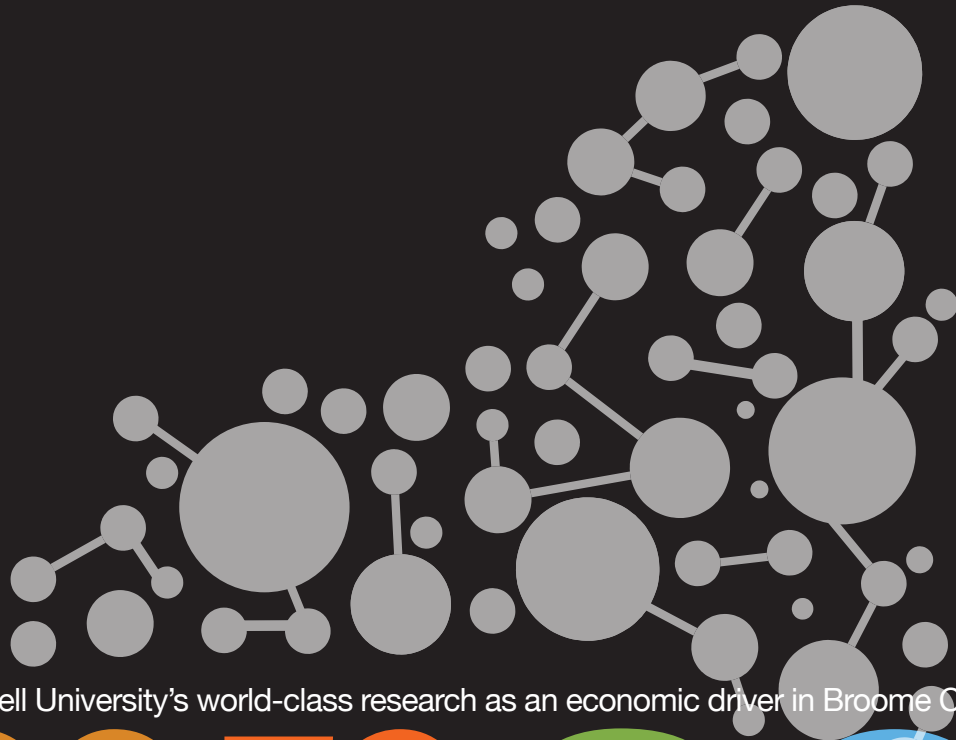
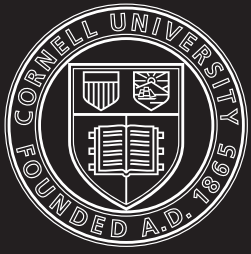


impact

Annual Report 2017

Cornell Cooperative Extension
Broome County





Applying Cornell University's world-class research as an economic driver in Broome County

impact

on our community



Cornell Cooperative Extension of Broome County uses Cornell University's world-class research and statewide Cooperative Extension network to enhance the lives and well-being of all Broome County residents.

Cornell Cooperative Extension's dedicated team works with Cornell faculty, agriculture, environment, nutrition and 4-H youth development teams to put research to work as an economic driver to grow a vibrant, healthy and economically strong Broome County.

Cornell Cooperative Extension
Broome County

Director's Message

A year of impact

The new Regional Agricultural Development Center, overlooking the beautiful Cutler Botanic Garden, the new Taste NY store on Upper Front Street and at the new Southern Tier Welcome Center on Interstate 81 shine a spotlight on some of the best agricultural products in the world—local products produced right here in Broome County. These new facilities, together with the Broome County Regional Farmers Market, are impacting the county's agriculture and agribusinesses in exciting new ways.

Cornell Cooperative Extension of Broome County is dedicated to ensuring the success of local agriculture. We are committed to supporting and ensuring a future for tomorrow's farms, farmers and small businesses, and serving as a platform for building markets for local products. All our programs serve as economic drivers, creating new career pathways for young people and new business development.

Our 4-H Youth Development programs are reaching more youth through in-school, afterschool and club programs that ever before. Our parent educators are supporting high-need families through holistic, strengths-based family and child development programs. Our nutrition educators are helping our most vulnerable families stretch their food dollars, tackle food insecurity issues and become healthier. Our educators are training tomorrow's entrepreneurs, veteran farmers, new business owners and out-of-school young adults.

Agriculture in the Classroom is partnered with ten school districts and is creating a workforce pipeline for future careers. The Empire State Afterschool Program,

in partnership with Binghamton City School District, is promoting Science, Technology, Engineering, Arts/ Agriculture and Math (STEAM) careers among high-need, underserved youth in seven elementary school and two middle schools. These two new initiatives are complimenting our ongoing programs serving young people through the 4-H Education Center at Finch Hollow Nature Center, 4-H Clubs, Solid Waste Management, 4-H Tech Wizards and CITIZEN U.

New York State Senator Fred Akshar, Assemblywoman Donna Lupardo, Assemblyman Clifford Crouch are champions of Broome County's agriculture and have supported our efforts in innumerable ways. CCE Broome is proud to partner with New York State Department of Agriculture and Markets, Broome County Farm Bureau, Greater Binghamton Chamber of Commerce, the South-Central New York Agriculture Program and Cornell University as well as many community organizations and foundation. We are grateful to Visions Federal Credit Union and the Hoyt Foundation for their support.

Cooperative Extension has a unique partnership with federal, state, and local government. CCE Broome could not exist without funding from Broome County and our ability to leverage funding through state and federal dollars. We are humbled by the support and trust placed in us to grow our local economy and impact the quality of life of Broome County residents. On behalf of our entire team, a sincere and heartfelt thank-you.



Victoria L. Giarratano
Executive Director



Board of Directors

Cornell Cooperative Extension of Broome County

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

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Nineveh

Recruitment Specialist, Lourdes Hospital

KATHARINE ELLIS, Vice-President

Vestal

*Senior Director for Communications and Marketing,
Binghamton University*

ANNE CATALANO, Secretary

Vestal

Investment Services Manager, Tioga State Bank

SCOTT BAKER

Windsor

Broome County Government Representative

FRANCIS COUDRIET

Binghamton

Director of Marketing & Product Innovation-IMS Inc.

