Greenville Health System/Clemson University Extension and /Duke Endowment Partnership:
A cooperative educational and service project
Danny Howard, Regional Lead Agent

This Scope of Work from Clemson University Extension service is in support of the application of the Greenville Health System to the Duke Endowment.

This proposal represents the vision for a partnership between Clemson University Public Health Sciences, Clemson University PSA, and the Greenville Health System to collaborate in improving health and quality of life of SC citizens in targeted counties in South Carolina. It is envisioned that this project will serve as a pilot for replication to other counties in the state as well as states where similar service partnerships could be formed to improve the health and well being of citizens. The full-time employment of graduates through the program provides an innovative model of health workforce development.

This project will start with the Greenville Extension office to accomplish the following activities:
The initiative will involve faculty, students, and graduates from the Department of Public Health Sciences at Clemson University, working with the integrated health service delivery system of the Greenville Health System.
The initiative will focus on improving the quality of life and health of SC citizens and reducing health costs, integrating with services as proposed by the Greenville Health System.

This will be accomplished through an intense training and employment program for select graduates and Public Health Sciences interns / cooperative experience students using the models and methods of health navigation, coaching, and lay health advisor programs. Graduates will be employed as Accountable Community Coordinators.

Project faculty will work directly with the providers of the Greenville Health System to design and implement a training program, which will provide a unique set of skills to these individuals. The training program will also incorporate the service and expertise of Tim Wiles of RenovoAdvantage. After an intensive training program, the individuals will be based within PSA facilities in Greenville and surrounding counties.
Food Safety for Restaurant Managers
Marie Hegler, Food Safety and Nutrition Agent

Safe food starts at home, in the grocery store, in the field, at the manufacturer, in the delivery truck, and also in restaurants. Keeping our food safe is important every step of the way, from field to fork. South Carolina’s Department of Health and Environmental Control (DHEC) has adopted a new food code regulation to help prevent foodborne illnesses from making their way to your plates when dining out. The new Retail Food Establishment Regulation was revised so that it is now more closely aligned with the U.S. Food and Drug Administration (FDA) 2013 Model Food Code.

One notable change from South Carolina’s previous regulation is the requirement for one manager or person with supervisory responsibility per facility (permit) to be certified by a food protection manager certification program. ServSafe Food Protection Manager Certification is one of these recognized programs and was developed by the National Restaurant Association to train and certify personnel in the safe handling and service of food. The program is designed to teach all elements of food safety within a food establishment, including good personal hygiene practices, pest management, minimum internal cooking temperatures of foods, and proper cleaning and sanitizing. In order to receive certification, participants must complete the certification exam mandated by the National Restaurant Association.

Area Food Safety and Nutrition Agent, Marie Hegler, along with the assistance of Adair Hoover, Food Safety Specialist for Clemson University’s Home and Garden Information Center, taught 14 ServSafe Food Protection Manager Certification courses to 154 participants. From convenience stores to fine-dining restaurants, all types of food establishments in and around the Upstate were represented, and with an 80% certification rate, everyone should feel a little bit better about the food they eat when dining out.

Backyard Barnyard
Lindsey Craig Livestock & Forage Agent

This past May “Backyard Barnyard,” a hands-on guide to small livestock farming, was held at Roper Mountain Science Center in Greenville County. The program was a joint effort between Upstate area livestock and forage agents Cassie Wycoff and Lindsey Craig. This one-day workshop offered many unique sessions including in-person weed ID, bee keeping, chicken farming, small ruminant farming, hog farming, raising horses, and having beef cattle. The class had over 20 participants from multiple counties, who got to practice some hands-on techniques. Some of these activities were ear tagging and giving vaccinations. Most of the participants had small farms themselves or were interested in raising food for their family on limited acreage. The class was a great success with future plans to move this program to other counties with even more topics to be covered.

Agent Lindsey Craig discusses raising swine on pasture with a group of students from Backyard Barnyard.
Greenville County Consumer Horticulture and Master Gardeners
Jordan Franklin Consumer Horticulture

Clemson Extension horticulture agents work closely with Extension specialists and researchers located on campus and at the various research and education centers located across the state. Extension consumer horticulture in Greenville County provides its residents with expertise in topics ranging from fruits and vegetables, landscape, turf, ornamental plants, and issues related to home gardening.

