

FY 2021 Annual Report of Accomplishments and Results

Georgia

University of Georgia

Fort Valley State University

I. Report Overview

The NIFA reviewer will refer to the executive summary submitted in your FY 2021 Plan of Work located in the Institutional Profile.

1. Executive Summary (Optional)

This executive summary provides background information about Georgia and the state's Federal Report of Accomplishments. This summary provides data on the state and its universities, program highlights, examples of collaborative efforts between the University of Georgia (UGA) and Fort Valley State University (FVSU), and brief summaries of each of the eight planned programs.

BACKGROUND

FVSU and UGA address major agricultural issues and other problems that affect rural and urban areas, the environment, families and youth. This accomplishment report presents coordinated efforts between the state's 1862 and 1890 land-grant institutions, UGA and FVSU, respectively, and covers the joint planning that occurs between agricultural experiment stations and Cooperative Extension units at both universities.

Georgia's Extension program has 167 offices with programming in all of Georgia's 159 counties. FVSU and UGA personnel are housed jointly in county offices. Extension delivers programming in Agriculture and Natural Resources, Family and Consumer Sciences, and 4-H Youth Development as both individual county efforts and as multicounty programs. State faculty members deliver training to county agents and programming directly to clientele, when appropriate.

FVSU and UGA researchers and scientists conduct research programs through a system of agricultural experiment stations. There are several campuses throughout the state, but the four largest are located in Athens, Fort Valley, Tifton and Griffin, Georgia. In addition, 11 Georgia research and education centers and five 4-H facilities are located throughout the state.

Core programs and targeted issues are determined and guided by a structured program-development system, and they are the focus of this joint report. The program-development system is a multistep process that remains in operation throughout the year. It enables needs assessment, problem identification and program evaluation, which is used to determine impact. The Georgia program development model works in cooperation with multiple advisory systems at county and state levels.

EXTERNAL FACTORS

As the COVID-19 pandemic continued, UGA Extension provided virtual and in-person educational programming while observing safe health practices for employees and the public. We offered resources for adults and 4-H youth on health, food, finances, parenting, agriculture and more. Of our total 1,180,689 educational contacts, 422,883 were virtual. Throughout the pandemic, our Ag Services Lab continued vital diagnostic services such as soil samples and municipal water samples. A total of 111,128 samples were processed.

In responding to the ongoing COVID-19 pandemic, FVSU Extension faculty and staff continued to offer virtual programming. A survey of 400 clients indicated they were comfortable with technology and virtual programming. FVSU had over 2,700 direct and 11,000 indirect virtual programmatic contacts in addition to traditional face-to-face programming. An additional 2,700 (direct and indirect) virtual contacts were programmatic efforts related directly to mitigating COVID 19 impacts.

II. Critical Issues Table of Contents

	Research			Extension		
	UGA	FVSU	TOTAL	UGA	FVSU	TOTAL
Animal Production	12 projects 5 results	6 projects 2 results	18 projects 7 results	1 program 4 results	1 program 1 result	2 programs 5 results
Community, Home & Life Skills	4 projects 2 results	0 projects 0 results	4 projects 2 results	1 program 2 results	1 program 1 result	2 programs 3 results
Food Safety & Quality	6 projects 4 results	3 projects 0 results	9 projects 4 results	1 program 2 result	1 program 1 result	2 programs 3 results
Health & Wellness	9 projects 5 results	0 projects 0 results	9 projects 5 results	1 program 7 results	1 program 1 result	2 programs 8 results
Plant Production	32 projects 10 results	3 projects 0 results	35 projects 10 results	1 program 1 result	1 program 1 result	2 programs 2 results
Sustainability, Conservation & the Environment	15 projects 10 results	1 project 0 results	16 projects 10 results	1 program 14 results	1 program 2 results	2 programs 16 results
Urban Agriculture	4 projects 0 results	0 projects 0 results	4 projects 0 results	1 program 4 results	1 program 1 result	2 programs 5 results
Youth & Family Development	0 projects 0 results	0 projects 0 results	0 projects 0 results	1 program 9 results	1 program 1 result	2 programs 10 results

Critical Issues Examples of Impact

Critical Issue	
Animal Production	<p>This issue explores different areas of animal production and protection, focusing on the production of sheep, goats, dairy and beef cattle, swine, poultry, aquaculture, and small ruminants. Equine and bees are also included. Specific topics for this issue include, but are not limited to: Georgia Beef Challenge, Master Cattleman's Program, profitability of dairy farming, swine intake regulation, IPM and evaluation of new forages and feeds.</p> <p>Examples of 2021 impact:</p> <p>Heifer Evaluation and Reproductive Development Program During the 2020-2021 Georgia HERD program, 43 Georgia beef producers consigned 241 bulls. After completing the program, a total of 135 head of bred heifers, meeting sale protocol standards, were marketed at auction through organized sales. The combined offering appraised for \$296,200. Additionally, the utilization of online bidding allowed 109 individuals to view and participate in the auction online and purchase 26 heifers. The program plans on incorporating the online platform in future programs to increase the reach of the program.</p> <p>Georgia Bull Evaluation During the 2020-2021 Georgia Bull Evaluation, 54 Georgia beef producers consigned 229 bulls. These bulls were developed using best management practices for health, nutrition, and reproduction. A total of 155 head of breeding age bulls meeting sale protocol standards were marketed at auction through Tifton or Calhoun organized sales. The combined offering appraised for \$447,600. Additionally, the utilization of online bidding allowed 101 producers to bid at a distance with 30 bulls being sold via the internet. The program plans on incorporating the online platform in future programs to increase the reach of the program.</p> <p>Aquatic Environment Diagnostics and Management Assistance, training, and resources were provided to county and state audiences that reached more than 900 pond owners in more than 80 counties in Georgia. Case response improved pond, property or fish population to an estimated \$5,000,000 of the more than \$2 billion Georgia pond property value in 2021.</p> <p>Agri-Unity Beef Quality Assurance Training In a collaborative effort, FVSU and UGA Extension organized a hands-on demonstration field day In June 2021 in addition to a Beef Quality Assurance classroom training. Live cattle were on display for handling demonstrations, chute processing best management practices, and body condition scoring. Minority producers from across middle Georgia participated. To measure program impact and engagement, a pre and post-test was completed by participants. The average mean of correct answers improved by 2.73 points. Program participants demonstrated enthusiasm over the material, and were looking forward to additional programming.</p>

<p>Food Safety & Quality</p>	<p>This issue explores different areas of food safety and quality, focusing on food processing, protection, and safety; plant production; and animal production and protection. Specific topics for this issue include, but are not limited to: consumer demand for food, food industry needs, and the food processing industry.</p> <p>Examples of 2021 impact:</p> <p>Improving efficiencies of forced-air cooling operations Cooling is the most important approach of reducing postharvest losses of fresh produce when the appropriate method along with the correct packaging is used. During this past year, it came to our attention that a number of packing houses around the state are not using the forced-air cooling systems to their maximum capacity or efficiency due to lack of knowledge or due to the use of inappropriate packaging supplies. This has as a result, increased cooling times or instances where the product never reaches its target temperature, resulting in increased postharvest losses which are in turn translated in lost income. Packing house owners confirmed our inferences as they face significant challenges while trying to cool during the hot summer months. progress toward, the goals and objectives described in your non-technical summary.</p> <p>According to our research over the past year, a few key low-cost improvements could be implemented in the existing facilities operating in the State of Georgia which would increase the efficiency and reduce the cooling time significantly.</p> <p>The significant reduction of the cooling time was shared with a group of packinghouse owners who were thrilled by the idea of improving the efficiency of their cooling system just by using an alternative packing carton which would be of no extra cost. According to them, reducing the cooling time is crucial especially in the summer months and will reduce the number of rejected loads due to poor quality that in the cases of bell peppers offer reach the level of 20-30% of the shipments.</p> <p>Egg Candling Licenses Georgia residents needed to obtain an egg candling license from the GDA, which requires a face-to-face written exam and hands-on candling exam to complete. However, in-person classes were cancelled and online formats were either unavailable or inaccessible to many producers. During this period, the GDA amassed a waiting list of over 80 residents in need of licensing.</p> <p>In August of 2021, UGA Extension–Spalding County hosted a 3-day certification training event to alleviate the bottleneck effect that was created by the pandemic. Classes were held on August 24-26, with a maximum capacity of 30 participants each day, which would allow for social distancing measures.</p> <p>The event saw 58 participants attend. At the conclusion of the 3-day event, 48 residents had successfully completed both the written and hands-on exams, and were eligible to receive their egg candling license.</p>
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<p>Health & Wellness</p>	<p>This issue explores areas of chronic disease prevention and healthy lifestyles, focusing on weight control, physical activity, diabetes management and prevention, cardiovascular diseases prevention and cancer prevention to the public. A large focus of this issue is on the state's youth.</p> <p>Examples of 2021 impact:</p> <p>Combatting Senior Hunger Good nutrition is a key factor for older adults to maintain well-being and an independent, healthy lifestyle, and in recovering from an illness or an injury. Reasonably priced, wholesome foods are not always accessible to older adults because of the lack of transportation, health problems and disabilities, and the lack of food stores within close proximity for shopping. Food insecurity is influenced by multiple factors and impacts a person's health, wellbeing, and quality of life.</p> <p>Approximately 13 of the 23 households participated on a weekly basis by coming to the Bishop Community Center to receive a pre-packed bag of produce that was placed in their trunks or back seats. In addition to the weekly produce distribution, local churches and civic clubs provide boxes of non-perishable items, laundry baskets with cleaning supplies, and/or bags of personal items for each senior. All 23 households participate in the monthly distribution. Since November 2020, approximately 3,100 pounds of produce valued at \$3,780 has been provided from the Plant-A-Row garden. Produce includes tomatoes, Irish potatoes, red potatoes, Yukon gold potatoes, sweet potatoes and herbs.</p> <p>Master FACS volunteers logged 175 hours between November 2020 and October 2021 through 19 distributions. According to Independent Sector, the current estimated national value of each volunteer hour is \$28.54. Therefore, these volunteers' work is valued at approximately \$4,995.</p> <p>Georgia 4-H Healthy Living The Centers for Disease Control and Prevention awarded project funds to UGA for fighting obesity in Calhoun County. The coalition is comprised of Family Connection, county and city leaders, educators, local law enforcement, educators, Fire/Rescue, Faith Leaders, health professionals, farmers, business owners, and other concerned citizens. This group of citizens continue to be driven and united in tackling this issue.</p> <p>Calhoun County citizens have committed to building a strong community coalition to address chronic health concerns by meeting monthly over one year. There have been over six new youth and adult prevention programs implemented.</p>
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<p>Health & Wellness (continued)</p>	<p>Expanding SNAP Access of Locally Grown Produce</p> <p>During the past three years, the Bartow County Extension office has formed a unique partnership with the local County Commissioner’s office, Cartersville Convention and Visitor’s Bureau, and City of Cartersville Mayor’s office to improve health outcomes in Bartow County, by increasing access to fresh produce and local foods. This process began with revitalizing the Cartersville Farmers Market, increasing community awareness, and supporting community wellness initiatives.</p> <p>The market returns money to the local economy, provides access to locally-sourced agricultural products, benefits the environment by having food travel fewer miles to the consumer, and creates a sense of community around food. There’s also an increasing appreciation for food access among families in our community that previously did not have a way to connect with our local farmers.</p> <p>The farmers market won 3rd place as National winner, 1st place Southern regional winner, and 1st place Georgia winner within the national association. The purpose of the award is to recognize members for their efforts in building community partnerships to meet the educational needs and/or concerns of families.</p> <p>The Cartersville Farmers Market continues to exceed our expectations. This year is the strongest we’ve had in both sales and customer demand. Due to the success of the Cartersville Farmers Market, we have become a model for increasing food access through local farmers markets and connecting their benefits as a community health initiative.</p>
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<p>Plant Production</p>	<p>This issue explores plant production and protection. Specific topics for this issue include, but are not limited to: plant growth and crop production; plant diseases, weeds and pests; developing new breeding tools; soil quality; irrigation; plant pathology; genetics; entomology; IPM, harvest and post-harvest handling; conservation; cultural trends; and breeding programs that incorporate variability derived from interspecific hybrids from which new cultivars can be developed.</p> <p>Examples of 2021 impact:</p> <p>Pecan Disease Management The fungal disease, pecan scab, is favored by frequent rainfall. The 2021 pecan growing season was one of the rainiest in a number of decades and crop losses due to scab was potentially devastating. Pecan growers limit this damage by applying fungicides.</p> <p>The pecan Extension meetings were presented online and attended by hundreds of pecan growers. Although the season is not yet complete and data collected, reports from growers and County Agents indicate that although the frequent rains created an environment with high disease potential, most growers were able limit damage to scab with fungicide applications. With a high number of fungicide applications required, having the knowledge of how and when to rotate or mix fungicides without sacrificing disease control was critical.</p> <p>Peanut Research to Educate Growers Worth County Extension implemented two on-farm peanut trials (irrigated trial and non-irrigated trial) with UGA Peanut Agronomist and cooperating growers to collect data regarding the use of in-furrow fertilizers in peanut.</p> <p>All rates of fertilizer products slowed emergence in both trials, and the two highest rates significantly reduced emergence for both locations up to 15 days after planting rating period. At the 2.0 gallon/A rate the cost of material was approximately \$19/A; at the 3.0 gallon/A rate, the cost of material was approximately \$28.50/A. In conclusion, the in-furrow fertilizer applications negatively affected the grower in these trials, impacting the crop stand and increasing the input cost per acre, while not increasing yield. The UGA recommendation was confirmed: Do not apply in-furrow fertilizers in peanut.</p>
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<p>Plant Production (continued)</p>	<p>Staying Connected with Row Crop Producers Production meetings for Row Crop Producers were affected due to in-person numbers being limited and all of the precautionary steps that came with Covid-19. ANR programming transitioned to an alternate form of communication to ensure that farmers, producers and growers received the information needed to not only protect their produce but for their production and worker safety as well. Through staggered Zoom meetings, social media feeds and online platform notifications the ANR Agent was able to provide a larger reach for different growers and commodities.</p> <p>Considering most workers would not have the opportunity to all attend these trainings, the virtual option allowed producers to be able to be flexible with their workers to receive training and updates. From Row Crop Production meetings to Field days, a majority of ANR programming transitioned to a virtual platform offering better opportunities for attendance and opportunities for questions to be answered with UGA Specialists. The packet deliveries that were made in-person offered the agent the opportunity to meet with producers on more personable level allowing for more information and producer needs to be addressed.</p> <p>Pest Control Handbook Weeds can cause significant yield losses in crops since they compete for moisture, nutrients, and light.</p> <p>Every year 50-70 field trials are conducted to evaluate potential new herbicides and to modify existing weed control recommendations. Over the course of 1 month in the fall, these weed control recommendations are updated using data collected in the field and by working with pesticide registrants. Approximately 900-1000 copies of the Pest Control Handbook are sold each year and it receives more than 1300+ web-page visits.</p> <p>The UGA Pest Control Handbook is one of the most popular, important, and widely used UGA publications. Using field corn as an example, the judicious use of herbicides by Georgia farmers in 2021 prevented the loss of more than \$126 million dollars in farm revenue.</p>
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Sustainability, Conservation and the Environment	<p>This issue explores areas related to the sustainability and profitability of agriculture. Specific topics for this issue include, but are not limited to: natural resource management, minimum tillage and cover crops; value added products or production practices that can improve sustainability and profitability; investigation of niche markets in Georgia; financial accounting and reporting strategies; and alternate cultural practices that will protect, improve and maintain soil fertility.</p> <p>Examples of 2021 impact:</p> <p>Increasing Water Use Efficiency and Precision Agriculture Adoption in Georgia</p> <p>Agriculture is the number one industry in the state of Georgia, and the state is heavily irrigated when compared to its neighboring states with approximately 50% of its total cropland acreage irrigated. Production costs have been steadily increasing and crop prices are variable from year to year. Thus, producers need a way to better manage their inputs from year to year to aid them in increasing profitability and sustainability. One such strategy is the implementation of Precision Agriculture techniques and technologies.</p> <p>The results of our research work have shown that the implementation and incorporation of irrigation scheduling tools has the potential to not only increase water use efficiency of crops, but the potential to increase yield and profitability. Climate variability is a major concern across the southeast. In some years we have ample rainfall to produce very good yields, while in other years, dryland yields are near zero. Even in seasons with ample rainfall, research has shown that the distribution of the rainfall is more critical than the total amount. Poorly timed droughts can cause significant yield reductions, especially if a valid irrigation scheduling strategy is not employed.</p> <p>These numbers can be directly translated to around \$200/acre savings and increased profitability by the producer which translates to a \$120,000,000 impact on the state. It can be estimated that over 3,000 producers have been exposed to this information regionally and nationally during 2021.</p>
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Sustainability, Conservation and the Environment (continued)	<p>Youth Discover National Park Service</p> <p>In his 2006 book <i>Last Child in the Woods</i>, Richard Louv discussed the concept of children suffering from “Nature Deficiency Disorder,” which describes the disconnect students of the modern era have with the outdoors.</p> <p>None of the students from the PROUD Program had been to a National Park. After the program, 100% of students demonstrated the following knowledge gain:</p> <ul style="list-style-type: none">- Correctly assembled a tent and prepared the campsite.- Proficiently took down a tent and packed up camp.- Collected Passport Cancellations at every National Park/Historic Site/Memorial on the trip.- Prepared a meal in the great outdoors.- Hiked in a National Park.- Identified wildlife not found in Georgia (bison, prairie dogs, mountain goats, antelope).- Read a map. <p>Well Water Testing: Building Impactful Community Partnerships</p> <p>The United States Environmental Protection Agency (EPA) estimates that more than 13 million households rely on private wells for their drinking water. Private Drinking Water Wells US EPA Since the EPA does not regulate private wells, it is up to the homeowner to assume responsibility for the safety of their water.</p> <p>Between December 2020 and October 7, 2021, Golden Triangle has tested 234 wells in eighteen counties in Southwest Georgia. The most serious issues identified through this testing are levels of coliform bacteria and arsenic that are equal to or over the Maximum Contaminant Level (MCL) as defined by the EPA. To date, out of 103 wells tested for Arsenic, 20 were at or above the MCL. That is a rate of 20% positive for arsenic. Out of the 61 wells tested for total coliform, 47 were over the MCL. Of the 61 wells tested for E. coli, 4 were over the MCL and of the 29 wells tested for fecal coliform, 4 were over the MCL. Altogether, 77% of the tests for total coliform bacteria have come back positive. As soon as these issues are identified, the staff of Golden Triangle contact the homeowner and begin discussing possible solutions. The staff of Terrell County Extension has provided educational information to many of the homeowners involved in this water testing program. Because these water tests are covered by grant funding from the USDA, the homeowners collectively saved over \$8,800 in water testing expenses.</p>
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<p>Sustainability, Conservation and the Environment (continued)</p>	<p>Master Agri-manager Program A team of faculty from the Department of Agricultural & Applied Economics and Cooperative Extension worked together to create the Master Agri-manager program. This program was done in collaboration with the UGA Small Business Development Center, AgSouth Farm Credit, United States Department of Agriculture (USDA) Farm Service Agency, and a Private Practice Attorney. The Master Agri-manager program was designed to help educate farmers about the business management side of their farming operation.</p> <p>After participating in the program, participants self-reported that they were/will:</p> <ul style="list-style-type: none">- Re-evaluate the goals of a multi-generational farm.- Better prepared to come up with a realistic business plan.- Further develop and complete a business plan.- Consider converting the farm business into a Limited Liability Corporation (LLC).- Utilize insurance to manage risk.- Participate in programs from USDA, Farm Service Agency.- Improved understanding of accounting documents (balance sheet and income statement)- Apply principles of good record keeping and keep up-to-date financial records.- Use spreadsheets to create a working capital budget and do accrual accounting to get an accurate assessment of profit/loss.- Convert the farm into a corporation or partnership for longevity and to limit personal liability (25% of participants self-reported that they intend to consider becoming an LLC)- Develop a farm business management plan (25% of participants self-reported that they intend to create a formal farm business plan) <p>Bridging the public's understanding of science and water within agriculture production practices Effective environmental science communication is an increasingly important area of research to connect the public with the importance of preserving and protecting natural resources in the world. Water is a finite resource necessary for all forms of life. Agricultural production has often been portrayed as one of the greatest offenders of mismanaging the use of the natural resource.</p> <p>This study further explored the concept of information visualization around science. The findings suggest animation of complex information can increase the public's ability to remember and recall key information elements. More importantly, this research highlighted the importance of providing the public any type of information about water conservation. This study used a control group who did not receive any type of infographic about water conservation. The control group was the least likely to be able to answer key questions about connecting water conservation and agricultural production's utilization of water; therefore, providing a static or animated form of information is more effective than no messaging about water conservation.</p>
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2021 Annual Report of Accomplishments and Results (AREERA)