PATRICK DOYLE

Binghamton

Self-employed, Doyle Consulting

STACEY DUNCAN

Binghamton

*Deputy Director, Community & Economic Development,
The Agency Broome County*

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Binghamton

Retired Teacher; Master Gardener

DANIEL LING

Endwell

Retired United Methodist Minister

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State Specialist, Cornell Cooperative Extension Administration

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Harpursville

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Glen Aubrey

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Attorney, Law Offices of James D. Ward

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Whitney Point

Co-owner, Whittaker Dairy Farm

AL VOS

Endwell

Associate Professor of English, Binghamton University

Staff

Administration	 Adam Bredesen	 Dan Cargill	 Ken Chapman	 Carol Fetterman	 Lorraine Kemak	 Gary Pisano	 Beth Roberts
	 Joy Pragacz	 Maria Wolf	 Jean Zilnik				
Agriculture and Agrribusiness	 Sarah Atwood	 Brian Aukema	 Laura Biasillo	 Nick Haynes	 Molly McManus	 Bridget Quaranta	 Megan Triesdail
	 Amy Willis						
		Horticulture	 Linda Svoboda		Environment	 Kevin Mathers	
4-H Youth Development	 Kelly Adams	 Katie Bowers	 Kelly Campbell	 Victoria Londner	 Kelly Mabee	 June Mead	 Tom Tasber
Nutrition Education	 Kathleen Cook	 Alyssa Joyce	 Jenna Matthews	 Rachel Parsons	 Ann Supa	 Kelly White	
Community Development	 Asia Ambler	 Amanda Marquez	 Holly Tracy-Bronson	 Cindi Conway			

Finance Overview

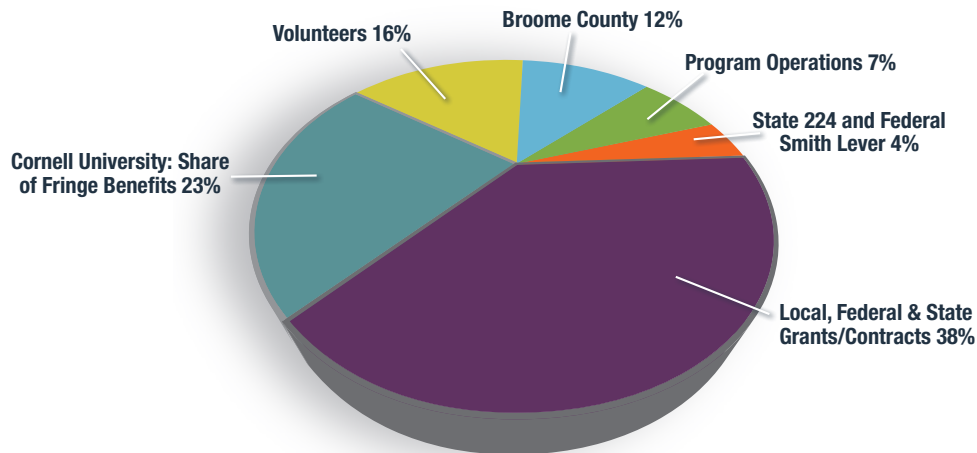
2017 Financial Support and Funding Sources

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

In 2017, it is estimated that each dollar of county funding to Cornell Cooperative Extension of Broome County will be matched by \$7.31 in additional financial and volunteer resources, and Cornell University fringe benefit cost share. CCE Broome's fiscal year ends December 31. As this report is published prior to fiscal year end, this graph does not represent the actual revenue for 2017. It is based on the estimated 2017 budget.

2017 FUNDING SOURCES

- 38% Local, Federal & State Grants/Contracts**—Direct program delivery
- 23% Cornell University: Share of Fringe Benefits**—Value of employee fringe benefits covered by Cornell University
- 16% Volunteers**—553 volunteers donated over 25,000 hours valued at \$544,750
- 12% Broome County**—Operations and direct program delivery
- 7% Program Operations**—Includes donations, user fees, interest earnings and transfers
- 4% State 224 and Federal Smith Lever**—Direct program delivery



Cornell Cooperative Extension of Broome 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, an 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.

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.



Agriculture

Growing Broome County

Broome County Regional Farmers Market

When the Broome County Regional Farmers Market celebrated its one-year anniversary in June, most of its vendors had doubled or tripled their sales and expanded their product lines. Two Dogs and a Poet had not only grown their sales and customer base, they had hired new staff and expanded their kitchen to meet the demand for their products.

CCE Broome County's nutrition educators are helping food-insecure families buy fresh, healthy fruits and vegetables at the Regional Farmers Market by providing education programs about the Supplemental Nutrition Assistance Program (SNAP), Electronic Benefits Transfer (EBT), Women, Infants and Children (WIC) and the Fruit & Vegetable Prescription Program, a program through the Rural Health Network. Through these programs, SNAP/EBT redemption increased from 229 to 761 during 2017. Fruit and Vegetable Rx voucher redemption went from 206 to 1766. In addition, during 2017, the vendors at the Farmers Market donated 12,000 lbs. of food to the Binghamton Food Rescue, a non-profit organization that practices "just-in-time rescue" of perishable foods for redistribution to serve food-insecure communities, mitigate waste and promote a sustainable local food system. By partnering with these programs, the Farmers Market and CCE Broome's educators are helping families have affordable access to fruits and vegetables.

In addition, the Farmers Market building is becoming an exciting venue for community and special events. During 2017 the market hosted two sold-out "Goat Yoga" events, Bridal Expo 2017, and the First Annual Art Fest—and more than 20 private events, as more and more learn about the beautiful facility. In 2017, the commercial kitchen hosted numerous cooking classes for over 300 people in how to preserve, bake, and prepare meals and served as a test kitchen for several start-up businesses.

For example, Dennis Marrero of Deposit, a wild blueberry farmer, used the commercial kitchen to develop his Blu-B-Q Sauce. Marrero is now licensed through NYS Department of

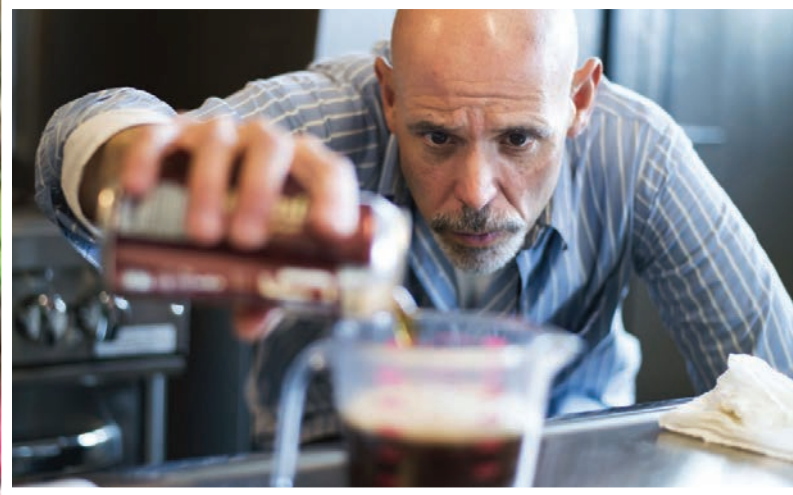


Agriculture and Markets, and his product has been approved for sale by the Cornell Food Venture Center. Marrero's Blu-B-Q sauce is now available at both Taste NY stores and being sold at the family's farm in Deposit.

Angela Tallman's "Gifted Sweets by Special Kneads" was an instant hit at the Farmers Market. On opening day for Tallman's new business at the market, her freshly baked cranberry apple pies sold out immediately—and she took home orders for an additional 85 pies. NYS Assemblywoman Lupardo was instrumental in coordinating Tallman's start-up at the market. Tallman, who has Down syndrome, started Special Kneads, after funding cuts meant the end of her job—but she needed

somewhere to sell her pies. As Lupardo explained, "The farmers market allows Angela to run her own business with the necessary support and resources she needs to be successful."