The Clemson Extension Master Gardener Program mission is to train, select, and utilize knowledgeable volunteers to facilitate the educational work of the local Consumer Horticulture Agent, by delivering researched-based information to citizens of the state. At over 300 members, The Greater Greenville Master Gardeners Association is well known for their strong volunteerism and service. Greenville County Master Gardeners are responsible for the following contributions:

- Answering questions for residents at the extension office or at Ask-a-Master-Gardener booths at local farmer’s markets
- Providing speakers for schools, civic organizations, and libraries through the Speakers Bureau
- Coordinating summer Junior Master Gardener camp
- Providing programming and maintenance assistance at Roper Mountain Science Center’s Butterfly Garden or Heritage Garden and The Children’s Garden at Linky Stone Park in downtown Greenville
- Coordinating and educating Greenville County residents during a 6-week Sowing & Growing: Fundamentals of Gardening program
- Distributing free seed for non-profit organization garden projects as a part of our Seed Fairy program

Through Early-November of 2016, Greenville Master Gardeners have provided over 5,726 hours of service worth an estimated $132,100 to over 12,000 Greenville County residents. In March 2016, 31 Greenville County Master Gardener Training class students graduated to become master gardener interns; eager to begin their 40 hours of mandatory volunteer service to become certified Master Gardeners. Near-capacity enrollment in our current, 27-member Master Gardener Training class demonstrates a continued interest by our residents to learn as well as teach others about home horticulture in Greenville County.

A new addition in 2016 is the Garden & Landscape Brown Bag Lunch program, which invites county residents to bring their lunch on the third Tuesday of each month and enjoy an hour-long discussion about seasonally pertinent landscape and garden topics. Interest has been high for our first three lunches with open registration being filled within a few days. Topics for our Brown Bag Lunch programs have included fall annual flowers, winter cover crops, and preparing the garden for winter. Future topics will include soil health, warm-season lawn maintenance, summer annual flowers, summer vegetable gardening, weed identification, and common insect and disease problems.
Clemson Extension’s First Health Extension Agent
Shana Madden, Health Extension Agent

Through a unique partnership with Greenville Health System (GHS), Clemson Extension has hired their first Health Extension Agent, Shana Madden, in helping to develop a new Health Extension program. The program will provide health and wellness education programs to Greenville County residents, using individual and group-based approaches. The purpose is to meet community members wherever they are in life to positively influence the social determinants of their health. Currently, the focus of the new position is to find and secure more partnerships statewide, where Health Extension can provide education and resources to those in need.

The first few months of the new position involved shadowing various members of the team from both Clemson and GHS as well as carrying a caseload of several clients, connecting them to community resources in order to improve their overall health. In May of 2016, the partnership added two health science students to spend a full year assisting with the development of the Health Extension program. The trio is currently working on developing health education and programs on chronic conditions and popular health topics. The programming will be delivered to clients referred to us through Health Extension and Greenville Health System.

They have also been working with Mauldin Montessori, providing a monthly program related to health. They have attended several health fairs and assisted Greenville Free Clinic with diabetes education materials. Along with education and programming, they just held the first Community Health Action committee meeting. The members include partners, professionals and community members from Greenville County, who address health in the community. The purpose of the committee is to gain a unique perspective of community needs in order to better influence and impact the knowledge and social determinants of those served. It is anticipated that these meetings will be held quarterly to address the needs of the community.

Shana Madden is a local from Pickens, SC, and graduated from Clemson University in Health Education and Promotion from the Public Health Sciences Department. She also received a Community Health Worker Certificate through Midlands Technical College. She just celebrated her one-year anniversary with Extension and is very excited to be at the start of this unique partnership and program. Like everyone involved, she cannot wait to see what will be achieved when everyone works together to improve the health of others!

The Home & Garden Information Center
The Home & Garden Information Center (HGIC) provides research-based information on landscaping, gardening, plant health, household pests, food safety & preservation, and nutrition, physical activity & health. 1-888-656-9988 (SC residents only, 8:00 am - 4:30 pm, M – F)
4-H is a community of young people across America who are learning leadership, citizenship, and life skills. The South Carolina 4-H Youth Development Program uses a learn-by-doing approach, the involvement of caring adults, and the knowledge and resources of Clemson University and the land grant university system to empower youth to become healthy, productive, and contributing members of society. Greenville County 4-H has grown from 890 members to 2908 in the past year. Volunteers contributing to Greenville County 4-H youth development are also increasing. Volunteer–led community clubs are teaching skills in environmental science, health and nutrition, cooking, sewing, archery, air rifle, livestock, gardening, and STEM-related activities. In addition to community clubs, 4-H reaches kids in the classroom. There are currently 15 schools in Greenville County with 4-H activities that range from reptiles to robotics.