Urban Agriculture	<p>This issue explores areas related to urban agriculture. Specific topics for this issue include, but are not limited to: water conservation technology and training; turf disease identification and management; IPM; development of new cost estimating and job bidding software for landscape installation; and Master Gardener programs.</p> <p>Examples of 2021 impact:</p> <p>Culturally Responsive Agricultural Literacy</p> <p>The goal of this project is to establish an academy to train educators who work in or desire to work in urban areas to identify and develop future leaders who will address the grand challenges related to our nation’s food supply, nutrition and health, the economy, and the environment as 80% of Americans currently live in urban areas. Our project will result in a grassroots initiative that will not only serve as a model and support for urban secondary agricultural education, but also encourage HEIs to invest resources into offering degrees programs in urban agriculture and/or courses that linked urban agriculture, nutritional sciences, environmental sciences, and telehealth due to increased student demand.</p> <p>As a result of the training and summer institute:</p> <ol style="list-style-type: none">1) A curriculum Map outlining learning outcomes for the six academic areas identified for the project has been developed to guide all future lesson development for the project.2) Participants expressed that the summer institute was reinvigorating and must become accessible to other teachers.3) Participants are developing lessons that align with the curriculum map4) Three universities have expressed an interest in collaborating with the UALSA.5) Saul Agricultural High School in Philadelphia has expressed an interest in participating in the summer institute next year.6) Plans are underway to recruit teachers for the 2022 summer institute.
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<p>Urban Agriculture (continued)</p>	<p>UGArden Supports Sustainable Food Systems Education</p> <p>There is growing demand for trained professionals in the area of sustainable and local food systems. Employers are looking for graduates who have an understanding of how food is grown and the issues related to organics as well as issues of food insecurity. At the same time, the Athens community ranks among the poorest and most food insecure of any in Georgia and the US, with many neighborhoods in USDA designated food deserts. UGA has established a new Experiential Learning requirement of all undergraduate students, and UGArden offers both formal and informal opportunities to fulfill this requirement.</p> <p>In addition to serving students, UGArden has also increased opportunities for county agents (in-service training), growers (workshops and tours), teacher training (in-service training dsays), individual tours and consultations and collaborations with local growers and makers of herbal products.</p> <p>As a result of efforts at UGARden...</p> <ul style="list-style-type: none">- 12,000+ lbs. produce shared with families in need through Campus Kitchen- over 100 county agents nd growers have tured or attended workshops at UGARden- Due to COVID restrictions, school visits have been curtailed, however, in previous years, over 1000 K-12 school children visist UGArden for instructiojnal activites and tours.- Three county agent trainings were held covering mushroom production, school and community gardens, and small scale farm operations- A small consortium of 6 herb growers and makers of herbal products has been establisehd, providing business support, networking, and sharing of resources
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<p>Urban Agriculture (continued)</p>	<p>Virtual MGEV Training</p> <p>Annually, 300 individuals are trained as Master Gardener Extension Volunteers (MGEV) to support Extension programming addressing consumer horticulture issues at the county level. The introductory training course includes 42 hours of instruction covering a wide range of topics, such as botany, plant physiology, soils, entomology, pathology, edible plants, ornamental plants, and turf.</p> <p>The COVID-19 pandemic disrupted the traditional classroom approach, yet demand for prepared volunteers increased. A virtual training course was constructed in UGA’s eLearning Commons.</p> <p>Five virtual MGEV training programs used the pilot virtual course to train 95 volunteers in nine counties. The course was effective at increasing knowledge among trainees. The seven cluster test scores were favorable with averages of 83.4% and higher</p> <p>The virtual course format attracted higher levels of interest than in-person training (higher class counts) than agents and program assistants have experienced in recent years. Participant comments, such as “This course was very good because it allowed flexibility in my schedule to be able to complete the assignments with my other commitments,” spotlighted the appeal of and value for the flexibility of the virtual course. Training coordinators reported younger trainees and a larger proportion of working people involved in the program, addressing accessibility goals for the MGEV program. One trainee shared, “First, this hybrid of in-person and virtual learning worked well for me as a high school teacher. This was the first year I was able to enter and complete the program, although I’ve wanted to do so for decades. Great job in improving accessibility!”</p>
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<p>Urban Agriculture (continued)</p>	<p>Agriculture Literacy in an Urban Community</p> <p>Due to urbanization, some communities in Chatham County have significant problems with food insecurity. Families have limited access to stores that offer a wide variety of healthy food items. Many neighborhoods are considered food deserts, an area that lacks fresh fruits, vegetables, and meats, but has a high number of convenience stores. Additional challenges like low income and vehicle availability may make it even harder for them to have a healthy diet and lifestyle.</p> <p>As a way to educate youth about agriculture and careers in agriculture Chatham County 4-H collaborated with FVSU Extension and Coastal Georgia Botanical Gardens.</p> <p>This was the second time we hosted a weeklong Agro S.T.E.A.M. camp for youth in Chatham County. Because of COVID, we hosted the camp at Georgia Coastal Botanical Gardens, the pavilion was used for outdoor classrooms, greenhouse and field. Chatham 4-H staff, 4-H teen & adult volunteers and FVSU Extension faculty implemented multiple lessons to 31 participants.</p> <p>Participants showed knowledge gained through their comments:</p> <p>“I learned how to extract DNA from a strawberry.”</p> <p>“Learned how they made soap and ice cream from goat milk, the ice cream was GOOD.”</p> <p>“I learn about agriculture and what its meaning.”</p> <p>“How important farms are and how we need to help them.”</p> <p>“Learn about different careers in Agriculture.”</p> <p>Former Chatham County Commissioner Jay Jones social media comment:</p> <p>“Great day at “Da Valley!” As usual it’s about the kids... Chatham County Kids! Thanks to the 4H Club and UGA Extension for building with me in 2019! Now 2021!!! We are back on the map and AG STEAM Camp will be bigger and better next year... close out tomorrow! All credit belongs to the ladies that put it together...”</p>
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<p>Youth & Family Development</p>	<p>This issue explores positive youth and family development. Specific topics for this issue include, but are not limited to: parenting; relationships, child and elderly care; 4-H and youth programming.</p> <p>Examples of 2021 impact:</p> <p>Continuing Education for Early Childhood Professionals Early childhood settings are educational experiences for young children. Children in high-quality child care programs learn valuable motor, language, cognitive, and social-emotional skills in child care that contribute to their school readiness, social skills, and emotional well-being in elementary school and beyond. Ongoing education of child care providers is one important way to increase child care quality in Georgia. Child care providers with more education and training provide better-quality learning experiences and are more responsive to children’s needs, which enables children to build skills they need to succeed in school and later in life.</p> <p>A total of 282.5 clock hours were obtained by early childhood professionals through the classes. 115 contacts were made through the ten sessions. Participants completed retrospective evaluations at the conclusion of each session and report the following results:</p> <ul style="list-style-type: none">- 53% indicate being extremely knowledgeable after the program compared to 5% before the program- 99% report they will definitely use the information they gained in the sessions- 83% state they feel better, 68% feel healthier, 71% feel more stable, 66% feel less stress, and 71% feel more in control as a result of the programs- Participants indicate on average saving approximately \$70 as a result of attending the sessions which equates to approximately \$2,126 per month and \$25,515 <p>Better Brains for Babies The connections made in the brain during the first few years of life form a crucial foundation for later learning and development.. Georgia’s poverty rate is higher than the national average. Children who grow up in such deprived environments are less likely to have the enriching experiences that lead to optimal brain development. Children who grow up in poverty tend to enter school less ready to learn, have more learning problems in school, are less likely to finish school, and tend have more adjustment problems later in life.</p> <p>Follow-up surveys were distribute six weeks after the class. The surveys were made available in both English and Spanish for participants to complete. 221 child care providers participated in the pilot. Of these 221, 73 people (33%) completed the survey. The majority of participants report integrating skills into the classroom at least weekly, with several report using lessons learned multiple times a week. For stress in youth, providers report they were more aware of symptoms and more likely to provide strategies and activities to alleviate its impact. Finally, providers also report sharing the information with parents and guardians to help them enhance home environments for brain development.</p>
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<p>Youth & Family Development (continued)</p>	<p>Mental Health First Aid</p> <p>One in five youth will experience a mental health challenge at some point during their life. 17.1 million youth under the age of 18 have or have had a psychiatric disorder – more than the number of children with cancer, diabetes, and AIDS combined. 5.14% of youth report having a substance use or alcohol problem. Despite this, only 7.4% of children in the United States have a mental health visit in a given year. 64.1% of youth with major depression do not receive any mental health treatment. Youth need caring adults who are able to talk with them and support them and their families in accessing appropriate resources.</p> <p>133 Participants have been certified as Youth Mental Health First Aiders, including 33 Extension Employees. Of those participants who participated in virtual trainings:</p> <ul style="list-style-type: none"> - 94% feel able to have a supportive conversation about mental health and/or substance abuse with a young person. - 90% feel able to ask a young person directly about suicide. - 86% feel able to respond to a young person experiencing a substance use crisis. <p>Georgia 4-H Environmental Education</p> <p>The Georgia 4-H Environmental Education Program offers day and residential field studies at sites from the mountains to the sea. The programs use the outdoors as a classroom without walls, are aligned with the current state education standards, keep students active and engaged in classes for up to eight hours a day, are taught by well-trained and college-educated instructors, use hands-on approaches to put learning in the context of the real world environment, and help to create and sustain bonds between teachers and students.</p> <p>During the 2020-21 school year, the program reached 3,956 participants, which is only a fraction of the typical 40,000+ served in a school year due to the COVID-19 pandemic. The program supplemented this limited in-person audience with a continuation of the very successful virtual series, "From the Mountains to the Sea."</p> <p>4-H Partnership Supports Meal Delivery to At-Risk Citizens</p> <p>The Lamar County Senior Center, the hub for the "Meals on Wheels" program, was faced with the dilemma of delivering shelf-stable meals to at-risk citizens with limited staff and transportation when the need for meals increased and routes grew.</p> <p>Over a period of four months, Lamar County 4-H'ers and one adult volunteer dedicated approximately 24 hours to deliver food to approximately 11 program participants. The deliveries equated to over 400 lbs. of prepared frozen meals. Mrs. Antionette Watts, Lamar County Senior Center Director stated, "The 4-H members jumped into action to help out. With the help of the 4-H team, we have been able to continuously provide meals to our homebound seniors without interruption. The Lamar County Senior Center and its meal participants greatly appreciate the Lamar County 4-H team for their willingness to work with us as a team to ensure continued service."</p>
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<p>Youth & Family Development (continued)</p>	<p>Getting Smarter about Relationships Relationship Smarts Plus (RS+) is an evidence-based relationship education curriculum that helps youth (a) understand how relationships connect to their personal development, (b) distinguish between healthy versus unhealthy relationship behaviors, (c) develop skills to effectively communicate and manage conflict, and (d) make safe and mature relationship decisions.</p> <p>In 2021, 1,038 youth across 7 counties were reached. At the conclusion of the program, youth report positive changes that will lead to future healthy relationships. At least 70% reported that they were more confident forming healthy relationships and applying the interpersonal skills learned. According to one of the youth, “This program helped me to better understand the components of a healthy relationship between family, friends, etc. and figure out methods to productively handle conflicts” Importantly, 77% have reported that they will use the skills learned.</p>
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III. Merit and Scientific Peer Review Processes

The NIFA reviewer will refer to your 2021 Plan of Work. Use this space to provide updates as needed or activities that you would like to bring to NIFA’s attention.

Process	Updates ONLY
<p>1. The <u>Merit Review Process</u></p>	<p>None</p>
<p>2. The <u>Scientific Peer Review Process</u></p>	<p>None</p>

IV. Stakeholder Input

The NIFA reviewer will refer to your 2021 Plan of Work. Use this space to provide updates as needed or activities that you would like to bring to NIFA's attention.

