**2021 STARS Report**

**Continuing Ed courses/events related to sustainability 9,479**

**Total courses/events offered 22,724**

**Cornell Cooperative Extension programming:**

Cornell University utilizes the Cooperative Extension Education System to extend educational programs to citizens all across New York State. Cornell Cooperative Extension (CCE) programs are planned with an interest in long-term community and personal sustainability. CCE provides high-value educational programs and university-backed resources that help solve real-life problems, transforming and improving New York families, farms, businesses and communities. Programs related to integrated pest management, invasive species, youth education enrichment, adapting agricultural practices in the face of climate change, family nutrition and budget balancing, and community planning are examples of non-formal educational initiatives connected to Cornell’s interest in motivating sustainable practices. <http://cce.cornell.edu/>

**Description of methods in the CCE – 2020 – All Data spreadsheet (most current full set of data):**

This spreadsheet shows all CCE events from 2020 across the state. First, it was filtered to only show Community Outreach (educational events), and then specific program areas most likely to have a sustainability focus. Events are viewable to provide an understanding of the array of Extension programs offered. Programs related to sustainability are estimated at 30% of all courses/events offered.  Note that this is a conservative look at participation, and based on a more thorough review of events completed in 2019.

Specific programs include:

* Certificate in Plant-Based Nutrition <https://www.ecornell.com/certificates/nutrition/plant-based-nutrition/>
* Climate Smart Farming: <http://climateinstitute.cals.cornell.edu/climate-smart-farming/>
* Master Composter: <http://ccetompkins.org/garden/composting/become-master-composter>
* Master Gardener: <http://gardening.cals.cornell.edu/cornell-cooperative-extension-master-gardener-volunteer-program/>
* Northeast Beginning Farmers Trainings – Small Farms Program <http://nebeginningfarmers.org/online-courses/>
* **Climate Change Science, Communication, and Action Online Courses**
* <https://www.civicecology.org/learning>
* An Ecological Approach to Diet & Wellbeing. Several courses/certificates available for professionals and community<https://fnec.cornell.edu/about-us/professional-development/pse-training/>

Examples of local, regional and statewide programs addressing sustainability are described below:

**Climate Smart Farming Extension Team** Cornell’s Climate Smart Farming (CSF) Extension Team gives New York farmers access to extension specialists with commodity expertise necessary to help manage the risks posed by increasing extreme weather, climate variability and long-term change. The extension team works in partnership with Cornell Institute for Climate Smart Solutions (CICSS) staff and faculty http://climateinstitute.cals.cornell.edu/whoweare/ and with other Cornell University faculty and CCE staff. The team has collaborated with NY Integrated Pest Management (IPM) staff, NYS Partnerships for Regional Invasive Species Management (PRISM) and industry groups like the NYS Berry Growers Association (NYSBGA). The primary effort is to help NYS farmers’ prepare for a changing climate by drawing on the latest science to answer questions about how to make changes to their management

practices that will help increase resiliency and farm sustainability. Videos, resources and access to team members can be found here: <http://climatesmartfarming.org/climate-smart-farming-extension-team/>

**On-Farm Cover Planning Tool for Farmers Aiming to Improve Soil Health** Cornell’s Climate Smart Farming (CSF) Extension Team worked together with Cornell Institute for Climate Smart Solutions (CICSS) staff and faculty (http://climateinstitute.cals.cornell.edu/whoweare/) and with other Cornell University faculty and CCE staff to develop an online tool that permits farmers to effectively plan cover crop plantings to better protect soil health and function from damage caused by extreme weather events and climate variability. This new resource helps NYS farmers’ prepare their farm and fields for our changing climate by combining crop growth models with gridded weather data to assess likelihood of cover crop success for several cover crop species planted at any location in NYS. This tool will allow farmers to make better management decisions to increase their farm's resiliency and sustainability.

**Building Community through Local Gardening** Cornell Cooperative Extension has been supporting gardening endeavors for over a century.  Recent efforts, including a program called “Seed to Supper”, have worked to fill hunger needs with backyard gardening know-how.  Seed to Supper is a program, developed by the Oregon Food Bank, to teach those with low-resource means how to grow their own food. New York State is adapting the program to our climate.  CCE Associations have been taking the program to local communities and supporting volunteer facilitators through the process of community engagement and development through teaching gardening skills.

In return, the trained cadre of volunteers are teaching and mentoring those in need about how to grow their own vegetables.  Additional visible outputs include community gardens, school based gardens and people coming together around food that they have grown.

**Master Gardener Volunteer Program Aims To Increase Healthy Living/Sustainable Practices** Roughly 2,000 Master Gardener Volunteers from 47 counties in New York State spent over 100,000 hours on programs intended to raise environmental and community sustainability.  Master Gardener programs are designed to enhance biodiversity, reduce family/childhood obesity by increasing home and community gardening opportunities, reduce the overuse of pesticide applications by helping individuals to appropriately identify pest issues and understand options for management, enhance well-being by supporting/guiding community gardens, help lower income families to incorporate growing food into their habits, and provide training on horticultural therapy to vulnerable populations (adults with disabilities, Alzheimer’s, Hospice, low income neighborhoods). <http://gardening.cals.cornell.edu/cornell-cooperative-extension-master-gardener-volunteer-program/>

**On-line Climate Change Education offered to anyone around the world Climate Change, Communication, Science, and Action** is offered in partnership from Cornell Institute for Climate Smart Solutions, Cornell Cooperative Extension, and the Civic Ecology Lab. The MOOC is offered to anyone interested in taking actions to limit greenhouse emissions as part of a network of professionals and students from around the world. Short pre-recorded lectures, readings, and discussion questions cover not only the basics of climate change science and impacts, but also the subtleties of climate change communication. The focus of the experience is on change actions, from what individuals can do at home to global policy agreements. Using Drawdown’s comprehensive list of climate change solutions, participants develop a personal climate action plan that includes achievable short-term action step. The Civic Ecology Lab offers a number of public facing online courses intended to change behaviors and encourage the spread of civic behavior with a focus on sustainable living <https://www.civicecology.org/learning>.