Kaelan Castetter started Innovative Bottling Solutions, as a student at Binghamton University. In 2017, he introduced Sovereign Vines, America's only hemp-infused wine at the Farmers Market and sales took off. Castetter says he is grateful the market and to Assemblywoman Lupardo, who has championed the many uses of industrial hemp in agribusinesses throughout the Southern Tier.





Regional Agricultural Development Center

Agriculture plays a vital role in Broome County's economic vitality. Each year, Broome County's farms and agribusinesses produce \$31 million in sales and \$100 million in business investments.

The new Regional Agricultural Development Center is home to a state-of-the-art distance learning classroom, commercial kitchen, Taste NY store and food systems career center. The new facility is a venue for conferences, workshops and classes for certifications and trainings in all aspects of creating and maintaining a safe and profitable food system. The new Taste NY market offers farm fresh products straight from the adjacent Farmers Market and commercial production kitchen, as well as established food businesses from across New York.

The Ag Development Center was funded through \$500,000 from the Southern Tier Agricultural Industry Enhancement program, and \$750,000 from the NYS Development Program, secured by NYS Assemblywoman Donna Lupardo.

Governor Andrew M. Cuomo said, "Our investments in the unique strengths and agricultural economy of the Southern Tier are moving the region forward, and these new projects will keep the momentum going. A robust and competitive agriculture industry is key to the Southern Tier's success, and this initiative provides vital resources that promote future economic growth and job creation."

Assemblywoman Lupardo said, "We have worked over a number of years to grow and develop our agricultural sector by making it a central part of our regional economic development strategy. Our progress includes the Regional Farmers Market, supports for farmers and processors, along with two Taste NY stores featuring all New York products. The Agricultural Development Center will play a vital role in our continued success,

training future farmers and producers, while connecting new and existing businesses to markets."

The classrooms offer access to world-class research from Cornell University's College of Agriculture and Life Sciences, NYS Department of Agriculture and Markets and the National Institute for Food and Agriculture, U.S. Department of Agriculture to ensure a pipeline for tomorrow's agricultural workforce. CCE Broome County's team of educators, Regional Farmers Market, new Ag Development Center and Taste NY store serve as an incubator for new products, agribusinesses and entrepreneurs.





Taste NY

The Taste NY initiative was launched by Governor Andrew Cuomo in 2013 to promote New York State's food and beverage industries. Overseen by NYS Department of Agriculture and Markets, Taste NY creates opportunities for local producers to showcase their goods. In 2017, Taste NY saw steady growth in Broome County, expanding New York's food and beverage industry, making the wide variety of foods and beverages produced in New York available state and nationwide.

During 2017, Taste NY was showcased at Watkins Glen International. Local Broome County products from M&D-R-Nuts, BobbySue's, Field Trip Jerky, Matzo Project and many more were featured. Over 40,000 people attended this three-day NASCAR event and got to sample Broome products.

At the Spiedie Fest & Balloon Rally, Taste NY opened a "pop-up" market so that visitors could sample New York products featured in the Taste NY stores, such as Awestruck Cider, Java Joe's, Sovereign Vines Hemp Infused Wine and Southern Tier Brewing Company.

Taste NY took part in the Greater Binghamton Business Expo to introduce farm fresh goods from several Broome County businesses and participated in "After Hours Tasting" so that business owners could sample products from Old Barn Market, Saucy Hog and Dutch Hill Creamery.

Taste NY and the Broome County Regional Farmers Market participated in Security Mutual Life Insurance Company of New York's annual health fair and offered samples from Sue Garing Honey and JNB Foods to promote natural sweetener alternatives and health conscious snacks.

Sue Garing said she's "a little picky" when choosing where to sell her honey. As she explained, "I have a quality product and I want a quality place to sell it." The Taste NY Stores have met Garing's high standards.

In collaboration with NYS Department of Agriculture and Markets, the Greater Binghamton Chamber of Commerce and the Governor's Office, the grand opening of the recently renovated Southern Tier Welcome Center and Taste NY Market was held in October. NYS Senator Fred Akshar said, "This Center is more than a rest stop, it's a celebration of Southern Tier culture, of history and of the people who shaped our community into the place we love so dearly today."



Taste NY celebrated the official grand opening of its new store at the Agricultural Development Center adjacent to the Cutler Botanic Garden with a ceremonial ribbon cutting in December. NYS Department of Agriculture and Markets Commissioner Richard A. Ball, NYS Assemblywoman Donna Lupardo, Assemblyman Clifford Crouch, Cornell Cooperative Extension Director Christopher Watkins and Broome County Executive Jason Garnar participated in the grand opening. Assemblywoman Lupardo said, “We have worked over a number of years to grow and develop our agricultural sector by making it a central part of our regional economic development strategy. The Regional Farmers Market and two Taste NY stores support Broome County farmers and processors and play a vital role in our continued success, connecting new and existing businesses to markets.”



So you are a New York State business that produces agricultural, food, or beverage products and you are looking for viable channels to grow your business. What should you do?

You should do what we did at Java Joe's Roasting Company and get yourself associated with Taste NY! Taste NY is the engine driving the local agri-tourism business in the Southern Tier— and we couldn't be happier with the tangible results that Taste

is producing for our coffee roasting business! Since connecting with Cornell Cooperative Extension of Broome and Taste NY we have experienced an enormous boost to our business. Today, there's a buzz in the community about Java Joe's Roasting Company and Taste NY has played a huge role in helping create that buzz.

Our coffee sales have increased tremendously across all channels thanks to the Taste NY program and its advocacy. We're looking forward to all the innovative opportunities the Taste NY program offers to experience the amazing products produced by our neighbors in the Southern Tier and throughout New York State!

*Eric Cole, Vice President
Java Joe's Roasting Co., Inc.
Binghamton*





Supporting Today's and Tomorrow's Farmers

CCE Broome County offers a wide range of programs to support new farmers, from in-person and on-farm technical assistance and one-day workshops to ongoing certification courses, enterprise-specific trainings and business plan writing. Here's one story of a family who participated in CCE Broome's programs and the impact on their farm.

Michelle and Dave Norton, along with their son Zach, came to CCE Broome in early 2017. They were interested in learning more about what they could do with the acreage they had recently purchased, and looking for an entrepreneurial opportunity for their son in agriculture.

Exploring the Small Farm Dream, a four-week series focused on understanding the many facets of starting an agricultural operation helped Zach see the potential in breeding pigs. From there the Norton family moved right into *Let's Write Your Business Plan* and now have a customized business plan. Throughout the year the Nortons participated in other CCE Broome workshops, including an agricultural tax workshop they found particularly beneficial in transitioning their farm from a self-described "hobby" to an established business.

Over the summer and fall of 2017, the Nortons doubled their usable acreage from 10 to 20 acres by focusing on soil fertility and expanding their herd of pigs, cows and rabbits. They partnered with Binghamton Brewing Co. to use the brewery's spent brewer grains to feed to their pigs. They are building on this success and connecting with other farm breweries as their business continues to grow. The Nortons say that taking full advantage of all the programs CCE Broome offers has been integral to their success.