Stakeholder Input Aspects	Updates ONLY
1. Actions taken to seek stakeholder input that encouraged their participation with a brief explanation	None
2. Methods to identify individuals and groups and brief explanation.	None
3. Methods for collecting stakeholder input and brief explanation.	None
4. Provide a brief statement on how you used your stakeholder input this past year to guide implementation of the relevant approved Plan of Work.	All input is channeled to college administration so they have the knowledge to make budgetary and program planning decisions. All vacant positions in all departments are brought to college-level administration for evaluation based on these criteria before a decision is made to refill. The dean solicits input from all faculty, staff and stakeholders prior to making hiring decisions on major administration positions. County agent and staff positions are reallocated to counties of higher need and those willing to contribute more county funding. Finally, legislative allocations greatly influence the type and amount of new positions added.

Reviewing Draft of the
2021 Annual Report of Accomplishments for UGA & FVSU

List Projects & Programs – all work in NRS is attached to either a Project (research) or Program (extension). Each of these Projects and Programs have a Results Statement attached to them.

Highlighted Results by Project or Program

Critical Issue

Animal Production

Program

Animal Production

Results

4

Organization

University of
Georgia

Project Director

Sunshine
Jordan



Project

Advanced Technologies for
the Genetic Improvement of
Poultry

Results

1

Organization

University of
Georgia

Project Director

Samuel Aggrey



Program

Animal Production

Results

1

Organization

Fort Valley State
University

Project Director

Mark Latimore



Project

Associative effects of
ensiling mixtures of alfalfa
and tropical forages with
antimicrobial and
antiparasitic activity on the
performance, microbial
communities and
metabolome of ruminants.

Results

1

Organization

Fort Valley State
University

Project Director

Andres Pech-
Cervantes



<i>Project</i> Effect of melatonin on fetal development, neonate survival and growth performance in goats	Results 1	Organization Fort Valley State University	Project Director Mahipal Singh	▼
<i>Project</i> Effects of bioactive molecules on embryogenesis, bone development, fat reduction, feed efficiency and growth performance in broilers	Results 1	Organization University of Georgia	Project Director Woo Kyun Kim	▼
<i>Project</i> Enhancing Health Promoting Properties and Shelf-life of Small Ruminant Meat and Dairy Products by Incorporating Functional Ingredients and Packaging Technologies	Results 1	Organization Fort Valley State University	Project Director Jung Lee	▼
<i>Project</i> Enhancing broiler metabolic efficiency and intestinal health in the absence of antibiotics	Results 1	Organization University of Georgia	Project Director Laura Ellestad	
<i>Project</i> Future Challenges in Animal Production Systems: Seeking Solutions through Focused Facilitation	Results 1	Organization University of Georgia	Project Director LilongChai	
<i>Project</i> Investigation of Potential for Zoonotic and Interspecies Disease Transmission to Livestock via White Tail Deer in Georgia	Results 1	Organization Fort Valley State University	Project Director Oreta Samples	
Critical Issue				
Community, Home and Life Skills				
<i>Program</i> Community, Home & Life Skills	Results 2	Organization University of Georgia	Project Director Sunshine Jordan	▼
<i>Program</i> Community, Home and Life Skills	Results 1	Organization Fort Valley State University	Project Director Mark Latimore	

Project

The Antecedents and Effects of Financial Self-Efficacy on Financial Behaviors and Outcomes

Results

1

Organization
University of Georgia

Project Director
Lance Palmer



Project

The road to substandard housing: Pathways, poverty, and life circumstances in rural Georgia

Results

1

Organization
University of Georgia

Project Director
Kimberly Skobba



Critical Issue

Food Safety

Project

Development of advanced technologies to ensure food safety

Results

1

Organization
University of Georgia

Project Director
Yen-con Hung



Program

Food Safety and Quality

Results

1

Organization
University of Georgia

Project Director
Sunshine Jordan



Program

Food Safety and Quality

Results

1

Organization
Fort Valley State University

Project Director
Mark Latimore



Project

Improving the current understanding of the spray during process of liquid foods through modeling and experimentation

Results

1

Organization
University of Georgia

Project Director
Kevin Mis Solval



Project

Microbial quality of blueberries and hygiene conditions of fresh blueberry packing lines

Results

1

Organization
University of Georgia

Project Director
Jinru Chen



Project

Rapid Methods and Biosensors for Food Quality, Food Safety and other Agricultural Applications

Results

1

Organization
University of Georgia

Project Director
Jose Reyes De Corcuera



Critical Issue

Health & Wellness

<i>Program</i>				
Health and Wellness	Results	Organization	Project Director	
	A	University of Georgia	Sunshine Jordan	▼
<i>Project</i>				
Enzymatic Modification of UpMs	Results	Organization	Project Director	
	1	University of Georgia	Casimir Akoh	▼
<i>Project</i>				
Folate Status Assessment for Evaluating Global Risk for Neural Tube Defects (NTD) and Monitoring Effectiveness of Folic Acid Fortification Programs	Results	Organization	Project Director	
	1	University of Georgia	Lynn Bailey	▼
<i>Program</i>				
Health and Wellness	Results	Organization	Project Director	
	1	Fort Valley State University	Mark Latimore	
<i>Project</i>				
Nutrition Assistance Programs and Dietary Outcomes	Results	Organization	Project Director	
	1	University of Georgia	Travis Smith	▼
<i>Project</i>				
The Relationship among Food Insecurity, Public Assistance Program Participation, Health, and Health Care Utilization in Older Adults	Results	Organization	Project Director	
	1	University of Georgia	Jung Sun Lee	▼
<i>Project</i>				
Transit and Release of Microencapsulated Bioactive Compounds in Dynamic Gastrointestinal Conditions and the Effect of Differing Food Matrices	Results	Organization	Project Director	
	1	University of Georgia	Fanbin Kong	▼
<i>Critical Issue</i>				
Plant Production				
<i>Project</i>				
Advancing plant epidemiology for the growers of Georgia and beyond	Results	Organization	Project Director	
	1	University of Georgia	Paul Severns	▼

<i>Project</i>	Biological Control of Arthropod Pests and Weeds	Results 1	Organization University of Georgia	Project Director Jason Schmidt	▼
<i>Project</i>	Biology and Management of Small Fruit Diseases	Results 1	Organization University of Georgia	Project Director Jonathan Oliver	▼
<i>Project</i>	Cultural Management Strategies to Enhance Pecan Production	Results 1	Organization University of Georgia	Project Director M Wells	▼
<i>Project</i>	Developing Ecologically- Based Pest Management Programs for Southeastern Fruit Production	Results 1	Organization University of Georgia	Project Director Brett Blaauw	▼
<i>Project</i>	Development and Integration of Intelligent Vehicles and Sensors for Crop Scouting, Spraying and Harvesting	Results 1	Organization University of Georgia	Project Director Glen Rains	▼
<i>Project</i>	Epidemiology and management of economically important insect-transmitted virus diseases in Georgia	Results 1	Organization University of Georgia	Project Director Sudeep Bag	▼
<i>Project</i>	Improvement of Ornamental Traits through Genome Editing	Results 1	Organization University of Georgia	Project Director H Wilde	
<i>Project</i>	Improving Quality and Reducing Losses in Specialty Fruit Crops through Storage Technologies	Results 1	Organization University of Georgia	Project Director Angelos Deltsidis	▼
<i>Program</i>	Plant Production	Results 1	Organization University of Georgia	Project Director Sunshine Jordan	▼
<i>Program</i>	Plant Production	Results 1	Organization Fort Valley State University	Project Director Mark Latimore	▼

<i>Project</i>				
Postharvest technologies and techniques to improve the quality of fresh fruits and vegetables	Results	Organization	Project Director	
	1	University of Georgia	Angelos Deltsidis	▼

Critical Issue

Sustainability. Conservation and the Environment

<i>Program</i>				
Sustainability, Conservation and the Environment	Results	Organization	Project Director	
	7	University of Georgia	Sunshine Jordan	▼

<i>Program</i>				
Sustainability, Conservation & the Environment	Results	Organization	Project Director	
	2	Fort Valley State University	Mark Latimore	

<i>Project</i>				
Assessing Carbon Balance of Farming Systems Constituting Agricultural Crops and Forest Ecosystems	Results	Organization	Project Director	
	1	University of Georgia	M Leclerc	▼

<i>Project</i>				
Assessing the environmental health of Georgia wetlands and rivers using aquatic invertebrates	Results	Organization	Project Director	
	1	University of Georgia	Darold Batzer	▼

<i>Project</i>				
Collection development, faunistics, and systematics of insects in Georgia.	Results	Organization	Project Director	
	1	University of Georgia	Joseph McHugh	▼

<i>Project</i>				
Costs and Benefits of Natural Resources on Public and Private Lands: Management, Economic Valuation, and Integrated Decision-Making	Results	Organization	Project Director	
	1	University of Georgia	John Bergstrom	▼

<i>Project</i>				
Enzyme-enhanced Composting for Reduced Environmental Risks and Improved Carbon and Nutrient Conservation	Results	Organization	Project Director	
	1	University of Georgia	Qingguo Huang	

Project
Investigating the role of exogenous enzymes on gastrointestinal and whole-bird physiology and susceptibility to Eimeria-based enteritis

Results

1

Organization
University of Georgia

Project Director
Oluyinka Olukosi

Project
Management and Policy Challenges in a Water-Scarce World

Results

1

Organization
University of Georgia

Project Director
Jeff Mullen



Project
Studying Commodity Prices and Effective Risk Management Decisions

Results

1

Organization
University of Georgia

Project Director
Berna Karali



Project
Sustainable and antimicrobial cotton denim textiles using nanocellulose technology

Results

1

Organization
University of Georgia

Project Director
Sergiy Minko



Project
U.S. Agricultural Trade and Policy in a Dynamic Global Market Environment

Results

1

Organization
University of Georgia

Project Director
Gopinath Munisamy



Critical Issue

Urban Agriculture

Program

Urban Agriculture

Results

3

Organization
University of Georgia

Project Director
Sunshine Jordan



Project
Assessment of epigenetic contributions to the success of the red imported fire ant

Results

1

Organization
University of Georgia

Project Director
Brendan Hunt



Project
Improving water quality and quantity on agricultural and urban landscapes through Best Management Practices

Results

1

Organization
University of Georgia

Project Director
Gary Hawkins



Critical Issue

Youth & Family Development

<i>Program</i> Youth & Family Development	Results A	Organization University of Georgia	Project Director Sunshine Jordan	▼
<i>Program</i> Youth & Family Development	Results 1	Organization Fort Valley State University	Project Director Mark Latimore	▼

Appendix

Research Projects A

Critical Issue
Animal Production Projects
18

<i>Project</i> Advanced Technologies for the Genetic Improvement of Poultry	Results 1	Organization University of Georgia	Project Director Samuel Aggrey	▼
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<i>Project</i> Associative effects of ensiling mixtures of alfalfa and tropical forages with antimicrobial and antiparasitic activity on the performance, microbial communities and metabolome of ruminants.	Results 1	Organization Fort Valley State University	Project Director Andres Pech- Cervantes	
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<i>Project</i> Determination of nitrogen corrected true metabolizable energy and digestible amino acid content of feed ingredients by near infrared reflective spectroscopy	Results 1	Organization University of Georgia	Project Director Adam Davis	▼
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<i>Project</i> Effect of melatonin on fetal development, neonate survival and growth performance in goats	Results 1	Organization Fort Valley State University	Project Director Mahipal Singh	
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<p><i>Project</i></p> <p>Effects of bioactive molecules on embryogenesis, bone development, fat reduction, feed efficiency and growth performance in broilers</p>	<p>Results</p> <p>1</p>	<p>Organization</p> <p>University of Georgia</p>	<p>Project Director</p> <p>Woo Kyun Kim</p>	<p>▼</p>
<p><i>Project</i></p> <p>Enhancing Health Promoting Properties and Shelf-life of Small Ruminant Meat and Dairy Products by Incorporating Functional Ingredients and Packaging Technologies</p>	<p>Results</p> <p>1</p>	<p>Organization</p> <p>Fort Valley State University</p>	<p>Project Director</p> <p>Jung Lee</p>	<p>▼</p>
<p><i>Project</i></p> <p>Enhancing Poultry Production Systems through Emerging Technologies and Husbandry Practices</p>	<p>Results</p> <p>1</p>	<p>Organization</p> <p>University of Georgia</p>	<p>Project Director</p> <p>LilongChai</p>	<p>▼</p>
<p><i>Project</i></p> <p>Enhancing broiler metabolic efficiency and intestinal health in the absence of antibiotics</p>	<p>Results</p> <p>1</p>	<p>Organization</p> <p>University of Georgia</p>	<p>Project Director</p> <p>Laura Ellestad</p>	<p>S/</p>
<p><i>Project</i></p> <p>Future Challenges in Animal Production Systems: Seeking Solutions through Focused Facilitation</p>	<p>Results</p> <p>1</p>	<p>Organization</p> <p>University of Georgia</p>	<p>Project Director</p> <p>LilongChai</p>	
<p><i>Project</i></p> <p>Identification and characterization of proteins associated with fertility in chickens.</p>	<p>Results</p> <p>1</p>	<p>Organization</p> <p>University of Georgia</p>	<p>Project Director</p> <p>Andrew Benson</p>	
<p><i>Project</i></p> <p>Impact of heat stress on lactating dairy cows and preweaned calves</p>	<p>Results</p> <p>1</p>	<p>Organization</p> <p>University of Georgia</p>	<p>Project Director</p> <p>ShaTao</p>	<p>▼</p>

<i>Project</i> Investigation of Potential for Zoonotic and Interspecies Disease Transmission to Livestock via White Tail Deer in Georgia	Results 1	Organization Fort Valley State University	Project Director Oreta Samples	
<i>Project</i> Molecular Mechanisms Regulating Skeletal Muscle Growth and Differentiation	Results 1	Organization University of Georgia	Project Director John Gonzalez	▼
<i>Project</i> Replacement of antimicrobial compounds with Prebiotics/probiotics /nanoparticle vaccine to control gut pathogens/foodborne pathogen infections in poultry	Results 1	Organization University of Georgia	Project Director Ramesh Selvaraj	▼
<i>Project</i> Taste sensation and food perception in chickens	Results 1	Organization University of Georgia	Project Director Hongxiang Liu	
<i>Project</i> Preservation of female germline in livestock	Results 0	Organization Fort Valley State University	Project Director Adel Moawad	▼
<i>Project</i> Treatment and Prevention Options Utilizing Probiotics for Mastitis in Caprine Species	Results 0	Organization Fort Valley State University	Project Director George McCommon	▼
<i>Project</i> test	Results 0	Organization University of Georgia	Project Director Sunshine Jordan	▼

Project
 Developing and Testing Science Communication Models to Increase Adoption of Emerging Agricultural Technologies and Best Management Practices

Results	Organization	Project Director
1	University of Georgia	Alexa Lamm

Project
 Multistate Research Coordination Southern Region

Results	Organization	Project Director
1	University of Georgia	William Secor

Project
 The Antecedents and Effects of Financial Self-Efficacy on Financial Behaviors and Outcomes

Results	Organization	Project Director
1	University of Georgia	Lance Palmer

Project
 The road to substandard housing: Pathways, poverty, and life circumstances in rural Georgia

Results	Organization	Project Director
1	University of Georgia	Kimberly Skobba

Critical Issue
Food Safety

Projects
 9

Project
 A NUMERICAL APPROACH TO UNDERSTANDING RISK FACTORS IN THE FARM-TO-FORK PASTURED POULTRY SUPPLY CHAIN

Results	Organization	Project Director
1	University of Georgia	Abhinav Mishra

Project
 Development of advanced technologies to ensure food safety

Results	Organization	Project Director
1	University of Georgia	Yen-con Hung

Project
 Improving the current understanding of the spray during process of liquid foods

Results	Organization	Project Director
1	University of Georgia	Kevin MisSolval

through modeling
and experimentation

Project

Microbial quality of
blueberries and
hygiene conditions of
fresh blueberry
packing lines

Results

1

Organization

University of
Georgia

Project Director

JinruChen

Project

Rapid Methods and
Biosensors for Food
Quality, Food Safety
and other
Agricultural
Applications

