**2019 STARS Report**

**Continuing Ed courses/events related to sustainability 2,840**

**Total courses/events offered 9,264**

**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 – 2019 – All Data spreadsheet:**

This spreadsheet shows all CCE events from 2019 across the state. First, it was filtered to only show Individual Direct Contact events (not Community Outreach), which is 9264 total. Next, events that fall under Statewide Program Categories that are sustainability focused or related were transferred into a pivot table on a new tab. These categories were then sifted through and events that were not sustainability focused or related were removed. One category, "Youth Competence, Youth Contribution, Youth & Volunteer Leadership" was more difficult to sift through, so a separate spreadsheet was made in which sustainability focused/related programs were highlighted and counted, summing to 299. This was added at the bottom of the pivot table. The total number of sustainability focused/related continuing education classes is therefore 2541+299 = 2840. Out of a total of 9264, this is 30.65%.

Clarification on some programs in the spreadsheet:

* CEEP = Community Energy Engagement Plan
* Ag in the Classroom / “AITC” / “aitc” = Established in 1985, New York Agriculture in the Classroom (NYAITC) is a partnership of Cornell University, the NYS Department of Ag & Markets, the NYS Education Department, Cornell Cooperative Extension, and the New York Farm Bureau. Its mission is to foster awareness, understanding, and appreciation of how we produce food and fiber, what we eat, and how we live, by helping educators, students, and their communities learn about and engage with agriculture and food systems. See <http://genesee.cce.cornell.edu/ag-in-the-classroom> for an example of Genesee County’s AITC program.
* Programs in the “Healthy Eating and Active Living” category are focused on/related to sustainability because the priority is increasing access to nutritious and safe food and creating food secure communities for low-income families. See <https://fnec.cornell.edu/about-us/vision-mission-values/>

**Specific certificate 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 Course**

<https://civicecology.org/course-cc/>

* 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.

 **Nutrient Management In High Tunnels For Sustainable Productivity** In 2018 the CCE Cornell Vegetable Program completed a project that educated farmers and students on managing soil health in high tunnels for long term productivity. The program included workshops, presentations, and intensive learning experiences both on-farm and formal educational events, technical

assistance via articles on-line and in print publications, email, and farm visits. We developed

and published a widely applicable set of best management practices for long term high tunnel

soil health and fertility, while continuing to provide soil, water and amendment analysis to

organic and conventional farmers. The project team conducted 32 educational outreach events

reaching 1,250 growers over 42 instruction hours. Nineteen farms across NYS participated in

intensive sampling and BMP implementation. These farms reported an average net annual high

tunnel income increase of $4307.49, a 47% increase from the baseline data.

**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/>

**Invasive Species Awareness** The CCE Invasive Species Program Work Team continues to assess needs and plan educational and action driven activities around Invasive Species Awareness. Next steps for this group are to bring together existing and new members to discuss the most strategic path for invasive species outreach in New York considering the existing state funded invasive species network. Discussions will help determine how all the players such as CCE, PRISMs, NY IPM, DEC, NE IPM, NIPN and other campus programs can best engage with one another, communicate and share outreach materials as well as identify and advocate for research on priority topics.  In the next year, the PWT will develop a work plan based on input from stakeholders.

**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.

**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.

Examples:

* **Statewide Youth STEM Camp**. Many statewide events in 4-H Youth Development have a STEM focus, but camp offers a unique environment that can bring together STEM specialists from across many disciplines, youth, and families in a unique outdoor setting that allows for excitement, curiousity and learning to happen. Forestry, geospacial science, outdoor adventure, entomology, backyard engineering, Bird Quest…are just a few topics lead by Cornell STEM specialists in depth over the course this weekend.
* **Many CCE Associations organize 6th Grade Conservation Field Days programs** for all 6th grade youth in their county introducing them to people, projects and places intended to make the kids think and grow. Ag conservation.
* **School Garden Liaison Projects** – While many counties are supporting school gardens the following is an example from Niagara County: Community and school gardens are powerful environmental education tools that can help to improve access to, and build necessary skills to support consumption of fruits and vegetables and increased physical activity. Recognizing the beneficial impact gardens can have on our communities, a year round garden was created to work around a short growing season. The CCE program “Creating Healthy Schools and Communities” worked with local stakeholders to install Tower Gardens in school and community locations throughout Niagara Falls and Lackawanna. Tower gardens are vertical, aeroponic growing systems that can grow up to 28 vegetables, herbs, fruits, and flowers in less than three square feet.
* **Camp Overlook – 4-H Camp – CCE Franklin County**. Mountaineer, Alpine Adventurers, and Pathfinder Camp (MAAPs), an ADK Wilderness Program, provides youth the opportunity to explore the High Peaks region of the Adirondacks while developing leadership skills, building personal confidence, and establishing a strong connection with the natural environment. The target population is 150 co-ed youth ages 8 – 19. The program is progressive, allowing campers to increase in trip intensity as they return to camp summer after summer.

**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 – from building sustainable business practices to growing the locally grown movement. Cornell Cooperative Extension is able to help Ag business with many aspects of product development – including assessing local needs, branding, retail sales, and on the back-end to increase farm production and sustainability practices. The intended effort is building a community where people can buy and create local products, enhancing community sustainability.

**Energy Education Resources and Learning Experiences** CCE Tompkins county is helping residents to reduce energy consumption and use energy resources more efficiently with a number of programs and events, one-on-one consultation, train-the-trainer events and workshops. <http://ccetompkins.org/energy>