Much of the success of Greenville County 4-H is due to County Council support and the incredible community partnerships with other organizations around the county. This past year, Greenville County 4-H built eight learning gardens at community centers run by Greenville County Parks, Recreation, and Tourism. These raised-bed vegetable gardens teach urban youth where their food comes and how to grow and prepare it. In addition, they are also learning about entomology, soil conservation, water conservation, and healthy eating. Greenville County Soil and Water Conservation district co-hosts Wet & Wild summer day camp with Greenville County 4-H. This past summer, 150 youth spent a week exploring Pleasant Ridge County Park and learning about terrestrial and aquatic ecosystems. The SC Forestry Commission sponsored Woods and Water day camp at Cedar Falls County Park, where 25 youth learned about our timber industry, protecting watersheds, compass and pacing, prescribed burning, and tree identification.

Leadership and Community Service are hallmarks of 4-H Youth development. This past spring over 400 4-H’ers from across the state visited with lawmakers at the State Capitol. Greenville County 4-H was represented by five of our best and brightest young people. They spent the day touring the capitol grounds, learning about SC history, how government works, and being introduced to both the House and the Senate.

The 2016-17 4-H year began September 1st and is off to a great start! Thank you all for your support. For more information on how you can make a difference in our youth, please contact Patricia Whitener, Greenville County 4-H agent at the Clemson Cooperative extension office (864) 365-0627, pwhiten@clemson.edu.
Clemson University Turf School
S. Cory Tanner, Area Horticulture Agent

Commercial turfgrass managers need continuing education opportunities to stay current with best management practices and pest management strategies, allowing them to become more competitive in the marketplace. Additionally, these professionals are required to obtain pesticide license recertification credits to maintain their pesticide applicator licenses as required by law. To meet this need, a team of Clemson Extension Agents and Specialists coordinated a Turf School in Greenville, SC, on February 18, 2016. This daylong program included presentations about water quality and pesticide efficacy, management of turfgrass insects, disease management in lawns, turfgrass fertility management, and lawn weed management strategies. Attendees received resource materials, 4.5 SC pesticide license recertification credits, and lunch. Forty-four commercial horticulturists, consisting of landscapers, turf managers, and municipal grounds crews, attended. Of those responding to the program evaluation, all reported that the information presented was “very useful” or “somewhat useful”. All respondents reported that they gained new knowledge by participating and that they will use the information presented in their job. By all indications, the 2016 Clemson Turf School was a great success and welcomed by the industry.

Expanded Food and Nutrition Education Program (EFNEP)
Paola Gutierrez, MHA Multicultural Nutrition Education Program Developer

In the past year, EFNEP identified the need to provide culturally sensitive material to the communities served. For this reason, a new agent was brought on board. Paola Gutierrez speaks Spanish, is bicultural, and has an extensive background in serving the community. She currently provides EFNEP curricula to Greenville and Greenwood counties.

The model has been to offer the curricula to schools where it is easier to access the whole family. This holistic approach allows quality time with both children and parents in separate spaces, discussing opportunities for improving their nutritional and physical activity habits. This approach increases the chances for modifications to be made at home, where traditionally children have had the responsibility to take new ideas home to their family. In many cases, the ideas are not implemented. Therefore, the goal is to bridge that gap that exists in the home.

This gap is unintentional and a result of eventful schedules and lives. An added advantage for the program is that it provides lessons in both Spanish and English, where Spanish-speaking staff does not need to be taken away from their tasks. EFNEP has made a wonderful choice in equipping the program with staff to address the fabric of the community; having a diverse classroom is very uniting.

In addition to the in-school service, there will be three half-day summer camp sessions for rising 4th or 5th graders. This is a partnership between 4-H and EFNEP, where children will not only learn the Choose Health Food Fun and Fitness, but also Junior Master Gardening or Food Preservation for Youth.