Results

1

Organization

University of
Georgia

Project Director

Jose Reyes De
Corcuera



Project

DELETE

Results

0

Organization

University of
Georgia

Project Director

Sunshine
Jordan



Project

Numerical Study on
Electroporation by
High-Intensity Pulsed
Electric Fields

Results

0

Organization

Fort Valley State
University

Project Director

Hao Qiu



Project

Product
Development and
Student
Entrepreneurship at
the Agricultural
Research Station

Results

0

Organization

Fort Valley State
University

Project Director

Brou Kouakou



Project

STRENGTHENING
FVSLU'S RESEARCH
CAPACITY IN FOOD
SAFETY ENGINEERING
AND FOOD AND
BIOMATERIALS
PROCESSING

Results

0

Organization

Fort Valley State
University

Project Director

Ajit Mahapatra



Critical Issue

Health & Wellness

Projects

8

Project

Enzymatic
Modification of Lipids

Results

1

Organization

University of
Georgia

Project Director

Casimir Akoh

Project

Folate Status

Assessment for Evaluating Global Risk for Neural Tube Defects (NTD) and Monitoring Effectiveness of Folic Acid Fortification Programs	Results 1	Organization University of Georgia	Project Director Lynn Bailey	▼
<i>Project</i> Impact of the diet-derived antioxidant erethioneine on biological aging and cellular senescence	Results 1	Organization University of Georgia	Project Director Robert Pazdro	
<i>Project</i> Nutrition Assistance Programs and Dietary Outcomes	Results 1	Organization University of Georgia	Project Director Travis Smith	▼
<i>Project</i> The Effect of Income on Mental Health: Causal Estimations using Earned Income Tax Credit	Results 1	Organization University of Georgia	Project Director Ptryk Babiarez	▼
<i>Project</i> The Relationship among Food Insecurity, Public Assistance Program Participation, Health, and Health Care Utilization in Older Adults	Results 1	Organization University of Georgia	Project Director Jung Sun Lee	▼
<i>Project</i> Transit and Release of Microencapsulated Bioactive Compounds in Dynamic Gastrointestinal Conditions and the Effect of Differing Food Matrices	Results 1	Organization University of Georgia	Project Director Fanbin Kong	▼
<i>Project</i> Impact of bioactive food compounds and dietary supplements on inflammation and brain health	Results 0	Organization University of Georgia	Project Director Hea Jin Park	▼

Plant Production

34

*Project***Advancing plant
epidemiology for the
growers of Georgia
and beyond****Results**

1

Organization
University of
Georgia**Project Director**

PaulSeverns

*Project***Biological Control of
Arthropod Pests and
Weeds****Results**

1

Organization
University of
Georgia**Project Director**

Jason Schmidt

*Project***Biology and
Management of Small
Fruit Diseases****Results**

1

Organization
University of
Georgia**Project Director**

Jonathan Oliver

*Project***Biology and
management of
diseases of soybean
and wheat****Results**

1

Organization
University of
Georgia**Project Director**

James Buck

*Project***Breeding and
Evaluation of
Herbaceous
Perennials in the
Malvaceae****Results**

1

Organization
University of
Georgia**Project Director**

John Ruter

*Project***Cultivar Evaluation****Results**

1

Organization
University of
Georgia**Project Director**

Daniel Mailhot

*Project***Cultural Management
Strategies to Enhance
Pecan Production****Results**

1

Organization
University of
Georgia**Project Director**

M Wells

*Project***Developing
Ecologically-Based
Pest Management
Programs for
Southeastern Fruit
Production****Results**

1

Organization
University of
Georgia**Project Director**

Brett Blaauw

*Project***Development and
Integration of
Intelligent Vehicles
and Sensors for Crop
Scouting, Spraying****Results**

1

Organization
University of
Georgia**Project Director**

Glen Rains

and Harvesting

<i>Project</i> Dynamics of plant immunity in the context of development	Results 1	Organization University of Georgia	Project Director Li Yang	▼
<i>Project</i> Ecology and Management of Insect Pests Affecting Peanut Production in Georgia	Results 1	Organization University of Georgia	Project Director Mark Abney	▼
<i>Project</i> Epidemiology and management of economically important insect-transmitted virus diseases in Georgia	Results 1	Organization University of Georgia	Project Director Sudeep Bag	
<i>Project</i> Epidemiology and management of foliar diseases of peanut	Results 1	Organization University of Georgia	Project Director ACulbreath	▼
<i>Project</i> Evaluation of cover crops and living mulches for use in field cropping systems	Results 1	Organization University of Georgia	Project Director Nicholas Basinger	▼
<i>Project</i> Genetics of host-plant resistance to Root-Knot Nematode in Upland cotton	Results 1	Organization University of Georgia	Project Director Peng Chee	
<i>Project</i> Genome editing technologies for crop improvement	Results 1	Organization University of Georgia	Project Director Wayne Parrott	▼
<i>Project</i> Improvement of Ornamental Traits through Genome Editing	Results 1	Organization University of Georgia	Project Director H Wilde	▼

<i>Project</i> Improving Quality and Reducing Losses in Specialty Fruit Crops through Storage Technologies	Results 1	Organization University of Georgia	Project Director Angelos Deltsidis	▼
<i>Project</i> Increasing Sustainability and Productivity in Conventional and Organic Vegetable Production Systems	Results 1	Organization University of Georgia	Project Director J Diaz-Perez	
<i>Project</i> Integrated disease management of pecans and peanuts	Results 1	Organization University of Georgia	Project Director Tim Brenneman	▼
<i>Project</i> Maintaining the profitability of Georgia soybean producers through sustainable nematode management	Results 1	Organization University of Georgia	Project Director Melissa Mitchum	▼
<i>Project</i> Management and production practices for the peach industry in the Southeastern U.S.	Results 1	Organization University of Georgia	Project Director Dario Chavez	▼
<i>Project</i> Multistate Research Coordination. Southern Region	Results 1	Organization University of Georgia	Project Director Ashfaq Sial	▼
<i>Project</i> Nutrient Management to Enhance Row Crop Production in Georgia	Results 1	Organization University of Georgia	Project Director Henry Sintim	▼
<i>Project</i> Pecan Breeding and Cultivar Evaluation	Results 1	Organization University of Georgia	Project Director PATRICK CONNER	▼

<i>Project</i> Plant Genetic Resources Conservation and Utilization	Results 1	Organization University of Georgia	Project Director Soraya Bertoli	▼
<i>Project</i> Postharvest technologies and techniques to improve the quality of fresh fruits and vegetables	Results 1	Organization University of Georgia	Project Director Angelos Deltsidis	▼
<i>Project</i> Soil behavior of pesticides, fate, and residual carryover in annual and perennial crops: laboratory and field analysis, evaluation and assessment of pesticides in agronomic and alternative crops, vegetables, pecan and berries	Results 1	Organization University of Georgia	Project Director Timothy Grey	▼
<i>Project</i> The Multifunctional Role of a Geminivirus C4 protein in Pathogenesis	Results 1	Organization University of Georgia	Project Director Carl Deom	
<i>Project</i> Vector-virus interactions and their influence on vector biology, ecology, and epidemiology of important thrips- and whitefly-transmitted viruses in Georgia	Results 1	Organization University of Georgia	Project Director RAJAGOPALBAB SRINIVASAN	▼
<i>Project</i> Application of Artificial Neural Networks in Agriculture for Enhanced Productivity	Results 0	Organization Fort Valley State University	Project Director Ramana Gosukonda	
<i>Project</i> DELETE	Results 0	Organization University of Georgia	Project Director Sunshine Jordan	▼

Project

Development of a Precision Animal Health and Forage Management System for Improved Utilization of Sericea Lespedeza as a Nutraceutical Forage for Year-Round Grazing/Feeding of Goats and Sheep

Results

0

Organization
Fort Valley State University

Project Director
Thomas Terrill



Project

Understanding the sorghum genetic diversity for biotic and abiotic stress resistance mechanisms

Results

0

Organization
Fort Valley State University

Project Director
Somashekhhar Punhuri



Critical Issue

Sustainability, Conservation and the Environment

Projects
17

Project

Agricultural and Rural Finance Markets in Transition

Results

1

Organization
University of Georgia

Project Director
C Escalante



Project

Assessing Carbon Balance of Farming Systems Constituting Agricultural Crops and Forest Ecosystems

Results

1

Organization
University of Georgia

Project Director
M Leclerc



Project

Assessing the environmental health of Georgia wetlands and rivers using aquatic invertebrates

Results

1

Organization
University of Georgia

Project Director
Darotd Batzer



Project

Collection development, faunistics, and systematics of insects in Georgia.

Results

1

Organization
University of Georgia

Project Director
Joseph McHugh



Project
Costs and Benefits of
Natural Resources on
Public and Private
Lands: Management,
Economic Valuation,
and Integrated
Decision-Making

Results	Organization	Project Director
1	University of Georgia	John Bergstrom

Project
Developing and
Testing Leadership
Capacity Building
Models to Address
Critical Issues Facing
the Agricultural and
Natural Resource
Industry

Results	Organization	Project Director
1	University of Georgia	Kevan Lamm

Project
Developmental
Evaluation to Build
Evaluative Capacity
at the Land-Grant
University

Results	Organization	Project Director
1	University of Georgia	Kathleen Kelsey

Project
Enzyme-enhanced
Composting for
Reduced
Environmental Risks
and Improved Carbon
and Nutrient
Conservation

Results	Organization	Project Director
1	University of Georgia	Qingguo Huang

Project
Human Capital
Formation and
Economic
Development

Results	Organization	Project Director
1	University of Georgia	Jeffrey Jordan

Project
Investigating the role
of exogenous
enzymes on
gastrointestinal and
whole-bird
physiology and
susceptibility to
Eimeria-based
enteritis

Results	Organization	Project Director
1	University of Georgia	Oluyinka Olukosi

Project
Management and
Policy Challenges in a
Water-Scarce World

Results	Organization	Project Director
1	University of Georgia	Jeff Mullen

<i>Project</i> Multistate Research Coordination, Southern Region	Results 1	Organization University of Georgia	Project Director Ashley Yopp	▼
<i>Project</i> Pathogen Population Structure and Disease Management in Turfgrass and Forage Grasses	Results 1	Organization University of Georgia	Project Director Bochra Bahri	
<i>Project</i> Studying Commodity Prices and Effective Risk Management Decisions	Results 1	Organization University of Georgia	Project Director Berna Karali	▼
<i>Project</i> Sustainable and antimicrobial cotton denim textiles using nanocellulose technology	Results 1	Organization University of Georgia	Project Director Sergiy Minko	▼
<i>Project</i> U.S. Agricultural Trade and Policy in a Dynamic Global Market Environment	Results 1	Organization University of Georgia	Project Director Gopinath Munisamy	▼
<i>Project</i> Agri-Biotechnology to strengthen green economy: Specialty Crops and Product Development	Results 0	Organization Fort Valley State University	Project Director Nirmal Joshee	▼
Critical Issue Urban Agriculture			Projects 4	
<i>Project</i> Assessment of epigenetic contributions to the success of the red imported fire ant	Results 1	Organization University of Georgia	Project Director Brendan Hunt	▼

<i>Project</i>				
Breeding plants for genetic diversity and ecological function for use in urban landscapes	Results	Organization	Project Director	
	1	University of Georgia	Carol Robacker	▼

<i>Project</i>				
Improving water quality and quantity on agricultural and urban landscapes through Best Management Practices	Results	Organization	Project Director	
	1	University of Georgia	Gary Hawkins	

<i>Project</i>				
Soil Biological Health in Turfgrass	Results	Organization	Project Director	
	0	University of Georgia	Mussie Habteselassie	▼

Critical Issue
Youth & Family Development Projects 0

There are no Projects with results for this Critical Issue or category.

Extension Programs A

Critical Issue
Animal Production Programs 2

<i>Program</i>				
Animal Production	Results	Organization	Project Director	
	4	University of Georgia	Sunshine Jordan	▼

<i>Program</i>				
Animal Production	Results	Organization	Project Director	
	1	Fort Valley State University	Mark Latimore	

Critical Issue
Community. Home and Life Skills Programs 2

<i>Program</i>				
Community, Home & Life Skills	Results	Organization	Project Director	
	2	University of Georgia	Sunshine Jordan	

<i>Program</i>				
Community, Home and Life Skills	Results	Organization	Project Director	
	1	Fort Valley State University	Mark Latimore	▼

Critical Issue

Food Safety

Programs

2

Program

Food Safety and Quality

Results

2

Organization
University of Georgia

Project Director
Sunshine Jordan



Program

Food Safety and Quality

Results

1

Organization
Fort Valley State University

Project Director
Mark Latimore



Critical Issue

Health & Wellness

Programs

2

Program

Health and Wellness

Results

7

Organization
University of Georgia

Project Director
Sunshine Jordan

Program

Health and Wellness

Results

1

Organization
Fort Valley State University

Project Director
Mark Latimore



Critical Issue

Plant Production

Programs

2

Program

Plant Production

Results

1

Organization
University of Georgia

Project Director
Sunshine Jordan



Program

Plant Production

Results

1

Organization
Fort Valley State University

Project Director
Mark Latimore



Critical Issue

Sustainability, Conservation and the Environment

Programs

2

Program

Sustainability, Conservation and the Environment

Results

14

Organization
University of Georgia

Project Director
Sunshine Jordan



Program

Sustainability, Conservation & the Environment

Results

2

Organization
Fort Valley State University

Project Director
Mark Latimore



Critical Issue

Urban Agriculture

Programs

2

<i>Program</i>	Results	Organization	Project Director	
Urban Agriculture	4	University of Georgia	Sunshine Jordan	▼

<i>Program</i>	Results	Organization	Project Director	
Urban Agriculture	1	Fort Valley State University	Mark Latimore	▼

Critical Issue
Youth & Family Development Programs
 2

<i>Program</i>	Results	Organization	Project Director	
Youth & Family Development	9	University of Georgia	Sunshine Jordan	▼

<i>Program</i>	Results	Organization	Project Director	
Youth & Family Development	1	Fort Valley State University	Mark Latimore	

Other Projects / Programs A

Type
Projects / Programs without a Critical Issue Projects / Programs
 1

<i>Project</i>	Results	Organization	Project Director	
Multistate Research Coordination, Southern Region	0	University of Georgia	Nick Place	▼

Type
Multistate Projects Projects
 16

<i>Project</i>	Results	Organization	Project Director	
U.S. Agricultural Trade and Policy in a Dynamic Global Market Environment	1	University of Georgia	Gopinath Munisamy	▼

<i>Project</i>	Results	Organization	Project Director	
Plant Genetic Resources Conservation and Utilization	1	University of Georgia	Soraya Bertioli	▼

<i>Project</i>	Results	Organization	Project Director	
Multistate Research Coordination, Southern Region	1	University of Georgia	Ashley Yopp	▼

<i>Project</i> Multistate Research Coordination, Southern Region	Results 1	Organization University of Georgia	Project Director Ashfaq Sial	▼
<i>Project</i> Multistate Research Coordination, Southern Region	Results 1	Organization University of Georgia	Project Director William Secor	▼
<i>Project</i> Multistate Research Coordination, Southern Region	Results 0	Organization University of Georgia	Project Director Nick Place	▼
<i>Project</i> Molecular Mechanisms Regulating Skeletal Muscle Growth and Differentiation	Results 1	Organization University of Georgia	Project Director John Gonzalez	▼
<i>Project</i> Management and Policy Challenges in a Water-Scarce World	Results 1	Organization University of Georgia	Project Director Jeff Mullen	▼
<i>Project</i> Improving Quality and Reducing Losses jnSpeciajtyJFruit Crops through Storage Technologies	Results 1	Organization University of Georgia	Project Director Angelos Deltsidis	▼
<i>Project</i> Identification and characterization of proteins associated with fertility in chickens.	Results 1	Organization University of Georgia	Project Director Andrew Benson	▼
<i>Project</i> Future Challenges in Animal Production Systems: Seeking Solutions through Focused Facilitation	Results 1	Organization University of Georgia	Project Director LilongChai	▼
<i>Project</i> Enhancing Poultry Production Systems through Emerging Technologies and Husbandry Practices	Results 1	Organization University of Georgia	Project Director LilongChai	▼

Project
Costs and Benefits of Natural Resources on Public and Private Lands: Management, Economic Valuation, and Integrated Decision-Making