**Growing the Next Generation of Conservationists** CCE provides experiences for youth to engage with the outdoors, gain skills and knowledge to motivate good decisions for the environment and food, and build youth who are interested in sustainability. CCE Associations across the state run 9 4-H residential camps, summer day camps, afterschool programs, children’s gardens, nature centers, and school enrichment experiences – many of which support environmental education. In 2020 there were many examples of virtual experiences offered in a series of 3 or more zooms to grow young conservationists most of these were developed through the efforts of a campus/county team called the Youth, Nature, and the Outdoor Environment (YFOE) Program Work Team

In 2020, YFOE program work team lead a Virtual Forestry Series. The series was a replacement for the canceled Forestry Weekend. This 6-part series introduced forestry to youth across New York State. Each session focused on a different ecological concept, including tree identification, map and compass, invasive species and pests, and forest ecology. Over 110 youth and adults from 23 counties participated. Participants who watched all 6 sessions and completed a survey were provided a tool they could use to continue their learning of and exploration into forestry.

The YFOE program work team also continued the growth of its Wildlife Habitat Enhancement Program using educational kits. The kits are available for 4-H educators to use. The WHEP Xpedition contest was held virtually with 18 participants from 6 counties. Participants were provided a tool they could use to continue their learning and exploration of wildlife.

**Taste NY Helping Locavore Movement Grow** Taste NY is an initiative launched by Governor Cuomo in 2013 to promote New York’s food and beverage industries. Several Cornell Cooperative Extension Associations are working in support of this effort, acting as a liaison between farmers and retail stores. Activities range from building sustainable business practices to growing the locally grown movement. Cornell Cooperative Extension helps agricultural businesses with many aspects of product development, including assessing local needs, branding, and retail sales, and on the back-end increasing farm production and sustainability practices. The intended effort is building a community where people can buy and create local products, enhancing community sustainability.

**Master Forest Owners expand programming**Several counties have a Master Forest Owner volunteer program led by CCE and Cornell University staff.The impact of the volunteers and staff working in communities is broad. Here is an example.

In 2019, CCE in Columbia and Greene counties, volunteers, staff and faculty:

* Managed the Catskill region of the Master Forest Owner volunteer program.
* Developed a Greene County Natural Resource Inventory and led the effort to build a GIS Storymap.
* Coordinated and provided education on forest management with a special focus on water quality, logger training courses for Empire State Forest Products certification and continuing education and distributed a forest-management letter series to landowners.
* Established a Forestry Friday social media program.
* Managed and invited the public, youth groups, schools, and professionals to the Siuslaw Model Forest located adjacent to the Columbia County CCE Agroforestry Resource Center.  The forest contains many best management practices, educational demonstrations, working forest sites, citizen science projects, and interpretive signs.
* Programs focused on ginseng, mushroom, maple and other forest-farming production models.
* Participated in citizen science deer-regeneration monitoring program.

**Energy Education Resources and Learning Experiences** Several counties are now leading energy education programs that entail training volunteers and offering educational events and consultations. **Examples:**

* CCE Tompkins county is helping residents to reduce energy consumption and use energy resources more efficiently with one-on-one consultations, train-the-trainer events, and workshops. <http://ccetompkins.org/energy>
* CCE Dutchess county has been working collaboratively with CCE Sullivan County and other community partners to help residents and businesses in the Mid-Hudson region reduce their energy consumption as part of the New Yok State Energy Research and Development Authority’s (NYSERDA) Community Energy Engagement Program (CEEP). Energy education has been provided to almost 3000 residents across seven counties. Of those, over 500 households indicated a change in behavior towards conserving energy or switching to cleaner sources of energy. A major focus of this work is helping the low-to-moderate income segment realize the benefits of energy efficiency and clean energy programs.

**Urban Farming** Urban farming efforts continue to grow across NYS with support being offered through Cornell Cooperative Extension staff and faculty. For example, Green Shoots for New Americans – Refugee Agricultural Partnership Program is an educational urban farming program, located on Buffalo’s east side, that provides adult refugees adaptive farming and marketing skills. By engaging newly arrived refugees in familiar agricultural practice, Green Shoots seeks to hasten their path toward self-sufficiency through providing a supplemental income, increase their access to healthy foods, and enhance community integration. The refugees are integrated into an urban farm operation that helps them acquire English language skills and knowledge of successful crop culture in North America. Participants in this program benefit by developing job skills and a sense of integration and ownership. To quote farmer Bir Rai “The goal of every human being in this world is to eat…When I came here Journey's End provided me some training…I am able to make some money, which is good."  The success of the project attracted the attention of local media, with Spectrum News producing a video that appeared on television and the internet.