This expansion of EFNEP began in July 2016, and the adult curriculum is currently offered to 26 individuals, with numbers increasing each class by a range of one to three new participants. The children’s curriculum is currently offered to 238 students, and numbers are expected to increase as there are schools in queue for both Greenville and Greenwood counties when the staff is increased. Visibility for the program has climbed in these areas and I look forward to ensuring that Clemson’s Cooperative Extension Service EFNEP is an instant synonym for healthy family outcomes, nutrition, physical fitness, and sensitivity to our diverse communities.
Commercial Fruit Updates
Andy Rollins, Area Commercial Fruit and Vegetable Agent

This was the last year of the peach variety trial located at James Cooley’s Farm near Chesnee. Although cold damage was clearly evident this year, damage was not as severe as last year. In the picture it shows one beautiful peach, but if you look closely, other fruits were damaged and did not ripen properly. After picking and evaluating peach quality for many years, all the information has now been compiled and put into the new peach website (www.clemsonpeach.org), which will help growers select varieties that are available and will produce efficiently for them.

Continued work on a stinkbug-monitoring project in conjunction with USDA ARS scientist, Dr. Ted Cottrell, has been utilizing an intern, Mrs. Desirae Kissell, in helping collect insect counts each week. Earlier this year it was discovered that the rise in populations could be determined using insect pheromones and trapping (see pic), and consequently, major damage could be avoided through the application of properly timed insecticide treatment. This continued work will help make timely decisions.

Also, an evaluation of new peach rootstocks on one farm a new trial on another farm, each having different selections, are believed to help growers with a devastating disease of Peach Oak Root Rot.

A multi-state variety trial of two unreleased strawberry cultivars are showing promise. Dr. Gina Fernandez, NCSU strawberry and blackberry breeder, is the primary inspector on the grant that Extension and Upstate strawberry growers are interested in. This is an on-farm trial at Mr. James Cooley’s farm, Strawberry Hill USA. Yields, taste and quality of the fruit and plants will be measured.

Continued work on Spotted Wing Drosophila this year in blueberries has yielded two years of data and a better understanding of lower risk options that are now available. One option in particular uses red spheres with an attractant (sugar) and a pesticide in their caps to draw them in and kill them without using pesticides directly on the fruit. The idea is great in that it reduces pesticide use and does better than the control; however, it still doesn’t do as good a job as commercial pesticides registered for this use.

The purpose of the analytical section of the Agricultural Service Laboratory is to provide information and analytical testing for soil, plant tissue, feed and forage, animal waste, irrigation water, and compost samples. Individual clients, commercial dealers, Extension Agents, Extension Specialists, and researchers may submit samples to the laboratory. In 2015 the Agricultural Service Laboratory processed 49,401 soil samples, 2,067 plant tissue, 713 feed and forage, and 1,605 waste samples.
Bringing Growers and Specialist Together
Chris Talley, Agronomy Agent, Upstate

The Upstate area of South Carolina is not known as a large corn and soybean production area of the State. However, there are still a large number of row crop producers, who either farm full time or part time. These producers are still in need of valuable research-based information provided through Clemson University to help them maximize their production systems. With the emergence of the new invasive insects, like the Sugarcane Aphid, Glyphosate resistant weeds, and diseases like Asiatic Soybean Rust, the need for this type of program is even more critical.

Area Agronomic Crops Agent Chris Talley conducted his annual “Upstate Row Crops Production” meeting in Anderson County on February 3, 2016. Over 20 local producers from surrounding counties participated in this program. Producers were giving information on weed management options for corn and soybeans, insect management in soybeans, and soybean disease management as well as learning about Clemson’s Certified Seed Program and official variety trials (OVTs) conducted across the state.

Producers had another opportunity to interact with our state specialists and other local farmers on August 19th and 20th of 2016 by participating in the Simpson Research and Education Center (REC) annual field day and in a Pre-Field Day Row Crop Producer meeting. The pre-field day meeting allowed producers to spend more time with our specialists in a one-on-one environment. Both the field day and pre-field day were well represented by our local row crop producers.

The 2016 producer meeting had 27 row crop producers in attendance from five Upstate counties. Over 50 producers participated in the Simpson REC field day agronomic crops tours, and 16 producers participated in the pre-field day meeting. All producers expressed that they gained valuable knowledge, which will help them be more profitable in their row crop production.

Many of our state Extension specialists participate in this meeting, where they relay information from their research trials to our Upstate producers. Producers can then utilize what they learn in making their farming operations more efficient and profitable.

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