Broome County Farm Trail

Farming is big business in Broome County. The products and services provided by Broome County's 560 farms translate into over \$20.9 million in direct economic impact.

In 2017, CCE Broome County and NYS Senator Fred Akshar sponsored the Sixth Annual Broome County Farm Trail, as part of their commitment to providing opportunities for farmers to share their story with community residents. It is important for county residents to understand where their food comes from, to appreciate the richness of Broome's local food system and to get to know Broome County's farmers.

Over 3,500 people attended Farm Trail events in May and October. Participating farms sold over \$25,000 in local products during the two events, accounting for an economic impact of over \$175,000 in Broome County. Visitors picked apples, took hay rides and guided tours, tapped maple trees, sampled local products, took alpacas through an obstacle course, learned about beekeeping, seed planting and more.

As one farmer said, "Thanks to Senator Akshar and Cornell Cooperative Extension, the Broome County Farm Trail has helped us expand the products that we are able to sell on the farm and to educate the public about all we have to offer."

Twelve farms participated in Broome County Farm Trail 2017 and opened their doors to the public. Participating farms: Aukema Dairy Farm/Dutch Hill Creamery, Country Wagon Produce, Nyala Alpaca Farm, JADA Hill Farm, Verde View Equestrian Center, Old Barn Market, Broome County Regional Farmers Market, Sugar Creek Maple Farm, Lone Maple Farm, Performing Acres Farm, Nanticoke Gardens and Apple Hills.



Industrial hemp businesses grow in Broome County

Cornell University and Cornell Cooperative Extension are leaders in the development of industrial hemp research for agribusinesses. Cornell is delivering up-to-date, science-based solutions and information about hemp production to meet growers' needs.

The 2014 U.S. Farm Bill legalized the growth of hemp for research by departments of agriculture or higher education institutions in states where it has been approved by law. In 2015, NYS Assemblywoman Lupardo co-sponsored legislation that created New York's pilot program.

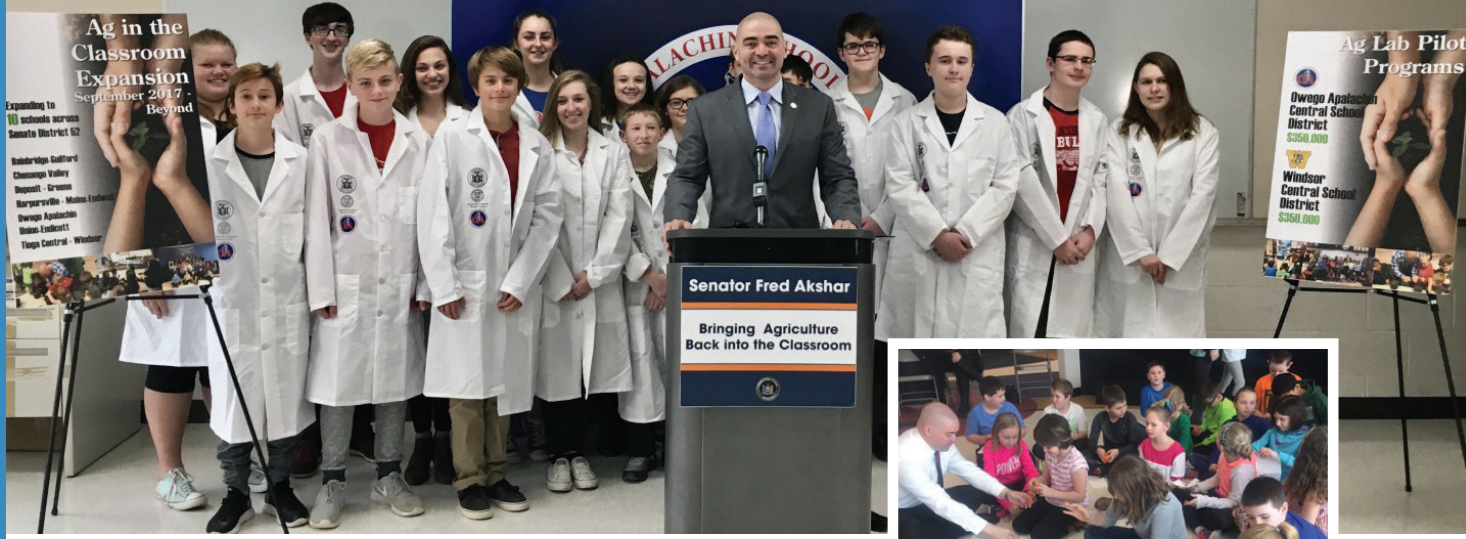
In 2017, the first New York State Industrial Hemp Summit was held at Cornell University. The summit focused on the economic market potential for development of products such as fiber, cosmetics, pharmaceuticals and food products. Industrial hemp is said to have over 10,000 uses and unexplored economic development potential. New York is poised to become a major producer of industrial hemp, providing healthy hempseed oil and fiber for textiles, insulation and other uses.

Eleven permits were issued for the production of industrial hemp in 2017, and Nanticoke Gardens received one of these permits. Janice Degni from the South Central NY Dairy and Field Crops Team is one of three Hemp Technical Specialists appointed by Cornell Cooperative Extension. Degni visited Nanticoke Garden to monitor the crop for potential insects, weeds and diseases and found that a troublesome leaf spot had infested Nanticoke's transplants. Samples were taken to the plant pathology lab at Cornell for diagnosis that led to the discovery of a previously unidentified fungus affecting hemp.

The Field Crops Team also worked with Southern Tier Hemp, LLC to organize an open house at Nanticoke Garden. Other interested growers learned about the potential for industrial hemp and how to secure production permits.

Cornell's College of Agriculture and Life Sciences, School of Integrative Plan Science established a website on industrial hemp research. *Industrial Hemp from Seed to Market* provides a review of market options, production and legal issues, barriers to growth and a wealth of resources from CCE Harvest NY Agricultural Development Specialist, Cheryl Thayer. See: <https://blogs.cornell.edu/industrialhemp/>





Growing careers in agriculture

Ag in the Classroom

Agriculture is New York State's No. 1 industry. Every year, generating over \$5.4 billion. In Broome County, farms and agribusinesses generate nearly \$31 million in sales annually and over \$100 million in business investments.

According to NYS Senator Fred Akshar, "Agriculture is one of the biggest and most diverse industries in our community and the state, but the average age of New York farmers is 55. That tells me, we need to invest in our future and help educate tomorrow's farmers." Senator Akshar uses the slogan "Growing our Agri-Future through Ag in the Classroom" to talk about the urgent need to prepare young people for careers in agriculture.

CCE Broome County's Ag in the Classroom responds to this need. With support from Senator Akshar, Assemblywoman Lupardo, Broome County Farm Bureau and Broome-Tioga BOCES, CCE Broome's Ag in the Classroom educators began programming in 2017 in five school districts, reaching over 7,000 students in Maine Endwell, Union Endicott, Windsor, Harpursville and Owego Apalachin. In September, the program added five more school districts: Chenango Valley, Tioga Central, Bainbridge-Guilford, Deposit and Greene.

