trainings and conferences. About 600 users now receive daily text or email alerts as part of the system.

“There’s such a huge potential for positive environmental and economic impact,” said Extension Associate Bianca Moebius-Clune, a member of the development team.

REDUcing FOOD SAFETY RISKS

Good Agricultural Practices, a multi-day, nationally recognized training program, prepares New York’s fresh produce growers to implement practices for increasing food safety by teaching them to develop solid farm food safety plans. Preparing for a third-party audit, a practice that many fresh produce buyers require now in response to produce-associated foodborne illness outbreaks, is a key component of the program.

Since 2009, the GAPs program has held 24 multi-day workshops throughout New York State, training over 600 people from at least 300 farms. Workshops incorporating science-based recommendations from peer-reviewed research conducted at Cornell, provide key produce safety knowledge to growers.

CCE partnered with the Produce Safety Alliance, the National Good Agricultural Practices Program, and the New York State Department of Agriculture and Markets GAPs to develop this program for both extension educators.
CITIZEN U is a two-year college preparation program for teens 14-18 years old in areas of Binghamton and Rochester where college attendance is low. Mirroring a university setting, weekly after-school seminars are taught by experts from CCE, Cornell University, community agencies and business partners. The teen leaders conduct projects in the areas of childhood obesity prevention, food security, climate change and sustainable energy.

During the summer, the teens gain job skills with paid internships which align with their CITIZEN U majors and community improvement projects.

In 2012-2014, all of the teen participants who were seniors graduated from high school and began college at two- and four-year colleges on full or partial scholarships.

Each year, the Youth In Action Award is given to one exceptional young person who embodies the life-changing impact of 4-H.

This year’s winner is Nosa Akol, a 17-year-old senior at Binghamton High School whose 4-H experience began when she joined CITIZEN U in her freshman year.

After a paid internship at Cornell University where she worked as a laboratory aid, she was invited to be a panelist at the Norman Borlaug Symposium where she spoke with U.S. Secretary of Agriculture Tom Vilsack about how micro-farming could help women and girls in South Sudan. She also delivered the keynote address at the 4-H Career Explorations at Cornell University last summer.

In her community, Nosa helped map the location of potholes in the city of Binghamton. And in the coming months, she will partner with 4-H alumnus Lazarus Lynch to lead a hunger banquet and poverty simulation to help educate her community about childhood hunger.

Nosa said, “My experiences in CITIZEN U 4-H opened new doors and opportunities for me, and set me on a path to be an agent for change. 4-H changed my life.”
Aaron Santangelo, a Community Educator in Alleghany County, was a 2011 intern who worked in Western New York on a field crop disease and nutrient management project led by faculty member Quirine Ketterings. Santangelo said, “It was a great fit for me. The internship expanded my knowledge of both field crops and provided me with an understanding of the process of conducting research and educating the public through extension.” He said his connection to Cornell and the skills and experience gained during his internship put him in a strong position when he interviewed for the educator job. Now, as a community educator, he works on a wide spectrum of issues with a range of growers from the beginning farmer with five acres to the producer working 400 acres.

Elizabeth Buck, a 2009 intern, works as a Program Aide with the Cornell Vegetable Program. She said the summer internship provided her with much insight into the inner workings of CCE and the breadth of programs and extension efforts offered in Northern New York. “It is quite spectacular, really, how much this organization is doing to help people and how efficiently and energetically the educators work at creating much-needed programs,” she said. “It’s really rewarding to draw from what I learned in my internship a few years ago,” said Buck.

The CCE Summer Internship Program provides College of Agriculture and Life Sciences and College of Human Ecology students a unique opportunity to team up with faculty members and field-based CCE educators around the state, conducting research which directly benefits New York State residents.

Since its establishment in 2007, the CCE Internship Program has expanded from five student projects to more than 25 each year. Last summer, projects ranged from helping farmers adapt to the changing environment, to parenting a second time around to engaging Latino youth in 4-H.
Farmworkers can be a difficult population to reach due to language, transportation, and literacy barriers. CCE and the Cornell Farmworker Program (CFP), a CaRDI affiliate, have developed a culturally-appropriate program to provide hands-on information about planning for emergencies and improving workplace relations.

The Lake Ontario Fruit Team, a partnership of five Western New York CCE associations, conducts educational programs for the commercial fruit industry. For the last five years, CFP has collaborated on a concurrent Spanish-language workshop for New York State farmworkers. Topics cover important safety and production issues but also delve into the complex issues that affect the migrant workforce in NYS’s agricultural sector.

TASTE NY

CCE Dutchess operates and manages the Taste NY Market at Todd Hill in partnership with the NYS Department of Agriculture and Markets. Opened in 2014, Taste NY brings together more than 500 local products from over 50 farms and producers in one place. Local meat, produce, plants, syrups and jams, baked goods, eggs and ice cream are among the offerings.

The Taste NY Market at Todd Hill plays host to between 3,000 and 5,000 visitors every week, with year-to-date sales of more than $140,000. Currently, there are products from 58 New York State agricultural producers in the store, 28 of which are actual farms.