Results	Organization	Project Director
1	University of Georgia	John Bergstrom

Project
Biological Control of Arthropod Pests and Weeds

Results	Organization	Project Director
1	University of Georgia	Jason Schmidt

Project
Agricultural and Rural Finance Markets in Transition

Results	Organization	Project Director
1	University of Georgia	C Escalante

Project
Advanced Technologies for the Genetic Improvement of Poultry

Results	Organization	Project Director
1	University of Georgia	Samuel Aggrey

Type Projects / Programs
Integrated Projects / Programs **24**

Program
Urban Agriculture

Results	Organization	Project Director
4	University of Georgia	Sunshine Jordan

Project
U.S. Agricultural Trade and Policy in a Dynamic Global Market Environment

Results	Organization	Project Director
1	University of Georgia	Gopinath Munisamy

Project
The road to substandard housing: Pathways, poverty, and life circumstances in rural Georgia

Results	Organization	Project Director
1	University of Georgia	Kimberly Skobba

Project
The Multifunctional Role of a Geminivirus C4 protein in Pathogenesis

Results	Organization	Project Director
1	University of Georgia	Carl Deom

<i>Project</i> The Effect of Income on Mental Health: Causal Estimations using Earned Income Tax Credit	Results 1	Organization University of Georgia	Project Director Ptryk Babiarz	▼
<i>Project</i> The Antecedents and Effects of Financial Self-Efficacy on Financial Behaviors and Outcomes	Results 1	Organization University of Georgia	Project Director Lance Palmer	▼
<i>Program</i> Sustainability, Conservation and the Environment	Results 14	Organization University of Georgia	Project Director Sunshine Jordan	▼
<i>Program</i> Plant Production	Results 1	Organization University of Georgia	Project Director Sunshine Jordan	▼
<i>Project</i> Nutrient Management to Enhance Row Crop Production in Georgia	Results 1	Organization University of Georgia	Project Director Henry Sintim	▼
<i>Project</i> Multistate Research Coordination Southern Region	Results 1	Organization University of Georgia	Project Director Ashley Yopp	
<i>Project</i> Multistate Research Coordination, Southern Region	Results 1	Organization University of Georgia	Project Director Ashfaq Sial	
<i>Project</i> Multistate Research Coordination, Southern Region	Results 1	Organization University of Georgia	Project Director William Secor	▼
<i>Project</i> Management and production practices for the peach industry in the Southeastern U.S.	Results 1	Organization University of Georgia	Project Director Dario Chavez	▼
<i>Project</i> Investigating the role of exogenous				

enzymes on gastrointestinal and whole-bird physiology and susceptibility to Eimeria-based enteritis	Results 1	Organization University of Georgia	Project Director Oluyinka Olukosi	✓
<i>Project</i> Increasing Sustainability and Productivity in Conventional and Organic Vegetable Production Systems	Results 1	Organization University of Georgia	Project Director J Diaz-Perez	
<i>Project</i> Improving the current understanding of the spray during process of liquid foods through modeling and experimentation	Results 1	Organization University of Georgia	Project Director Kevin MisSolval	✓
<i>Project</i> Improving Quality and Reducing Losses in Specialty Fruit Crops through Storage Technologies	Results 1	Organization University of Georgia	Project Director Angelos Deltsidis	✓
<i>Project</i> Impact of heat stress on lactating dairy cows and oreweaned calves	Results 1	Organization University of Georgia	Project Director ShaTao	✓
<i>Program</i> Health and Wellness	Results 7	Organization University of Georgia	Project Director Sunshine Jordan	✓
<i>Project</i> Future Challenges in Animal Production Systems: Seeking Solutions through Focused Facilitation	Results 1	Organization University of Georgia	Project Director LilongChai	
<i>Program</i> Food Safety and Quality	Results 2	Organization University of Georgia	Project Director Sunshine Jordan	

Project

**Enhancing Poultry
Production Systems
through Emerging
Technologies and
Husbandry Practices**

Results

1

Organization
University of
Georgia

Project Director
LilongChai



Program

**Community, Home &
Life Skills**

Results

2

Organization
University of
Georgia

Project Director
Sunshine
Jordan



Program

Animal Production

Results

4

Organization
University of
Georgia

Project Director
Sunshine
Jordan



Reviewing Draft of the
2021 Annual Report of Accomplishments for UGA & FVSU

Results Statements – examples of the Results Statements entered into NRS. For research, these were formerly called Progress Reports and entered in REEport by PIs.

Critical Issue

Animal Production

Program/Project

Extension Trainings for Precision Poultry Farming

In 2-3 sentences, briefly describe the issue or problem that your project addresses.

Different precision poultry farming technologies such as wearable sensors, robots, computer vision methods of machine learning or deep learning, Internet of Things (IoT), and environmental sensing have been tested or developed to enhance and optimize the production, animal health, and welfare management of poultry farming. However, it's still not clear which kind of technologies have been commercialized and how poultry producers can use those technologies to address on-farm animal production and welfare issues. Therefore, a systematic training platform is critical for building the connection between technology researchers/developers and potential users.

Briefly describe in non-technical terms how your major activities helped you achieve, or make significant progress toward, the goals and objectives described in your non-technical summary.

Dr. Lilong Chai (a poultry engineering specialist in UGA poultry science department) initiated a Georgia Precision Poultry Conference in May 2021, along with support from department administration and fellow faculty members. At the training, speakers and panelists (i.e., poultry producers, researchers, and technology developers) shared their knowledge and experience in poultry well-being evaluation, new technological applications of precision poultry farming, and experience with implementation and refinement of precision management practices applicable to the poultry sector. The inaugural 2021 Georgia Precision Poultry Farming Conference (virtually via Zoom) attracted 322 registrations from poultry and egg farms, poultry service companies, academia and government agencies from more than 30 countries.

Briefly describe how your target audience benefited from your project's activities.

The Georgia Precision Poultry Farming Conference provided a training and information exchange opportunity for stakeholders on the challenges and opportunities related to future of poultry farming. The Department of Poultry Science plans to host this Extension conference annually.

Briefly describe how the broader public benefited from your project's activities.

Currently, the U.S. is the world's largest poultry producer, with annual sales value of \$40 billion, making research, development and training of precision poultry farming critical in the U.S. poultry sector. As the top poultry producing state in the U.S., Georgia is home to many nationally ranked poultry production and processing companies, as well as a multitude of companies supplying poultry technologies to the world.

Comments (optional)

Describe and explain any major changes or problems encountered in approach. Additionally, note opportunities for training and professional development provided, how results have been disseminated to communities of interest, and any new details regarding what the project or program plans to do during the next reporting period to accomplish the goals.

N/A

Critical Issue

Animal Production

Program/Project

POULTRY411 App for Smartphones

In 2-3 sentences, briefly describe the issue or problem that your project addresses.

Environmental control within poultry houses is an important factor in poultry production. Ventilation is a key component of poultry house environmental control in maintaining conditions conducive to achieve optimum bird health and performance. Grower income is reduced as energy costs continue to rise. Understanding how to ventilate and operate poultry houses to achieve and maintain productive environments during cold weather is crucial for both the grower and the integrator. Broiler house design has improved greatly over the last 30 years to meet the requirements of modern broilers. As a result, environmental conditions can be controlled much more closely with outside weather conditions having less of an effect. Management of these houses is complex and a lack of understanding of basic principles invariably has a negative influence on poultry performance and results in higher operation costs. Poultry growers, flock supervisors, veterinarians and others that support the poultry industry could use a way to conveniently access information when away from their computers. Minimum ventilation rates are important in maintaining the optimum environmental conditions for poultry performance and welfare, but people may not fully understand the factors that affect the fan operation time. Minimizing air leakage in a poultry house improves poultry house ventilation by getting more air to enter through the air inlets. A convenient and mobile method was needed for people to calculate both minimum ventilation rates and poultry house air leakage.

Briefly describe in non-technical terms how your major activities helped you achieve, or make significant progress toward, the goals and objectives described in your non-technical summary.

A smartphone app was created for the iOS and Android operating systems that provides access to a moisture balance calculator that uses current house conditions to determine the proper minimum ventilation rate. The second calculator in the app provides information on the amount of house leakage, how much air inlet area is required, how much air enters through the air inlets, and how much the air inlets will open. Using this information people can determine how well their house is performing and how much more air would enter through the inlets due to efforts to reduce the air leakage. The app also provides a means to access the Poultry Housing Tips Newsletters that cover many topics on poultry house environmental control and find out when workshops, seminars and other educational opportunities on poultry house environmental control are available.

Briefly describe how your target audience benefited from your project's activities.

Since it's launch in October, the app has a total of 2,975 downloads.

Briefly describe how the broader public benefited from your project's activities.
Poultry App available to the public.

Comments (optional)

Describe and explain any major changes or problems encountered in approach. Additionally, note opportunities for training and professional development provided, how results have been disseminated to communities of interest, and any new details regarding what the project or program plans to do during the next reporting period to accomplish the goals.

N/A

Critical Issue

Animal Production

Program/Project

County-based Poultry Ordinances

In 2-3 sentences, briefly describe the issue or problem that your project addresses.

The poultry industry in the state of Georgia is the largest in the U.S., with an annual economic impact to the state in excess of \$28 billion dollars. The need for expansion of new production housing to meet the growing demand for poultry meat has led farmers and poultry companies to build new housing in areas of the state unaccustomed to the poultry industry and the size of facilities needed to accommodate the production practices. Concerned citizens and county commission members who are often uninformed or misguided regarding poultry production, have voiced misgivings concerning the approval of large scale production housing and often attempt to craft ordinances that will prohibit poultry housing within county boundaries.

Briefly describe in non-technical terms how your major activities helped you achieve, or make significant progress toward, the goals and objectives described in your non-technical summary.

Extension specialists within the Department of Poultry Science assisted county agricultural agents in delivering sound scientific information to county commission members regarding modern poultry production housing, estimations of water usage, management of production by-products, air emissions, and neighbor relations. During 2021, four county commissions were assisted with the formation or amending of poultry-related ordinances. The county commissions received face-to-face interactions with extension specialists and county-based agricultural agents in an effort to deliver factual information in order that the commissions could appropriately deliberate regarding the formation of poultry-specific ordinances that target poultry production siting and management practices. The Northwest Georgia Regional County Commission Association sponsored a face-to-face educational event on September 13, 2021, to provide commissions, planning board members, city planners, poultry companies, and concerned citizens an opportunity to hear from university specialists and Georgia Poultry Federation representatives regarding the importance of proper poultry barn siting, management and environmental stewardship. The presentations, publications and ordinance summaries generated by UGA Poultry Specialists can assist county Extension agriculture agents with county commission interactions in order to determine the best course of action to take when county commissions request assistance from the Extension Service when deliberating the need for or alteration to county-based ordinances. A series of informational publications continue to be prepared by UGA Poultry Extension Specialists to simplify the delivery process and provide county agents with more concise and timely assistance.

Briefly describe how your target audience benefited from your project's activities.

Through the efforts of the College of Agriculture and Environmental Sciences at the University of Georgia, county administrators continue to be educated on the practices of modern poultry production

and the interactions that it creates within Georgia counties. Careful consideration of the needs of the whole county, including zoning/ordinance development, tax revenue, and infra-structure improvements will provide measured opportunities for growth of the poultry industry while addressing concerns of citizen within rural communities.

Briefly describe how the broader public benefited from your project's activities.

Increased opportunities for the poultry industry and public awareness

Comments (optional)

Describe and explain any major changes or problems encountered in approach. Additionally, note opportunities for training and professional development provided, how results have been disseminated to communities of interest, and any new details regarding what the project or program plans to do during the next reporting period to accomplish the goals.

N/A

Critical Issue

Community, Home and Life Skills

Program/Project

Military readiness training benefits county

In 2-3 sentences, briefly describe the issue or problem that your project addresses.

Rural Warren County has many citizens that have no medical insurance or are underinsured. The Warren County Board of Commissioners applied to host an Innovative Readiness Training. This program is sponsored by the Secretary of Defense for Reserve Affairs with the mission of providing Military Reserve Service members with hands-on readiness training opportunities while providing direct and lasting benefits to communities in need of free medical, dental, optometric and veterinary services.

Briefly describe in non-technical terms how your major activities helped you achieve, or make significant progress toward, the goals and objectives described in your non-technical summary.

The grant required many partners and all types of local support. The Warren County Extension Coordinator served on the committee to organize and carry out all of the required efforts. This included meals, extra labor and communication with the county residents as well as all other necessities for the eleven-day program for 180 Reserve members. The Warren County Group was chosen in 2018 and 2019 to host this training event.

Briefly describe how your target audience benefited from your project's activities.

When the grant was announced again, Warren County leaders applied again and were successful. The Innovative Readiness Training Program was a great success. Veterinary services were added from the 2021 grant. The military reserve personnel served 721 Warren County residents and performed 5,811 medical services. This saved \$327,877 for dental, optometry and medical services for underinsured and non-insured citizens. In addition, they performed 487 veterinary procedures saving \$11,200.

While providing these services to the community, these Reserve and National Guard members get invaluable practice which results in a combat-ready force equipped to the same standards of operational readiness as their Active Duty Counterparts.

Briefly describe how the broader public benefited from your project's activities.

Military preparedness

Comments (optional)

Describe and explain any major changes or problems encountered in approach. Additionally, note opportunities for training and professional development provided, how results have been disseminated to communities of interest, and any new details regarding what the project or program plans to do during the next reporting period to accomplish the goals.

N/A

Critical Issue

Health & Nutrition

Program/Project

Radon Action Month

In 2-3 sentences, briefly describe the issue or problem that your project addresses.

Radon is a naturally occurring radioactive gas that is the second leading cause of lung cancer in Georgia. While nationally one in 15 homes has an elevated level of radon, in parts of Georgia as many as one in three homes has an elevated radon level. Georgia has no laws on radon, so it is up to residents to test their homes. The UGA Radon Program works to educate the public on radon, distribute radon test kits, and encourage radon testing and mitigation.

Briefly describe in non-technical terms how your major activities helped you achieve, or make significant progress toward, the goals and objectives described in your non-technical summary.

During the month of January, we promote radon action month. The UGA Radon Program puts out press releases on radon, gets proclamations in many Georgia counties, and hosts programs on how to test for radon and what to do to fix your home if radon levels are elevated.

Briefly describe how your target audience benefited from your project's activities.

During January 2021 the UGA Radon Program distributed 517 radon test kits. Of those distributed, 319 were used. Sixty-four of those homes tested high, and according to our survey results about 75% of those individuals mitigated the radon in their home. This resulted in about 128 individuals with a reduced risk of developing lung cancer from our outreach activities in January.

Briefly describe how the broader public benefited from your project's activities.

Safer homes

Comments (optional)

Describe and explain any major changes or problems encountered in approach. Additionally, note opportunities for training and professional development provided, how results have been disseminated to communities of interest, and any new details regarding what the project or program plans to do during the next reporting period to accomplish the goals.

N/A

Critical Issue

Food Safety and Quality

Program/Project

Food Safety Education for Foodservice Personnel

Brief Title

Food Safety Education for Foodservice Personnel

In 2-3 sentences, briefly describe the issue or problem that your project addresses.

More than 250 foodborne diseases present a significant public health challenge. In the U.S., per year, foodborne disease results in an estimated 48 million persons with gastrointestinal foodborne illnesses, 128,000 hospitalizations, and 3,000 deaths (2010). Estimates for Georgia are 2.5 million cases per year at a cost of \$4.7 billion (2010). Transfer of viral and bacterial infections through foodservice operations is of high concern.

FDA's periodic retail food safety risk factor studies document the need for improved food safety practices by workers; compliance with personal hygiene controls, temperature control and practices to prevent contamination and cross-contamination should be higher in most foodservice settings (FDA 2014). The American public continues to eat away from home in large numbers. In Georgia, there are more than 18,500 food service establishments (2016) having sales of \$19.6 billion and employing more 476,500 people (NRA, 2018). In Georgia, 65% of children under the age of six are in the care of someone other than their parents while the parents work (2014). The staff in these facilities could benefit from food safety training. Georgia DCH regulates 2,024 personal care homes, 815 Community Living Arrangements, and 368 nursing home facilities (2016); the staff in these need food safety education. In Athens-Clarke, Morgan and Oconee Counties, there are 620 inspected food establishments, 112 personal care facilities, and 67 childcare facilities.