Senator Akshar is hopeful that Ag in the Classroom will be in all schools within his district and serve as a model for New York. Broome-Tioga BOCES CEO and District Superintendent Allen Buyck said, "The Senator has been a great advocate for providing exposure to opportunities for students to learn more about all of the many aspects of agriculture. We will continue to work with the Senator, Cornell Cooperative Extension, and our school districts to provide the best programs for our students. We are very fortunate to have such collaborative partners in our area."

Dr. Jason A. Andrews, Superintendent, Windsor Central School District said, "We are thrilled with the addition of



an agricultural lab to the District, and grateful to Senator Akshar and Cornell Cooperative Extension for bringing this leading-edge technology to our students. This helps us further our mission to give students the 21st century skills they need to be college- and career-ready."

In Harpursville, Ag in the Classroom expanded its programming by building a school garden through Cornell University's Garden-Based Learning Program, *Seed to Salad*. The program is designed as a way for pre-K through 6th grade students to develop leadership skills. Through community donations, the students and Ag in the Classroom educators built five raised-bed gardens, planted seeds and held a "salad party" on the last day of school. As one 4th grader explained, "I don't like salad, but it was cool to eat something I planted as a seed."





Animal Livestock Program

The Griffith brothers, Landon, age 12 and Logan, age 10 grew up on a horse farm. After joining 4-H to increase their horse knowledge and have opportunities to show their horses at county and state fairs, they were introduced to the 4-H Livestock Program.

Landon and Logan were excited to learn that they could make money through the 4-H Livestock Program while learning about all kinds of animals. After each boy made between \$80-\$100 for their own pens of meat birds, they developed a plan to use the money they made at the Broome County Fair's 4-H Livestock Auction to start their own business.

Through 4-H, they learned the cost of everything involved in raising meat birds and market hogs. After making a list of their business expenses, the brothers put half of their money into a separate business account to pay for the birds and hogs. Next, Landon and Logan worked out a schedule for who'd be responsible for caring for their livestock, and how they plan to reimburse their parents for the use of their family's barn and farm equipment.

Landon wants to save his earnings to invest in his ideas for future agribusinesses. Logan is saving his money to attend the National 4-H Leadership Conference in Washington, D.C. At the National 4-H Conference, delegates from across the country discuss topics affecting youth and learn skills they can apply to projects in their own communities. Looks like the Griffith brothers are well on their way to exciting and profitable careers in agriculture.

Horticulture

Beautifying Broome County

The Horticulture Department Educator and 83 active Broome County Master Gardener Volunteers, Interns and Garden Assistants provide horticultural education to the greater Binghamton area through diagnostic services, the development and maintenance of Cutler Botanic Gardens (CBG), providing guided tours of CBG, Speakers Bureau presentations, information tables at the Regional Farmers Market and other venues, horticultural classes at CCE Broome and other neighborhood organizations, and conduct community beautification projects throughout Broome County.

During 2017, the Master Gardeners and interns contributed over 6,000 hours of service to Cutler Botanic Gardens and the greater Broome County community. Speakers Bureau contributors presented 21 programs to over 500 adults at garden club or civic organization meetings. Over 1200 lbs. of produce were harvested from the Cutler Botanic Garden vegetable garden and donated to food-insecure families through the Loaves and Fish Food Pantry in Binghamton.

Broome County Master Gardener Volunteers planned, planted and maintained 13 themed areas within Cutler Botanic Gardens, as well as other parts of the CCE campus, beautifying the grounds and educating the public about gardening. Volunteers staffed information tables at the Southern Tier Builders and Remodelers Home Show and at the Regional Farmers Market on seed starting, beneficial insects, container gardening, pollinator protection and invasive plants.

Throughout the year, Master Gardeners give gardening classes to residents throughout Broome County. Eight classes on various topics were presented to youth and adults in 2017. The Master Gardeners also help develop and maintain various community gardens such as the Tremont Street Area Garden, Binghamton; C. Fred Johnson Park, Johnson City; Binghamton Urban Farm; Elizabeth Church Manor; Danielle House; Town of Dickinson Town Hall; Town of Chenango Town Hall; Confluence Park, Binghamton; Your Home Public



Library, Johnson City; Otsiningo Park, Binghamton; and a number of church gardens in Broome County.

In 2017, 14 interns trained to become Master Gardeners by working in the garden throughout the growing season, answering questions on the Horticulture Response Line and attending trainings provided by educators from Cornell Cooperative Extension and Cornell University. In October, CCE Broome County hosted the first session of the Southern Tier Region Master Gardener Volunteer Core Preparation for 35 Broome, Tioga, Schuyler and Chemung county residents. Five sessions are planned through the spring of 2018. Venues for each session were selected to take advantage of the resources in each county, such as Cutler Botanic Gardens in Broome, Plant Science Laboratory and Cornell Plantations in Tompkins, the composting demonstration area in Tioga and the teaching garden in Schuyler County. Collaborators on the Southern Tier Regional trainings include Lori Brewer, Cornell University's Garden-Based Learning; Linda Svoboda, CCE Broome County; Barb Neal, CCE Tioga; Roger Ort, CCE Schuyler; and Jingjing Yin, CCE Chemung.





Environment

The management of solid waste requires significant financial and human resources, and the impacts of solid waste generation exact a large toll on the environment. Waste reduction practices like composting provide citizens with an opportunity to address improve the environment and save money.

CCE Broome County's Solid Waste Youth Program offers a variety of interactive lessons focused on topics such as recycling, composting, and landfills. It is important to educate youth about waste reduction and recycling strategies so they can become good stewards of the environment and encourage their own families to be part of these efforts.

Recognizing classroom time restraints and other demands faced by teachers, as well as the challenges of composting outdoors during the colder months, CCE Broome's environment educators developed an indoor worm bin composting program through which teachers and educators from other youth-serving organizations can learn about worm composting, and receive ready-to-use worm bins and educational resource materials. During

2017, over 200 teachers and youth educators completed the training, received educational resources and these ready-to-use worm bins.

During the 2016-17 school year, teachers participating in the program were sent an online survey to determine the effectiveness of the training and their overall satisfaction with the program. Over 80% of the teachers responding to the survey rated the workshop as excellent, and nearly 90% reported that they would recommend the program to others. One teacher commented, "It was a really informative workshop and I enjoyed learning about the worms and have appreciated that they were provided for us all set up! My students have enjoyed them and they have generated a great deal of discussion regarding decomposition, natural "garbage" disposal, invasive species and more!"

CCE Broome County's solid waste education program is partially funded by the New York State Department of Environmental Conservation, with additional funding provided by the Broome County Division of Solid Waste Management.