DEVELOPING SKILLS

Each year, CCE Genesee Executive Director Beverly Mancuso and Harvest NY’s Dairy Foods Specialist Tristan Zuber work with CaRDI to connect CALS NYS interns to a broad array of economic development representatives as part of their community engagement projects. Adam Friedlander ‘16 (pictured here) testing the milk at Muller Quaker Dairy LLC last year.

FARMWORKER SUPPORT

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“Workers commented that this was one of the few opportunities where they received training that helped them in their workplace and included important discussions to improve their quality of life.” —Mary Jo Dudley, CFP director
SUSTAINABLE LAND USE

Throughout New York State, CCE and the Cornell Community and Regional Development Institute (CaRDI) act as partners for community capacity building around land use issues. When former CCE Yates county Executive Director, Peter Landre, invited CaRDI to conduct a Land Use Leadership Alliance (LULA) training focused on the Keuka Lake Watershed, he hoped it would create lasting change.

“It’s not often, or easy, for communities around a large lake to work together on a consistent, long term basis for the betterment of the watershed,” says Landre, now a CCE State Extension Specialist.

In 2009, the Keuka Lake Watershed LULA program brought together 50 local leaders over a two year period to create a sustainable watershed land use plan and to build capacity within the community to put the plan into action. The Keuka Watershed LULA team continues to meet on a monthly basis to implement the action strategy.

Over the next year, CCE Oneida, Madison and Onondaga will host and participate in CaRDI’s newest training, the Local Agriculture & Land Use Leadership Institute. Developed by CaRDI, American Farmland Trust, and LEAD-NY, the institute provides an action oriented curriculum for community leaders that combines skills in land use decision making, farmland protection, economic development, and leadership.

RUST TO GREEN

“One of the things that has really struck me about Rust to Green (R2G) is that it has created a new way of doing business, a new way of doing Extension,” says Ron Bunce, Executive Director of CCE-Oneida. Since 2010, R2G Utica has been using creative and participatory engagement strategies to build relationships and tackle local issues and urban challenges.

R2G Utica—a joint program of CCE, Utica-area groups, and CaRDI—emphasizes actionable projects that empower the community to jointly reimagine and “activate” change within their rust belt city. Most recently, R2G Utica partners joined forces to co-create Utica’s inaugural One World Flower Festival in May 2015. The festival emphasized art and culture’s role in creative placemaking and community development. For the day of the festival, local people experienced tangible and positive changes to the pivotal, yet neglected, downtown Oneida Square district and neighborhood.

Today, CCE-Oneida hosts the R2G Utica program and runs the R2G Urban Studio out of an office in Utica’s City Hall. By engaging a diverse group of collaborating partners inclusive of CCE, Cornell faculty and students, and an ever diversifying set of people and groups from Utica, R2G is fostering a union of knowledge and action to support Utica’s transition from “rust to green”.

The One World Flower Fest is a collective action to make Oneida Square a safer, more beautiful, welcoming and people-friendly place. May 2015, Utica
A NETWORK OF RESOURCES

The Extension Disaster Education Network (EDEN) is the premier provider of disaster education resources delivered through the Land Grant University system.

New York-EDEN, based at Cornell University, is accessed via Cornell Cooperative Extension Associations in every county of New York State and the five boroughs of New York City. New York-EDEN links the resources of state agencies and organizations with the community networking and outreach capabilities of CCE.

New York-EDEN aims to:
- Disseminate educational materials
- Provide emergency preparedness training for CCE staff members, businesses and communities
- Assist CCE Associations in establishing partnerships and plans to assist their communities
- Respond to requests for and distribute credible, tailored resource materials, especially to county and state officials

CLIMATE SMART FARMING TEAM FORMED

New York farmers coping with extreme weather and climate variability will have better access to the latest in management practices that improve farm resiliency through a Climate Smart Farming Extension Team organized by Cornell University’s Institute for Climate Change and Agriculture (CICCA).

“The Climate Smart Farming Team pulls together top farm specialists from Cornell and the Cornell Cooperative Extension (CCE) System to provide new research and decision-making tools that can help farmers reduce the risks climate change presents to their operations,” says Dr. Allison Chatrchyan, CICCA director.

“We expect to offer solid research-based information on climate change that farmers can use to manage risks to their farms and to take advantage of new opportunities. Our ultimate goal is to strengthen New York agriculture’s capacity to face a changing climate.”

“The pilot team is the first in the nation devoted to climate change resiliency, and can serve as a model for extension across the United States,” said Christopher Watkins, Director of the Cornell Cooperative Extension system. “The specialists on the team are from Western New York, Northern New York and the Hudson Valley, helping to reach a broader audience of farmers.”
CORNELL COOPERATIVE EXTENSION OFFICES ARE LOCATED ACROSS THE STATE. TO LEARN ABOUT PROGRAMS IN YOUR AREA, VISIT: LOCAL.CCE.CORNELL.EDU