The FDA Food Code requires that the person in charge of a foodservice operation become a Certified Food Protection Manager (CFPM). That person must be on site at all times during operating hours. A CFPM must show that he or she has the required knowledge by passing a test from an accredited program. Both the Georgia Departments of Health and Agriculture require food safety-certified managers for foodservice and retail food stores.

A Center for Disease Control and Prevention study suggests that the presence of a CFPM reduces the risk of a foodborne illness outbreak for an establishment. The study also suggests it was a distinguishing factor between restaurants that experienced a foodborne illness outbreak and those that had not. In addition, the FDA's Retail Food Risk Factor Studies suggest that the presence of a certified manager has

a positive correlation with more effective control of certain risk factors, such as poor personal hygiene, in different facility types.

Briefly describe in non-technical terms how your major activities helped you achieve, or make significant progress toward, the goals and objectives described in your non-technical summary.

The ServSafe® Food Safety Program is developed by the National Restaurant Association (NRA) to address the growing food safety concerns of consumers for the food service staff that serve them. This program provides foodservice managers and employees of schools, nursing homes, senior centers, deli's, private clubs, and restaurants information on food microbiology, sanitary food handling and storage, HACCP food safety program, pest control, and safety procedures. The NRA's ServSafe program leads the way in providing comprehensive educational materials to the restaurant industry. The training and certification program is recognized by more federal, state and local jurisdictions than any other food safety certification.

Family and Consumer Sciences Extension Agents offered ServSafe® Manager and Food Handler training opportunities across the state.

Briefly describe how your target audience benefited from your project's activities.

Food industry professionals received critical educational trainings. After the training, participants completed either the ServSafe® Manager certification exam or the Food Handler test to assess their knowledge of food safety and recommended food handling practices. As a result of the trainings, participants indicated they are very likely to improve these food safety practices:

- train employees on personal hygiene and safe food handling
- monitor cleaning and sanitizing practices for food-contact surfaces
- perform continuous self-inspections
- monitor employee use of food thermometers and temperature logs
- monitor employee handwashing
- use written standards for receiving foods from suppliers

On average, these foodservice workers serve approximately 1,500 people a day and manage approximately 20 employees.

Foodservice personnel indicated in the post evaluations that "Instructors made the class interesting" and "Great new information". As a result of these classes, participants can put into practice the new knowledge and keep food safe for Georgia.

Briefly describe how the broader public benefited from your project's activities.

Reduce foodborne illness

Comments (optional)

Describe and explain any major changes or problems encountered in approach. Additionally, note opportunities for training and professional development provided, how results have been disseminated to communities of interest, and any new details regarding what the project or program plans to do during the next reporting period to accomplish the goals.

N/A

Critical Issue

Health & Nutrition

Program/Project

Diabetes Prevention

In 2-3 sentences, briefly describe the issue or problem that your project addresses.

One in three American adults (88 million) has prediabetes and more than 8 in 10 adults with prediabetes don't know they have it.(1) Prediabetes increases the risk for heart disease and stroke and for developing type 2 diabetes (T2DM), a costly and life-altering disease that increases the risk for morbidity and mortality from COVID-19. Together, prediabetes and diabetes cost Georgia \$11 billion annually in direct medical expenses and lost productivity,(2) and those costs are likely higher in the wake of COVID-19. The evidence-based, CDC National Diabetes Prevention Program (DPP) lifestyle change program has been shown to decrease the risk of developing T2DM by up to 58% among those with prediabetes who lose at least 5% of their body weight by eating healthy and exercising 150 minutes per week.(3) Moreover, the program has been shown to have a return on investment of up to 42%, and save participants \$2,671 per person in medical costs per year.(4)

1. Centers for Disease Control and Prevention. About Prediabetes & Type 2 Diabetes.

<https://www.cdc.gov/diabetes/prevention/about-prediabetes.html>. Accessed on Jul 27, 2020.

2. American Diabetes Association. The Burden of Diabetes in Georgia.

http://main.diabetes.org/dorg/docs/state-fact-sheets/ADV_2020_State_Fact_sheets_GA.pdf. Accessed on Oct 20, 2021

3. Centers for Disease Control and Prevention. Research Behind the National DPP.

<https://www.cdc.gov/diabetes/prevention/research-behind-ndpp.htm>. Accessed on Jul 27, 2020.

4. Khan, T., Tsipas, S., & Wozniak, G. (2017). Medical Care Expenditures for Individuals with Prediabetes: The Potential Cost Savings in Reducing the Risk of Developing Diabetes. *Population health management*, 20(5), 389–396. <https://doi.org/10.1089/pop.2016.0134>

Briefly describe in non-technical terms how your major activities helped you achieve, or make significant progress toward, the goals and objectives described in your non-technical summary.

In the fall of 2019, UGA Extension began delivering the yearlong Diabetes Prevention Program in-person in two counties and expanded to in-person delivery to 13 counties in winter of 2020. All in-person programs were switched to virtual delivery in March of 2020 in response to the COVID-19 pandemic. As of fall 2020, UGA Extension has been providing both in-person and virtual Diabetes Prevention Programs across the state inclusive of 13 counties and three University System of Georgia faculty and staff groups (University of Georgia, University of North Georgia, and Georgia Tech). FACS Extension agents teach participants to prevent diabetes through eating healthy, managing stress, being more active, and

problem solving. Participants and agents work together to find solutions to the common barriers to a healthy lifestyle, many of which were amplified during the pandemic lockdowns. In the reporting year, FACS Agents delivered over 2,700 educational contact hours to the 194 active participants.

Briefly describe how your target audience benefited from your project's activities.

Since the start of the program in 2019, agents delivered 25 programs (16 complete and 8 ongoing) to 277 Georgia citizens, (102 in-person and 92 virtual since November 2020). Participants lost a total of 1,924 pounds (1,618 since November 1, 2020). Sixty participants have met or exceeded the 5% weight loss goal shown to reduce the risk of diabetes, and many of these participants are only partway through the year-long program. Moreover, participants are averaging 175 minutes of physical activity per week which exceeds the program goal. Notably, these positive outcomes have been achieved during a time when much of America has gained weight and experienced declines in physical and mental health.

The estimated savings of an individual who does not progress from prediabetes to diabetes is \$2,671 annually.⁽⁴⁾ Thus, one could estimate that these 60 people who have met the program goals will save \$160,260 next year if this weight loss keeps them from progressing to diabetes. Yet diabetes costs are not the only costs associated with excess weight, and researchers have compared societal costs savings across BMI categories.⁽⁵⁾ Eight people moved from overweight to normal weight and 11 people from obese overweight resulting in an estimated societal cost savings of \$329,287.5

Participants have also reported decreasing medications and insulin, less knee pain, and improvements in cholesterol, blood pressure, and mental health. Comments from participants include, "This program was the best thing that I've done in a long time...and I no longer have to take the pre-diabetes medication my doctor had prescribed," "Since COVID, [the DPP] has helped me to get back on track," and "My joint pain and inflammation is virtually gone."

In February 2021, UGA achieved full recognition, the highest honor, in the CDC through the National Diabetes Prevention Recognition Program for its excellence in implementation and program outcomes. Thus, UGA Extension is persevering through the pandemic to improve health and wellbeing of citizens and save Georgia money.

1. Centers for Disease Control and Prevention. About Prediabetes & Type 2 Diabetes.

<https://www.cdc.gov/diabetes/prevention/about-prediabetes.html>. Accessed on Jul 27, 2020.

2. American Diabetes Association. The Burden of Diabetes in Georgia.

http://main.diabetes.org/dorg/docs/state-fact-sheets/ADV_2020_State_Fact_sheets_GA.pdf. Accessed on Oct 20, 2021

3. Centers for Disease Control and Prevention. Research Behind the National DPP.

<https://www.cdc.gov/diabetes/prevention/research-behind-ndpp.htm>. Accessed on Jul 27, 2020.

4. Khan, T., Tsipas, S., & Wozniak, G. (2017). Medical Care Expenditures for Individuals with Prediabetes: The Potential Cost Savings in Reducing the Risk of Developing Diabetes. *Population health management*, 20(5), 389–396. <https://doi.org/10.1089/pop.2016.0134>

5. Fallah-Fini, S., Adam, A., Cheskin, L. J., Bartsch, S. M., & Lee, B. Y. (2017). The additional costs and health effects of a patient having overweight or obesity: a computational model. *Obesity*, 25(10), 1809-1815.

Briefly describe how the broader public benefited from your project's activities.

Improved health of citizens

Comments (optional)

Describe and explain any major changes or problems encountered in approach. Additionally, note opportunities for training and professional development provided, how results have been disseminated to communities of interest, and any new details regarding what the project or program plans to do during the next reporting period to accomplish the goals.

N/A

Critical Issue

Health & Nutrition

Program/Project

Gleaning Program Provides Fresh Produce

In 2-3 sentences, briefly describe the issue or problem that your project addresses.

In Georgia, 32% of adults are obese, while in Appling County 39% of adults are obese (CHR, 2020). Obesity and overweight contribute to the development of chronic conditions such as cardiovascular disease (CVD), hypertension, diabetes, cancer and osteoarthritis. CVD is the number one killer in Georgia. For every 100,000 people in Georgia, 341.1 people die from heart disease annually compared to 320 per 100,000 nationally (CDC, DHDSP 2016-2018). For every 100,000 people in Appling County, 475.9 adults die from all heart related disease each year. Hypertension contributes to heart disease, kidney disease, diabetic complications and stroke. For every 100,000 people in Appling County, 110.2 people die each year from stroke compared to the Georgia average of 85. While 10.5% of the US population has been diagnosed with diabetes, 11.4% of Georgians have been diagnosed with diabetes (CDC, 2020). Appling County is higher than the state average at 15% of adults diagnosed with diabetes (CDC, 2017). Cancer is the second leading cause of death in Georgia and the US (CDC, 2017). While Georgia has similar incidence and mortality rates to the U.S. for breast, cervical and colorectal cancer, several counties, particularly rural counties, have rates that far exceed national and state averages (SEER, 2013). For every 100,000 people in Appling County, 416.8 people are diagnosed with cancer; cancer mortality rates are 173.3 people (CDC, 2017). Risk for 1/3 of cancers could be reduced by achieving a healthy weight, eating a healthier diet, not smoking and being more physically active (AICR 2018). Out of the six statistics mentioned above, Appling County ranks higher than Georgia does five times. In addition, only 20% of the population of Appling County has access to exercise opportunities, which is below state norms at 75%. Appling County also ranks higher, at 38% in physical inactivity, than the state at 28%, according to County Health Rankings (2020).

Briefly describe in non-technical terms how your major activities helped you achieve, or make significant progress toward, the goals and objectives described in your non-technical summary.

As one of the eleven counties chosen to receive funding from Healthcare Georgia Foundation Two Georgias Initiative, Appling County formed the Coalition for a Healthy Appling County in 2017. Two of the goals of the Strategic Plan are to: Empower all Appling County residents to eat a healthy diet and to Empower all Appling County residents to be physically active. As chair of the Healthy Eating Committee, agent helped choose strategies to meet the goal of this committee. One of the strategies chosen was to support the establishment of a Gleaning Program, which gives volunteers the opportunity to gather leftover produce after a harvest to donate to those in need. This project addresses both goals mentioned above by providing fresh produce to limited income individuals and families, and promotes physical activity to those who glean. In addition, it has helped foster community and a sense of belonging among the volunteers who enjoy working together for a good cause.

Briefly describe how your target audience benefited from your project's activities.

Extension partnered with the Coalition for a Healthy Appling County to form the Appling County Glean Team in October 2018, under the direction of Society of St. Andrew. Thirteen growers from Appling and surrounding counties have been involved by donating produce that was left after the harvest. One farmer has donated an acre of his land to plant a garden just for this project. Nine volunteers have been trained to be Field Supervisors. Seventy-one volunteers have gleaned, with a total of 713 volunteer hours, with a value of \$20,349.00, based on Independent Sector–Dollar Value of a Volunteer. Some of the volunteers included 4-H'ers, clients from the Appling County Senior Center and Pineland Adult Mental Health Service Center.

The gleaning program has provided adults and youth opportunities to give back. Since the project's inception, volunteers of all ages have gleaned 40 times, and one farm donated pallets of blueberries fifteen times. Last year, four 4-H'ers donated one of their show pigs for slaughter to the food bank. In total, 55,550 pounds of produce and 650 pounds of pork, equaling 56,200 pounds of fresh food, have been donated to feed limited income citizens of Appling and surrounding counties. According to America's Second Harvest, the dollar value of these donations equal \$56,200.

In order to educate those receiving food, FACS agent also provided Farm, Fresh and Fast brochures for the food bank to disperse with produce that was gleaned. Therefore, 225 citizens of Appling County have received educational materials, which included nutrition facts, food safety advice and recipes.

This project has impacted Appling County citizens in many ways, whether they received food or volunteered their time to give back to their community. Food was donated to several organizations: the Appling County Food Bank; the Appling County Senior Center; Pineland Behavioral Health Center; Called to Love; Elderwood Apartments; and the Georgia Baptist Children's Home.

Through the gleaning program, the original goals – to empower all Appling County residents to eat a healthy diet and to empower all Appling County residents to be physically active – are being met with the help of volunteer adults and youth. The main objective of this project is to strengthen the overall health

of Appling County, raising it above the state and national levels.

The following testimonies represent those who have been involved in this project:

A volunteer from the Appling County Senior Center, said “This is a wonderful program. It allows people who wouldn’t normally go to the store to buy fresh fruits and vegetables to eat healthy. It’s such a blessing. I feel that the farmers enjoy not having to waste their crop and be able to bless people too. I’ve so enjoyed helping with this worthy cause. It’s been a blessing to me and to others.”

The overseer of the Appling County Food Bank, said “For the people we serve and the food bank volunteers, receiving fresh fruits and vegetables makes their day! Not only for the people we serve, but those people who are serving especially enjoy being able to serve fresh produce to the clients. You know, most people just don’t get fresh produce anymore. It is very rewarding. People get excited about fresh produce!”

Briefly describe how the broader public benefited from your project's activities.

Fresh produce available to the public

Comments (optional)

Describe and explain any major changes or problems encountered in approach. Additionally, note opportunities for training and professional development provided, how results have been disseminated to communities of interest, and any new details regarding what the project or program plans to do during the next reporting period to accomplish the goals.

N/A

Critical Issue

Health & Nutrition

Program/Project

Making Mental Health a Priority

In 2-3 sentences, briefly describe the issue or problem that your project addresses.

Mental health is a prevalent issue in Clayton County, Georgia. In 2017, Georgia Department of Public Health reported approximately 3,000 discharges related to mental health in the county. Although it is a prevalent issue, there is only 1 mental health provider per 1,880 mental health patients according to the Clayton County Health District. Research has shown that physical health and mental health impact each other tremendously. Those who suffer from cardiovascular disease or diabetes or other chronic diseases are at a greater risk for developing depression and/or anxiety. Clayton County has a high prevalence of diabetes, obesity, and cancer. Chronic diseases that can have a major impact on an individual's mental health.

Briefly describe in non-technical terms how your major activities helped you achieve, or make significant progress toward, the goals and objectives described in your non-technical summary.

In May 2021, Clayton County Extension began its Prioritizing Mental Health series. This was a weekly, one-hour series held virtually that introduced participants to different ways to practice mindfulness-- Mindful Gardening, Mindful Eating, and Mindful Cooking. Mindfulness is described as the basic human ability to be fully present and aware of where we are and what we are doing. Research has shown that mindfulness positively impacts stress reduction, emotion and attention regulation, and helps to reduce depression and anxiety. In the third week, a licensed therapist joined for Mental Health 101 session sharing information about different types of mental illnesses, the symptoms, and some possible coping mechanisms. To close out the Prioritizing Mental Health series, Clayton County Extension launched the "Mental Health Roundtable" on Facebook Live. The roundtable was a three-part recorded conversation between Extension agents from both University of Georgia and Fort Valley State University on different topics and questions concerning mental health.

Briefly describe how your target audience benefited from your project's activities.

The Prioritizing Mental Health series reached over 1000 people virtually with the Mental Health Round Table reaching over 200 people alone. After participating in the series, approximately 70% of attendees reported increased knowledge with 100% reporting that they will definitely use the information provided. Attendees also reported that they felt better, more stable, less stressed, and more in control. One viewer said, "I wish I could turn back the clock to when my mother first dealt with depression. But I am grateful for the tools and information that I now know. UGA Extension (Clayton County) thank you". Another viewer mentioned, "The entire Mindful Monday series was beneficial and served as a reminder of the things that we can do for our mental health. This platform provided access to this very important information to individuals over the entire country. Thank you!".