4-H Youth Development

Tomorrow's careers begin in 4-H

4-H is the youth development program of the Cooperative Extension System, a network of more than 100 public universities across the nation, providing the supports and opportunities young people need in order to succeed in college, careers and life. 4-H connects youth to hands-on learning and helps them grow into competent, caring, contributing members of society—creating a career pathway for tomorrow's leaders.

Broome County 4-H'ers, Jasmine and Juliet Jordan, are a testament to this pathway and the research on 4-H conducted by the Institute for Applied Research in Youth Development at Tufts University. The study found that 4-H plays a vital role in helping young people succeed. Youth who participate in 4-H are nearly four times more likely to make contributions to their communities than youth who do not participate in 4-H.

Since joining 4-H when they were 11 years old, Jasmine and Juliet have had many opportunities to explore a wide range of topics that have sparked their interest in future careers. Joining the Green Team 4-H Club helped them develop leadership and career readiness skills that have translated into becoming actively involved in their college community and student government. After working with the Green Team in the Cutler Botanic Garden, Jasmine and Juliet entered the Master Gardener Program and became the youngest graduates ever of the program's intensive two-year training.

Last summer, Jasmine and Juliet developed a community service project called the Fresh Food Fun! to connect young people to the benefits of local agriculture and the farm-fresh products at the Broome County Regional Farmers Market. The twins collaborated with six vendors at the Farmers Market to provide behind-the-scenes tours of their farms and agribusinesses. Jasmine and Juliet conducted a "Food System Scavenger Hunt" as part of Fresh Food Fun! at the Broome County Fair to help fair goers understand the sustainable food cycle.

All together, the twins' 4-H experiences ignited their passion for learning about and having careers in sustainable food systems. Today Jasmine and Juliet are pursuing Applied Science Degrees in Sustainable Farming and Food Systems at Tompkins Cortland Community College.



*Dear Kelly Adams, Kelly Campbell and
CCE Broome County 4-H,*

The 4-H program has provided us with the opportunity to excel in our interests, develop a passion, discover a career, and ultimately create a lifestyle. We have been truly blessed by the experience of every 4-H Public Presentation, Project Day, Award and Trip.

What a blessing it has been to learn and discover new things in the beautiful environment of 4-H! Through 4-H, you have blessed not only our lives, but those of so many children from all walks of life. You give them the opportunity to excel, learn, connect, and grow in a safe and loving environment.

As we move on to college, we will never forget to make the best better, and we will forever hold dear in the memories we have made through 4-H. Thank you for making our experiences so memorable and for touching our lives in so many ways.

*With much love and appreciation,
Jasmine & Juliet Jordan*



4-H Tech Wizards

What does it take to make superheroes? Early in 2017, 46 youth crowded into Windsor's C.R. Weeks Elementary School auditorium to find out. Energetic CCE Broome educators and Windsor school officials jumped on stage to explain what being a Tech Wizard means—and how to discover your inner superhero. Andrew Fiorentino, Windsor Central Schools Assistant Superintendent for Business & Administrative Services, inspired the new Tech Wizards to become tomorrow's superheroes, challenging them to become tomorrow's scientists and the superheroes who will one day discover a cure for cancer. During the year, some of the youth in the room would become super-skilled with electronics, while others would be stars on stage. Some would find they had a talent for chemistry, or a love for animal science. Throughout 2017, Tech Wizards educators focused on helping youth find their own "super-powers."

Tech Wizards is an after-school, culturally responsive, small-group mentoring program that focuses on building STEM skills. The goal is to involve at risk youth in learning civic engagement and workforce readiness skills, and prepare youth for success in school, college and future careers. Adult mentors work closely with their mentees to carry out a variety of STEM projects, including projects in photography and digital editing, robotics, chemistry, wearable technology, GPS/GIS and environmental stewardship, as well as animal science and nutrition education. Tech Wizards focuses on civic engagement and community improvement projects. One project this year focused on helping families in Puerto Rico devastated by Hurricane Maria and another on helping seniors at an assisted living center in Windsor.

The Tech Wizards mentors and mentees toured Cornell University's particle accelerator, helped researchers at the Cornell Social Media Lab, built video games at the Bronfenbrenner Center for Translational Research, cared for alpacas at Nyala Farm and explored careers at STEAMfest, in celebration of National Lights On Afterschool.

At the start of 2017, most of the young people in Tech Wizards didn't know one another. By working on creative, challenging, and most importantly fun STEM projects together, the youth found friends and caring adults. Together, they got excited about science, less anxious about making friends, and inspired that one day they really could be superheroes. By the time the Tech Wizards entered middle school, they had new traits in common: confidence in the work they did, new knowledge and passion for science and technology, and new, growing friendships. Nothing is more powerful than that!

4-H Tech Wizards is part of New York's 4-H National Mentoring Program. The project, now in its seventh year serving Broome County youth, is sponsored by National 4-H Council and the U.S. Dept. of Justice, Office of Juvenile Justice Delinquency Prevention (OJJDP), New York State 4-H Youth Development Program and Cornell University.





CITIZEN U

In 2017, CITIZEN U Teen Leaders worked closely with the Binghamton Police Department and City of Binghamton to conduct a series of projects aimed at developing healthy, constructive relationships between law enforcement and young people to promote safer neighborhoods in Binghamton. The program is supported by a Community Development Block Grant from the City of Binghamton.

CITIZEN U is a year-round afterschool and summer employment program that focuses on civic engagement, workforce development and positive youth development for high-need, at-risk youth. Through CITIZEN U, Teen Leaders gain the skills needed to become community change agents and to graduate successfully from high school prepared for college, careers and citizenship.

Over the summer, 17 CITIZEN U Teen Leaders were employed to conduct a series community improvement projects. In partnership with the Binghamton Police and Firemen, CITIZEN U hosted three Police & Popsicles events at Recreation Park, MacArthur Park and Theodore Roosevelt Elementary School to improve communications between young people and police. CITIZEN U Teen Leaders worked with CCE Broome County's nutrition educators to come up with healthy recipes for their homemade fresh fruit and yogurt popsicles. The Police & Popsicles events included Binghamton Police's Command Center, a forensics station, K-9 demonstrations, fire truck tours—and of course eating popsicles!



As Binghamton Police Department Investigator Charles Woody Jr. explained, “With everything going on these days, it is important right from the beginning to show a friendly face from the police department. Anything we can do that incorporates the police, kids and teenagers is a good thing—and working with CITIZEN U has been great.”

CITIZEN U also hosted the Operation 4 Cooperation 2017 Police-Youth Summit at the Doubletree by Hilton Binghamton. Mayor David and Police Chief Joseph Zikuski were among the featured speakers. Teen Leaders, Binghamton Police Officers and community members discussed ideas and strategies for making Binghamton a safe, youth-welcoming city.

CITIZEN U is a sustained Children, Youth and Families At-Risk Sustainable Community Project (2011-2016), originally funded by the National Institute of Food and Agriculture, U.S. Department of Agriculture.



4-H Education Center at Finch Hollow

The 4-H Education Center at Finch Hollow serves schools and students throughout Broome County. Classroom teachers don't always have the tools or the space to bring in hands-on science experiments into the classroom—and teachers are always looking for ways to help their students learn about exciting STEM careers. When teachers schedule field trips to the 4-H Education Center at Finch Hollow Nature Center, they know their students will have an opportunity to learn about and experience the environment—and learn about future STEM careers in science through observations.

When youth participate in programs at the 4-H Education Center at Finch Hollow, they learn about protecting the environment and the vital role played by the animals and plants around us. The 4-H Education Center at Finch Hollow provides hands-on, interactive activities where young people learn about science, the environment and the living world around them.

During 2017, the educators at the 4-H Education Center partnered with school groups through Broome County to participate in the Compass Study. Youth used compasses on a course at the center to put what they learned into action. Learning how to use a compass involves math skills—and teachers appreciate the way the lessons allow students to practice math in a “real world” application.

Youth took readings, marked their readings using a fixed point in nature, counted their steps and then reset their compasses to take new readings. These lessons meet the New York State Standards for observation and for math, and also meet Cornell Cooperative Extension standards for introducing youth to STEM careers and fields of study to pursue in college.





Nutrition

Growing a healthier Broome County

Eat Smart New York

CCE Broome County's Eat Smart New York (ESNY) nutrition educators worked closely with Johnson City School District during 2017 on a variety of programs including *CATCH* (Coordinated Approach to Child Health), *Smarter Lunchroom*, winter recess cooking classes, *Whoa, Slow, Go*, a school garden and development of a school wellness policy. The nutrition educators' presence in the schools has shown results. With constant exposure to healthy eating messages, the Johnson City students have shown increased interest in nutrition and are practicing healthier eating habits.

In 2017, CCE Broome's nutrition educators focused on working with 560 students in grades K through 2. The student body is culturally and ethnically diverse. Approximately 66% of these students are eligible for free or reduced lunch. *Discover MyPlate* and *CATCH* were a good fit with the topics being taught by classroom teachers. Lessons were limited to 30 minutes once a week with taste tests complimenting each lesson.

Fun food characters were created in the cafeterias, as well as fun, colorful signage to compliment the introduction of new food groups. Students often talked of how they noticed these characters while going through the lunch line. Attractive, catchy names were given to the lunch menu food items. Students would read the lunch menu names over the morning announcements. To encourage

students to try new foods, the nutrition educators offered taste tests during lunch hour. The nutrition educators constructed a *Whoa, Slow, Go* wall. This brightly colored *Whoa, Slow, Go* wall gave students an opportunity to apply what they learned through nutrition lessons.

Collaboration with the Johnson City School District Wellness Committee gave ESNY opportunities to provide technical assistance on the latest nutrition research for the wellness policy. CCE Broome's educators were also invited to manage a large, 14 raised-bed produce garden at one of the schools. The educators' goal is make an everlasting impression on the students that not only affects their food decisions but also helps create a healthier school community. Both teachers and students know the nutrition educators and call them by name when they visit the schools. All agree—CCE Broome's partnership with Johnson City School District has been very successful.



Expanded Food and Nutrition Education Program

The Expanded Food and Nutrition Education Program (EFNEP) program offers nutrition information and weekly challenges to encourage behavior changes that are easy for families to use. EFNEP's unique approach of facilitated learning, rather than lecturing, allows participants to learn from each other, brainstorm ideas that work for them and build confidence by sharing their experiences. CCE Broome County's nutrition educators implement EFNEP in the community, meet with families where they are—through work readiness programs, in schools, community centers and churches—to make participation as easy as possible.

Participant surveys show quantifiable success. More than 75% of EFNEP families showed improvement in food resource management, planning meals, using a grocery list and comparing prices. Almost 90% of the participants showed improved nutrition practices, eating more vegetables, drinking less sugary drinks, reading labels, eating more whole grains and less fat dairy. Over 60% of the families demonstrated improved food safety practices, such as increased hand washing and not thawing meat at room temperature.

While the survey results speak to program effectiveness, first-hand accounts from participants highlight the impact of EFNEP. For example:

Since I have been coming to the class I have been thinking about the foods that I buy and make for my family and really thinking about making healthier choices. This past weekend I made a pasta salad for a family picnic. Everyone loved it! I was worried if the family would try it but it was all gone! And you know, I have gone down a pants size too!

This class has really inspired me to make healthy changes at home. I am making recipes with lots of vegetables and reading labels. I would not have even glanced at the label had it not been for this class. It's helped me a lot.

We have made several changes since starting the program, more fruits and veggies, less meat, and we have cut out most sugary food and drinks. We also started biking as a family and letting the kids run around the park.

Healthy Lifestyles Coalition

By partnering with the United Way of Broome County's Healthy Lifestyles Coalition, CCE Broome's nutrition educators are impacting food-insecure families on Binghamton's North Side. In 2017 the EFNEP educators worked with the Healthy Lifestyles team at Theodore Roosevelt Elementary School to provide nutrition lessons as part of the school day and conducted a six-week gardening program. The fruits and vegetables raised in the garden were used for the school's annual harvest dinner—much to the delight of the young people who had tended the garden.

Nearly 100 young people participated in the afterschool program at Theodore Roosevelt. Through the Healthy Lifestyles Coalition, the elementary students learned simple recipes and were able to take healthy ingredients home to try with their families. By participating in new food preparation activities each week, these young people became more knowledgeable, confident and inspired to try out the new recipes with their families—laying the groundwork for long-term behavior changes and healthier futures.



Community Development

Building skills and impacting lives in Broome County

Career Bound

CCE Broome County's Career Bound provides workforce readiness programming for out-of-school young people through funding from Broome-Tioga Workforce New York and the Workforce Investment Opportunity Act. The Career Bound educators work with young adults to secure job readiness credentials and develop the skills needed to enter and succeed in post-secondary education and employment.

Many of the young people who come to Career Bound face significant hardships. CCE Broome's program and Career Bound educators provide a personalized and supportive environment that allows these young people to succeed.

In 2017, Francesca entered the program, excited to learn and grow. Francesca had moved to Binghamton, in search of a fresh start. She had had a difficult time finding any steady employment. But everything changed when Francesca enrolled in Career Bound.

Francesca worked hard to obtain her TASC (High School Equivalency) diploma while raising her son and working part-time. Career Bound provided funding for Francesca to complete a Teacher Aide 101 class and placed her in a work experience at Broome-Tioga BOCES. Her employer was so pleased with her performance that Francesca secured permanent employment as a teacher aide after completing her work experience. Francesca's long-term goal is to continue to increase her skills and one day to attend college. Francesca's success is why CCE Broome's Career Bound educators are committed to working with young adults to help them succeed—to create long-term positive outcomes, including job retention, career advancement and completion of vocational or post-secondary education.



Parent Education

Sadly, many families live in crisis. They struggle with homelessness, food insecurity, drug abuse, domestic violence and children with severe developmental and behavioral issues. CCE Broome County's parent education program works with these families holistically. CCE Broome's strengths-based approaches are designed to keep children and families together, reduce foster care and improve children's health through referrals, nutrition education and one-on-one mentoring. Programs focus on preventing child abuse and neglect through parenting skills workshops, role modeling and personalized support.