Briefly describe how the broader public benefited from your project's activities.

Improved mental health of citizens

Comments (optional)

Describe and explain any major changes or problems encountered in approach. Additionally, note opportunities for training and professional development provided, how results have been disseminated to communities of interest, and any new details regarding what the project or program plans to do during the next reporting period to accomplish the goals.

N/A

Critical Issue

Health & Nutrition

Program/Project

Increasing Community Engagement on Health

In 2-3 sentences, briefly describe the issue or problem that your project addresses.

Extension's WCC initiative helps build diverse, multigenerational, cross-sector coalitions that can recognize and address systemic health inequities. This initiative supports youth voice and action through equal partnerships with adults, addresses determinants of health through policy, systems and environmental changes at local and system level and focuses on diversity, equity and inclusion. Washington County has been part of this grant for the past four years and plans to continue to work toward these projects. Located in the Southeast Extension District, Washington County has a long history of being engaged in health interventions with many community collaborators including county government. Washington County is rural and ranks 59 of 159 counties in overall ranking in health outcomes with a population of 20,676 and a 30.2 % poverty rate. Out of 159 Counties Washington County ranks 34 in County Life Expectancy (Premature Death) out of those 159 Counties.

Briefly describe in non-technical terms how your major activities helped you achieve, or make significant progress toward, the goals and objectives described in your non-technical summary.

Washington County established and formed a community Health Coalition. With the expertise in rural programs the Archway Partnership and Cooperative Extension were natural partners for developing new options and resources for the community. Extension and UGA Archway partnered their Health Issue Work Group model to bring together stake holders, including healthcare providers and other community members, to learn about the needs and goals for rural areas on health and the Washington County Health Coalition was formed. Youth voice has become valued and an active part of the Coalition. Washington County 4-H Agent recruited youth to the Health Coalition team. WCC team members were offered an opportunity to participate in the new developed master Volunteer Academy. Four youth and two adults agreed to complete the 40-hour volunteer training and successfully graduated the program. The Master Volunteers now participate in the Washington County Health Coalition. This will provide over 480 volunteer hours back into the community.

Briefly describe how your target audience benefited from your project's activities.

Efforts in recruiting adult and youth volunteers produced a total of 104 volunteers actively participating in the WCC Master Volunteer Academy. 15 adult volunteers and 7 youth volunteers are actively participating in monthly Health Coalition Meetings. Current estimated national value of each volunteer hour is \$28.54. The 6 master volunteer graduates have given 240 hours of volunteer time at an estimated amount of \$12,329.28. There are additional 98 participants in the Master Volunteer Program giving their time of 18 hours totaling 1,764 hours for an estimated value of \$50,344.56. Since graduation, the master volunteer graduates have given an additional 192 hours totaling \$5,479.68. Additional WCC volunteers have given 96 hours totaling \$2,739.84. WCC has acquired \$53,344.56 of

estimated value to Washington County Culture of Health. Participant Comments: “I never thought about improving health equity means changing policies, systems and environments so that everyone has what they need.” – Youth Participant. “I have been so impressed how our youth have grown becoming a strong voice and integral part of the decisions about health in our community.” – Adult Participant.

Briefly describe how the broader public benefited from your project's activities.

Increased community engagement

Comments (optional)

Describe and explain any major changes or problems encountered in approach. Additionally, note opportunities for training and professional development provided, how results have been disseminated to communities of interest, and any new details regarding what the project or program plans to do during the next reporting period to accomplish the goals.

N/A

Critical Issue

Health & Nutrition

Program/Project

Fresh on DeK Mobile Farmers Market

In 2-3 sentences, briefly describe the issue or problem that your project addresses.

DeKalb County has the 4th highest case count of novel coronavirus (COVID-19) in the state of Georgia, compared to 2020. Feeding America projects that in 2021, 21.3% of black individuals may experience food insecurity, due to lack of access to sufficient foods because of limited financial resources.

Briefly describe in non-technical terms how your major activities helped you achieve, or make significant progress toward, the goals and objectives described in your non-technical summary.

Fresh on DeK Mobile Farmer's Market visits 16 different food desert locations around DeKalb County over the course of 16 weeks providing education and fresh produce to DeKalb residents. Due to social distancing and food-handling guidelines, Fresh on Dek continues to provide fresh produce at no cost at various strategic drive-thru locations, including recreation centers, senior communities, public libraries, churches, and community centers. Residents receive a range of pre-bagged produce including sweet potatoes, apples, oranges, corn, okra, plums and more. Fresh on DeK, continues offering weekly live classes, online food demonstrations and digital healthy-living handouts. This is made possible with funding from the Centers of Disease Control and Prevention, DeKalb County Government DeKalb County Board of Health and UGA Cooperative Extension.

Briefly describe how your target audience benefited from your project's activities.

Throughout the 16-week 2021 farmers market season, Fresh on DeK Mobile Farmer's Market provides fresh produce to about 8,410 residents. The number of participants nearly doubled from last year's farmers market season. This equates to the distribution of approximately 54,665 pounds of fresh fruits and vegetables at 16 community sites around DeKalb County. Fresh on DeK continues the educational outreach through weekly 1-hour healthy living classes on Zoom and Facebook Live online platforms for 16 weeks. Reaching over 500 online participants through various topics such as physical activity with limited mobility, to reducing sodium intake in their diets. Fresh on DeK estimates \$95,665 of money saved for families, based on average produce prices. A participant of the classes said, "The Health, Nutrition, and Wellness discussion and demonstrations were most/very beneficial part of the program." Another participant commented, "Thank you for providing this program, it has been a blessing to myself and my family."

Briefly describe how the broader public benefited from your project's activities.

Improved access to fresh produce

Comments (optional)

Describe and explain any major changes or problems encountered in approach. Additionally, note opportunities for training and professional development provided, how results have been disseminated to communities of interest, and any new details regarding what the project or program plans to do during the next reporting period to accomplish the goals.

N/A

Critical Issue

Health & Nutrition

Program/Project

Farmers to Families

In 2-3 sentences, briefly describe the issue or problem that your project addresses.

Many Americans, including Telfair County citizens, who rank 153rd out of 159 counties for poverty, lost jobs and other valuable resources through no fault of their own due to the COVID-19 Pandemic. In addition, even the families within the community who remained gainfully employed found resources to not be as plentiful due to COVID-19. Grocery store shelves were not always packed and when they were, many families had no way to pay for the goods.

Briefly describe in non-technical terms how your major activities helped you achieve, or make significant progress toward, the goals and objectives described in your non-technical summary.

Extension was contacted by the Telfair County Board of Education about becoming a collaborative partner for a weekly distribution of the Farmers to Families Food Boxes in July of 2020, we excitedly agreed! With the anticipation of school starting back in August, no boxes were ordered as the school site would be unavailable to receive visitors with school in session. Upon hearing this, Extension stepped up and applied to become a distribution site. Working with several community partners such as the Telfair County Farmers Market, the Telfair County Firefighters, the Telfair County Farm Bureau, The Telfair County Commissioners, McRae-Helena Public Works, and the Telfair County Recreation, Extension has been able to provide an additional two rounds of food box distribution in September and October, resulting in another seven weeks of food box delivery to Telfair County citizens. Extension is also providing SNAP-Ed (Supplemental Nutrition Assistance Program Education) materials to participants during the weekly food distributions, in addition to online videos for recipes for using the weekly food box items.

Briefly describe how your target audience benefited from your project's activities.

The Farmers to Families Food Distribution partnership resulted in a total of 2,808 boxes of food valued at \$168,840.00 of free and fresh fruits, vegetables, dairy, and meat products to countless Telfair County families in just the fourth quarter of 2020. This is a huge economic impact for a rural, poverty-stricken county. For many families, this weekly food box has provided more than just food, it has provided hope and assurance that they are not forgotten and their families are important and cared for. The smiles and the gratitude that are given to each volunteer weekly is reassurance for Extension that this was indeed a much-needed and much-appreciated endeavor. In addition to the tremendous food value this has provided Telfair county, Extension's response required many volunteers weekly to ensure that this initiative ran smoothly and accomplished the goals of providing as many families with food as possible. Each week, Extension coordinated at least 20 volunteers, resulting in \$2,034.00 worth of additional services provided to local citizens – that is \$28,476.00 of in-kind support over the span of this three-month initiative! Finally, in an attempt to ensure this food did not go to waste, the FACS Agent authored

Facebook videos with quick, easy, and many no-cook recipes that would provide different ideas on how to easily prepare the food in each week's delivery. To date, these eight videos have been viewed 5,599 times in 23 states across the nation and even one foreign country! Additionally, over 2,500 recipe cards from SNAP-Ed have been distributed, as well as information on joining the SNAP-Ed Food eTalk, online classes. Based on the number of views through the Extension Facebook page and other social media sites, it is evident that this information is being used and shared on other's pages, impacting an even greater audience than our Farmers to Families food box recipients. The Farmers to Families initiative has allowed Extension to reach many individuals within our community that have never utilized Extension's services before with nearly 86% of survey participants reporting that they will actively seek out UGA Extension Programming in the future. Even more exciting is the fact that nearly 95% of survey participants of the program report that their family is now consuming more dairy and fresh fruits and vegetables daily. In addition, 100% of surveyed participants report that they will continue to look for ways to increase their consumption of dairy, fresh fruits and vegetables, resulting in a much healthier community! This program has resulted in greater food security for many families within our community while exposing them to a wide variety of simple, easy to prepare menus which will provide health benefits for everyone.

Remarks from participants: "Laura and her group ALWAYS exceed in taking care of Telfair County!" – Food Box Recipient from week 1,

"Our family is very appreciative on this service and the other services provided by our extension office in Telfair County. Laura Smith, her staff, and volunteers have coordinated distribution of the food boxes and have done a WONDERFUL job" – Food Box Recipient from week 3,

"I LOVE this program!!! It has helped my family save so much on groceries!!! It has also introduced new foods to our family"- Food Box Recipient from week 7

Briefly describe how the broader public benefited from your project's activities.

Food to families in need

Comments (optional)

Describe and explain any major changes or problems encountered in approach. Additionally, note opportunities for training and professional development provided, how results have been disseminated to communities of interest, and any new details regarding what the project or program plans to do during the next reporting period to accomplish the goals.

N/A

Critical Issue

Health & Nutrition

Program/Project

Two Agents & the FACS Podcast

In 2-3 sentences, briefly describe the issue or problem that your project addresses.

Face-to-face interaction with consumers has always been important in Family Consumer Science programming. Exposing communities, families, and stakeholders to research-based information based on the latest scientific research in language, is more than just a standard delivery. This task involves (a) establishing and maintaining personal relationships; (b) assisting and caring for others; (c) performing for or working directly with the public, and (d) selling to or influencing others. The current crisis that is brewing around the globe as social distancing becomes the norm to counter the COVID-19 outbreak. This outbreak has not only been a devastation to society's health but to society's social ability. Schools are taking part in virtual learning, people are working from home, and restaurants were only taking to-go orders. Face-to-face interaction has become extremely difficult or null and void. Despite the national crisis the University of Georgia's Family and Consumer Sciences program; in an attempt to provide a new, accessible outlet for research-based information to reach a larger audience of consumers and professionals, as well as to reach communities and families socially.

UGA Family and Consumer Sciences Agents Leslie Weaver and Carrie Vanderver created Two Agents & the FACS Podcast. A podcast is another method to entertain, humor, and educate. They are all sound, with no distraction coming from how people look or dress as you might get from watching a TV show or film. Information is being received in new ways. The Pew Research Center reports 86% of US adults to get news from digital services. Younger generations report obtaining information primarily from internet sources including diverse audience growth. According to a study conducted in late March 2020, Gen Z adults were the most likely group to listen to podcasts more as a result of the coronavirus outbreak in the United States, with 31 percent saying that their podcast consumption would likely increase, compared to 16 percent of Gen X respondents <https://www.statista.com/statistics/1107961/podcast-listeners-coronavirus-us/#statistic>. According to Morning Consult several podcast companies say they saw spikes in listenership through the pandemic, even during typically slow periods for the industry. 22% of consumers say they listened to podcasts more than usual during the pandemic, as podcast companies observe spikes in niche-topic titles. About 1 in 3 Americans 32% of Americans say they now listen to podcasts at least weekly. When asked to reflect on their pre-pandemic listening, habits, 26 percent said they streamed podcasts at least weekly. <https://morningconsult.com/2021/04/12/podcast-pandemic-growth/>

Briefly describe in non-technical terms how your major activities helped you achieve, or make significant progress toward, the goals and objectives described in your non-technical summary.

As outlets receiving information evolve, so should the way the University of Georgia Cooperative Extension delivers research-based material. FACS Agents Leslie Weaver and Carrie Vanderver created Two Agents & the FACS Podcast. A podcast that covers reliable, relatable, and research-based topics on

real-life issues. Sharing information from all extension program areas, and incorporating extension agents as a special guest to share expertise. Each episode lasts 30 to 45 minutes. New episodes are available on second and fourth Mondays each month, across seven different free listening platforms: Anchor, Breaker, Google Podcasts, Apple Podcasts, Pocket Casts, Radio Public, and Spotify. Episodes are recorded using an approachable “kitchen table talk” style. Two to three topics are covered each time that relate to current seasons, events, holidays, and issues, based on research-based Extension publications and other notable sources.

[Briefly describe how your target audience benefited from your project's activities.](#)

Two Agents & the FACS has been featured in CAES Newswire and the UGA FACS Magazine. Two Agents & the FACS maintains a larger audience than many in-person programs. The podcast has been strategically designed to be a friendly method of timely and important information delivered to consumers and professionals in Chatham and Ware Counties.

In result of Two Agents & the FACS Podcast:

- 18 Episodes produced, approximately 12 hours of content.
- There have been 927 plays.
- Episode play has ranged from 24-91 listeners.
- Listeners are primarily female (82%), 5% male, 13% non-specified.
- Listeners range in age from 18 to 60+.
- Episode 5: I Think I love my Spouse- 100 plays
- Episode7: The Facts on the Vacs- 85 plays

The podcast platform has provided outreach, and exposure to fellow agents through the national extension service;by sharing programs, publications or having guest host. Two Agents & the FACS has even been used as a teaching tool for other groups considering new methods of educational outreach: by invitation, the hosts discussed podcasting basics to professionals in Arkansas Extension not long after the initial development of the program

[Briefly describe how the broader public benefited from your project's activities.](#)

Research-based information on health and nutrition available to the public.

Comments (optional)

Describe and explain any major changes or problems encountered in approach. Additionally, note opportunities for training and professional development provided, how results have been disseminated to communities of interest, and any new details regarding what the project or program plans to do during the next reporting period to accomplish the goals.

N/A

Critical Issue

Plant Production

Program/Project

Agronomic Crops Scout School

In 2-3 sentences, briefly describe the issue or problem that your project addresses.

Insect pests pose a serious economic threat to Georgia's cotton, peanut and soybean producers. The foundation of effective IPM strategies is pest population monitoring and the use of economic thresholds for management decision making. Time constraints and lack of training often limit a grower's ability to monitor insect activity accurately and efficiently in his or her own fields. Well-trained professional scouts reduce the risk of insect injury to crops and ensure that control tactics (e.g. insecticide applications) are implemented only when necessary.

Briefly describe in non-technical terms how your major activities helped you achieve, or make significant progress toward, the goals and objectives described in your non-technical summary.

The University of Georgia Agronomic Crops Scout School is held annually in South-central and Southeast Georgia. The major components of the curriculum are crop physiology and development, insect identification and biology, proper scouting procedures, and safety. The half-day course provides attendees a comprehensive introduction to scouting cotton, peanut, and soybean with classroom and field instruction.

Briefly describe how your target audience benefited from your project's activities.

Using accurate, real-time pest population information for making pest control decisions is the single most effective way to reduce management mistakes. The Agronomic Crops Scout School ensures a ready supply of well-trained scouts to meet the pest monitoring needs of Georgia growers. Scout School attendance averages over 100 annually. The economic and environmental impact of implementing IPM practices in Georgia's major row crops is not easily quantified, but the benefits are significant. A survey of Georgia peanut growers conducted in the fall of 2021 showed that approximately half of the surveyed acres (108,277) were scouted regularly for insect pests. Growers who reported that their peanuts were scouted treated 24% fewer acres for foliage feeding caterpillars than growers whose peanut fields were not scouted. Likewise, the use of a trapping program to monitor peanut burrower bug populations in East Georgia in 2021 resulted in knowledge-based insecticide applications that reduced crop injury and ensured judicious pesticide use.