During 2017, CCE Broome's parent educators worked with 203 families, referred by Department of Social Services, Family Court, rehabilitation centers, pediatricians, schools and faith-based organizations. Parent educators help build strong families in programs conveniently located neighborhood settings. Parent education classes conducted in Endicott are funded through a Town of Union Community Development Block Grant.

While CCE Broome's parent education program has had much success, one parent truly stands out. This particular mom had struggled with addiction while she was pregnant. She had been in and out of treatment facilities for years before enrolling in CCE Broome's programming. After completing the parent education program, she applied what she'd learned to her recovery and to parenting her son. She took some parenting classes twice just to make sure she understood how to move forward on her own. Thanks to the skills and confidence she built through the parent education program, she regained full custody of her child. Today, she is enrolled at SUNY Broome—and recently made the President's List.





Expanded Learning Network

The Expanded Learning Network (ELN) is a regional chapter of the New York State Network for Youth Success. The ELN is supported in part by the United Way of Broome County through a Capacity Building Grant.

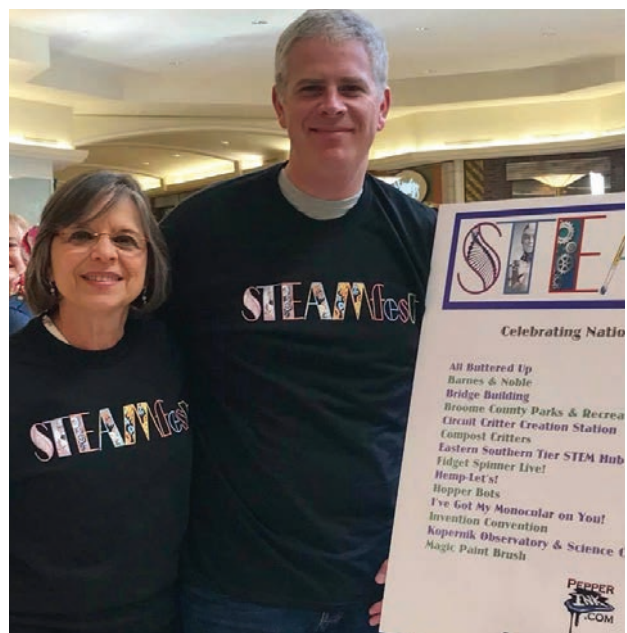
The purpose of the ELN is to provide professional development and technical assistance to build the capacity of Broome County's youth-serving organizations to deliver high-quality, research-based out-of-school-time programs. Afterschool programs keep young people safe when the school day ends. Research shows that youth in afterschool programs are less likely to engage in criminal activity, including substance abuse. Regular attendance in a high-quality afterschool program is linked to higher scores on standardized tests. Afterschool programs lead to academic and career success.

During 2017, the ELN conducted two professional development events, Trauma Informed Youth Work and the Building Sustainable Communities through Youth/Adult Partnerships Conference, and a career exploration event called STEAMfest 2017. STEAMfest celebrated National Lights On Afterschool Week to highlight the important role out-of-school-time programs play in preparing young people to succeed in college, careers and life.

Over 1,200 children, youth and families participated in STEAMfest 2017. The event brought together afterschool programs, makers, business and industry to highlight Science, Technology, Engineering Art/Agriculture and Math (STEAM) career pathways for young people throughout Broome County. STEAMfest engaged hundreds of families in learning about the importance of afterschool programs, as they learned how to build robots, make fidget spinners out of recycled plastic bottles, create flying critters with LED light-up eyes, explore fossils, 3-D printing and power Broome County's carousels with the wind.

STEAMfest 2017 was sponsored by NYS Assemblywoman Donna Lupardo, NYS Dept. of Agriculture & Markets, Eastern Southern Tier STEM Hub, United Way of Broome County, Broome-Tioga BOCES, Cornell Cooperative

Extension of Broome County, New York State Network for Youth Success, Broome County Promise Zone, Embroidery & Screen Printing Network, Oakdale Mall and Marchuska Brothers Construction, LLC.





A Look Ahead to 2018

What's on the horizon?

The ever-changing agriculture field has challenged us to forge new partnerships throughout the state. In 2017, CCE Broome County was selected by the Regional Economic Development Council and NYS Department of Agriculture & Markets to support farms across an eight-county region through the New York State Grown & Certified Program. NYS Grown & Certified's goal is to increase access to farm-fresh produce and ensure a safe food system for all New Yorkers through environmentally sustainable programs. Through Grown & Certified, farmers will have new avenues for their products and local food consumption will result in healthier communities. Look for new markets, new jobs and new products in 2018!

Through events such as the NYS Farm to School Summit, the Agricultural Development Center and Taste NY store are positioned as an agricultural training and technical assistance hub. Through the growth of the Broome County Regional Farmers Market, new product development and vendor support programs, CCE Broome County is proudly promoting local products and growing new businesses. Our new facilities—together with the beauty of the Cutler Botanic Garden—have made our campus a tourist destination. And more changes are on their way in 2018.

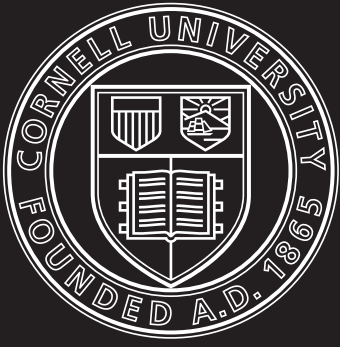
Food access and food security challenge all communities. We are one of many organizations in Broome County focused on food security, healthy lifestyles and access to fresh healthy food. Drawing on Cornell University's world-class research, our nutrition educators are equipped to deliver programs that enable low-income families to stretch their food dollars

and make healthier choices. We are committed to continuing to develop innovative, new ways to reach these audiences and focus holistically on Broome County's most vulnerable children, youth and families.

Increasingly, too many families in our community are struggling with domestic violence, addiction and other challenges. Inclusive parent education and family development program requests have increased. CCE Broome is committed to growing our family and parent education programs to meet the needs of our community.

Creating a workforce for the future is more important today than ever before. CCE serves as a pipeline for Science, Technology, Engineering, Art/Agriculture and Math (STEAM) careers. Our workforce development programs, including Ag in the Classroom, Empire State Afterschool, 4-H Youth Development and Career Bound are preparing tomorrow's workforce. Mark your calendars for STEAMfest 2018 October 20, where we'll be inspiring tomorrow's scientists, engineers and food system experts!

However, we can't accomplish all this work without the support of our partners and community. While we continue to pursue funding from donors, businesses and community partners, we need your help. Please consider supporting CCE through corporate giving or a personal donation. If you would like to learn more know about what's on the horizon for 2018 and how you can be involved, please give us a call. Remember, we work for you!



Cornell Cooperative Extension
Broome County

impact
on our community

840 Upper Front Street
Binghamton, NY 13905
607.772.8953

CCEBROOMECOUNTY.COM
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