Briefly describe how the broader public benefited from your project's activities.

Reduction of pest damage to crops

Comments (optional)

Describe and explain any major changes or problems encountered in approach. Additionally, note opportunities for training and professional development provided, how results have been disseminated to communities of interest, and any new details regarding what the project or program plans to do during the next reporting period to accomplish the goals.

N/A

Critical Issue

Sustainability, Conservation, and the Environment

Program/Project

Georgia's "Using Pesticides Wisely" Program Changes Agriculture for the Better

In 2-3 sentences, briefly describe the issue or problem that your project addresses.

As the world's population is expected to approach 10 billion people by 2050, family farms are faced with a mighty challenge of feeding and clothing them all. To meet this demand, science confirms growers must have access to economically effective pesticides. Furthermore, new technologies like auxin-tolerant cotton and soybeans and their respective herbicides will be a vital part of long-term agricultural sustainability. However, it is equally important that all pesticides are used carefully and strategically in ways that protect the consumer of agricultural products, pesticide applicators, our environment, pollinators, and endangered species while managing pests effectively and economically.

Briefly describe in non-technical terms how your major activities helped you achieve, or make significant progress toward, the goals and objectives described in your non-technical summary.

With pesticide stewardship being critically important to the sustainability of humankind, University of Georgia Extension and the Georgia Department of Agriculture teamed up to create the first of its kind large-scale classroom and on-farm training program titled "Using Pesticides Wisely". The program has included the following: 1) Over 125 field experiments conducted across the state developing methods to improve on-target pesticide applications; 2) in-person classroom training events at 153 locations; 3) Extension Agents conducting one-on-one in-person trainings for over 1000 pesticide applicators helping them make better decisions when applying pesticides; and 4) during the pandemic, educational programs continued with a mixture of both virtual (15 webinars) and in-person trainings following safety guidelines.

Briefly describe how your target audience benefited from your project's activities.

The Using Pesticides Wisely program collectively trained 11,379 pesticide applicators since its creation in 2014 leading to a 78% reduction in pesticide drift complaints documented by the University of Georgia Cooperative Extension Service. Additionally, the Georgia Department of Agriculture has only confirmed one dicamba drift complaint from use in agronomic crops since the commercialization of the auxin technologies during 2016.

Briefly describe how the broader public benefited from your project's activities.

Pesticide stewardship is critically important to the sustainability of humankind.

Comments (optional)

Describe and explain any major changes or problems encountered in approach. Additionally, note opportunities for training and professional development provided, how results have been disseminated to communities of interest, and any new details regarding what the project or program plans to do during the next reporting period to accomplish the goals.

N/A

Critical Issue

Sustainability, Conservation, and the Environment

Program/Project

Industry-Funded Turfgrass Research and Extension Infrastructure

In 2-3 sentences, briefly describe the issue or problem that your project addresses.

Turfgrass is a multibillion-dollar industry that encompasses lawns, parks, sports fields, sod production and golf courses with over 62 million acres in the US. In the state of Georgia alone, turfgrass covers 1.8 million acres, making it one of the largest agricultural commodities with a maintenance value of \$1.56 billion. This industry accounts for 111,000 full- and part-time jobs. Because of high demands in aesthetic quality and playability, mitigating disease (dollar spot, rhizoctonia large patch, spring dead spot, Pythium anthracnose, fairy ring nematodes etc) and physiological stress factors (temperature extremes, water stress, light, salt, and poor soil quality) represents major expenses to the turfgrass industry. Despite the importance of the subject, there is a severe lack of research infrastructure and turfgrass facilities in where to carry out investigation and extension educational activities which are essential for attainment of crucial research data and its dissemination

Briefly describe in non-technical terms how your major activities helped you achieve, or make significant progress toward, the goals and objectives described in your non-technical summary.

Collaborations were established with essential turfgrass industry companies and professionals to act on the dire need for infrastructure research facilities. Bayer Environmental Science, Green Tee Golf Inc, Sports Turf Company and NG Turf and Pike Creek Turf answered to the call. Bayer Environmental Science provided funds for the construction of a 9600 sq ft research golf green built at USGA specifications which entails the subgrading of the area, subsurface drainage, rock gravel layer, sand, root zone mix, as well as covering, smoothing, and firming. A UGA-develop turfgrass bermudagrass species - TifEagle- sprigs were used as turfgrass putting surface. The experimental green has 8 independent irrigation zones. The cost of this research facility was estimated in \$89,000 dls. All funds were donated by the industry. Additionally, a 22,000 sq ft sports field research and education area was built as a soccer pitch. The turfgrass surface was sprigged with bermudagrass Tifway which is highly resistant to wear. The area was prepared, tilled, subgraded by Sports Turf Company and company \$18,000 dls. All funds, time, resources, and expertise were donated by the turfgrass industry at no cost to UGA. It is important to note that despite university shutdowns, labor shortage and overall uncertainty due to COVID, partnerships between UGA scientists and Extension specialists and Industry professionals was sustained, continued, and expanded while always maintaining COVID guidelines and protocols.

Briefly describe how your target audience benefited from your project's activities.

Two brand-new turfgrass research and extension state of the art infrastructure facilities were built despite of the challenges brought by COVID during 2020. These facilities are now available to researchers and extension specialists at the UGA griffin campus. The total cost of these industry-funded projects is estimated at US \$ 107,000 dls. The partnership between the turfgrass industry and turfgrass

scientists at UGA has already yielded fruits. The research golf green and the sports field area have been used to conduct a myriad of fungicide evaluation trials and several physiological stress-related investigations. Several extension educational activities have been carried out. More disease and physiological stress management trials will be conducted this fall 2021 and spring 2022. As COVID restrictions and uncertainty ease, face to face educational extension activities are expected to increase exponentially. The final goals of these infrastructure project are to provide turfgrass managers with new disease and physiological stress management tools, improved disease control, and better turf quality in our state. Results from these investigations and extension activities will benefit the turfgrass industry, practitioners and public at large. Anecdotally, the soccer pitch has also been used as an area to carry out team-building activities and soccer matches to promote health and wellness among faculty and staff on campus.

Briefly describe how the broader public benefited from your project's activities.

N/A

Comments (optional)

Describe and explain any major changes or problems encountered in approach. Additionally, note opportunities for training and professional development provided, how results have been disseminated to communities of interest, and any new details regarding what the project or program plans to do during the next reporting period to accomplish the goals.

N/A

Critical Issue

Sustainability, Conservation, and the Environment

Program/Project

Great Georgia Pollinator Census

In 2-3 sentences, briefly describe the issue or problem that your project addresses.

During the first Great Georgia Pollinator Census in 2019, 4,698 Georgians participated. During 2020, during the COVID pandemic, 3,755 people participated. As people stayed home during the COVID crisis, more backyard gardens were created and interest in pollinators also increased. In August of 2021, most school systems had returned to in-person learning and there was renewed interest in science, technology, engineering, art and math (STEAM) programming. Businesses also showed increased interest in the Pollinator Census either by having their employees participate as part of community outreach programs or by attracting clients to the business for counting events.

Briefly describe in non-technical terms how your major activities helped you achieve, or make significant progress toward, the goals and objectives described in your non-technical summary.

The project coordinator met with teachers to determine what Census resources were needed to meet the STEAM needs of the schools. Expanded lesson plans incorporating language arts and math were created and distributed through the website, social media and e-newsletter. Educators received instruction on adding a pollinator garden landscape building component to their programs during teacher trainings.

Resources for businesses were created and a "Business" tab was added to the website, <https://GGaPC.org>. Andie Culbertson, MLA, created a simple landscape plan that businesses could follow to have a small habitat of landscape plants that would be blooming during Census counting time.

Social media, Georgia Pollinator Census Facebook Group and @GaPollinators Instagram, continued to be an educational tool for the Census. During the first part of the year, pollinator habitat creation was emphasized along with best management practices. Approaching summer, the focus switched to insect identification. Practice counts were encouraged in spring and mid-summer and special insect identification quizzes were added on social media. #FunFactFridays were continued in 2021 and educators pulled those for use in the classroom. The Great Georgia Pollinator Podcast was launched in 2021 as another outreach tool.

The project coordinator, Extension agents and 23 project partners created online content such as webinars, videos and Facebook live events to educate the public on pollinator habitat, insect identification and how to successfully participate in the census. Over 40 in-person counting events were organized across the state. University of Georgia's Office of Communication worked with the project coordinator to create new project graphics for Extension agent and partner use.

Briefly describe how your target audience benefited from your project's activities.

Five thousand, nine hundred and forty-six Georgians participated in the 2021 Great Georgia Pollinator Census documenting over 108,000 insect visits. This is a 58% increase in participation from the 2020 Census. Seventy-five schools participated with an increased number of classes per school involved. Georgians of all ages counted insects, including Phoenix of Tucker Senior Living Facility and VFW #5255 as well as the Three Rivers Boys and Girls Club.

There was increased participation by colleges. Kennesaw State students participated, the University of North Georgia and Georgia Tech both had special counting events and the biology department at West Georgia College participated. The Young Harris College biology department encouraged their students to count although classes were not yet in session. Monks from the Monastery of the Holy Spirit counted. Slow Pour Brewery and Project Chimps are examples of businesses that participated.

The Georgia Pollinator Facebook Group grew to over 2,500 members. Although the focus is a Georgia-based project, members from nine countries outside of the United States are interested in what Georgia is doing with pollinator conservation and are part of the group.

Participants reported that 436 new pollinator spaces were created as a part of the 2021 Census. Sixty-five percent of participants indicated that participating in the census changed their understanding of the benefits provided by insects that visit their gardens.

Comments from participants included:

"They are not just stinging creatures they actually help the world when you give them a chance."

"These fourth grade students took their job as citizen scientists very seriously".

"There are many tiny insects in the pollinator world that I never noticed before today."

"It was worth breaking ground for this flower garden in 2020 even at age 71!"

"You can't yell and run around if you want to see some insects."

Briefly describe how the broader public benefited from your project's activities.

Honey bees and the beekeeping industry are societal assets that need to be valued and sustained. Honey bees not only provide honey, but they are the world's most manageable pollinator, a source of healthful recreation for hundreds of thousands, and a viable direct contributor to agricultural production. Honey bees, along with other biotic pollinators, are threatened by many environmental stressors. Providing communities with trained and vetted experts on pollinators is an investment for science literacy and environmentally-sound local policies.

Comments (optional)

Describe and explain any major changes or problems encountered in approach. Additionally, note opportunities for training and professional development provided, how results have been disseminated to communities of interest, and any new details regarding what the project or program plans to do during the next reporting period to accomplish the goals.

N/A

Critical Issue

Sustainability, Conservation, and the Environment

Program/Project

Forecasting Agricultural Water Use

In 2-3 sentences, briefly describe the issue or problem that your project addresses.

Increasing water demand and shifting climate conditions will continue to put increased pressure on Georgia's water resources. In an effort to proactively develop water management strategies, the state puts together a State Water Plan every 5 years. To do that effectively requires good information on future water use within each Water Planning Council's watershed.

Briefly describe in non-technical terms how your major activities helped you achieve, or make significant progress toward, the goals and objectives described in your non-technical summary.

Developed county-level estimates of agricultural water use under different climatic conditions for 2021-2030. Each forecast was broken down by surface water and groundwater; the forecasts were also aggregated up to the watershed level.

Briefly describe how your target audience benefited from your project's activities.

These forecasts are used by the Water Planning Councils to anticipate water demand and develop appropriate water management strategies. The forecasts and water management plans are ultimately incorporated into the State Water Plan.

Briefly describe how the broader public benefited from your project's activities.

Public

Comments (optional)

Describe and explain any major changes or problems encountered in approach. Additionally, note opportunities for training and professional development provided, how results have been disseminated to communities of interest, and any new details regarding what the project or program plans to do during the next reporting period to accomplish the goals.

N/A

Critical Issue

Sustainability, Conservation, and the Environment

Georgia Green Landscape Stewards Program

In 2-3 sentences, briefly describe the issue or problem that your project addresses.

According to a report published by the Natural Resources Conservation Service, as of 2012 4.6 million acres in Georgia were allocated to developed land. Developed land is the fastest growing land use category with acreage more than doubling between 1982 and 2012. As we face global crises such as climate change, biodiversity loss and water shortages, the choices we make in our individual landscapes have a significant impact on our local and global ecosystems.

Briefly describe in non-technical terms how your major activities helped you achieve, or make significant progress toward, the goals and objectives described in your non-technical summary.

Utilizing funding from a mini-grant from the Center for Urban Agriculture at the University of Georgia, Camden County Agriculture Agent Jessica Warren and Northeast Area Water Agent Martin Wunderly worked to create a sustainable landscape program in which clients could learn from educational modules at their own pace, implement practices in their landscapes and evaluate their landscape practices for recognition. Participants must reach a minimum score of 70 points on the scoring metric in order to certify their landscape. Educational and scoring metric components include composting, mulching, pollinator habitat, welcoming wildlife, water conservation, water quality, stormwater, invasive species, native plants and biodiversity. Certification is free and participants have the opportunity to purchase an attractive yard sign that designates their property as a Georgia Green Landscape. The program is open to all Georgia residents and businesses. Clients can navigate the program on their own or through the leadership of their local extension agent. The website contains an "UGA Agent Resources" tab that contains ready to use presentations and marketing materials through a password protected shared file.

Briefly describe how your target audience benefited from your project's activities.

Since the program launched in March of 2021, 68 landscapes in 29 different counties have been certified through the Georgia Green Landscape Stewards Program. There have been more than 1239 views of program educational components through the program's YouTube channel, and more than 2241 unique views of the program website (<https://site.extension.uga.edu/georgiagreen/>). Master Gardener groups have been especially excited about the program and promoting it in their local communities. In addition to residential landscape certifications, there have been several church and public demonstration garden certifications. Educational components were also offered as a live webinar series following the program launch. Evaluations from the webinar series stated that 100% of respondents had an increase in knowledge due to the series. The program has received much positive feedback from clientele including the quotes below which also help document behavior changes due to the program.

“Thank you. Going through the checklist made me aware of some areas where I am weak. I will work on ongoing improvement!”

“It was a very informative lecture by Jessica Warren extension agent, on supporting the GA ecosystem and the necessity of planting and maintaining native corridors for pollinators which are not just butterflies. Great presentation!!!! Simply put, informative and inspirational.”

“I just wanted to say that I thought the program was really well done. The videos were both informative and interesting, and the scorecards were a great tool for assessing key practices. I’m hoping the yard sign will help serve as a form of advertisement, since the concepts in this program are extremely important.”

“The stick pile my boyfriend keeps in the yard and I have wanted to clean up is probably why we have so much biodiversity already. I just took down our hummingbird feeder and we are getting a frog pad for the pool. Also, going to pick up the dog's business more often.”

“I will implement poster/brochure session at future garden club plant sales/also advise club members club will not sell any plants listed as invasives on Georgia Green Landscapes Steward Program.”

“I learned about the different types of mulch and their advantages and disadvantages. I will use this information with my school garden projects and community gardens. I love this series!”

“I didn't know that the newer classes of pesticides were more water soluble. I'm going to put together a chemical spill kit for my home. I plan to establish a rain garden in an area of my property that is part of the stormwater path to a nearby lake.”

“It's really important to NOT over fertilize your lawn/plants. I plan to send off soil for testing!”

“This was a great all-around series. I learned so much about the full picture of native gardening - from the best plants to how to compost, conserve, water, etc, etc. Totally enjoyed it and would highly recommend. Many thanks to Jessica and Martin.”

Briefly describe how the broader public benefited from your project's activities.

The choices we make in our individual landscapes have a significant impact on our local and global ecosystems.

Comments (optional)

Describe and explain any major changes or problems encountered in approach. Additionally, note opportunities for training and professional development provided, how results have been disseminated to communities of interest, and any new details regarding what the project or program plans to do during the next reporting period to accomplish the goals.

N/A

Critical Issue

Sustainability, Conservation, and the Environment

Program/Project

Georgia Master Beekeeper Program

In 2-3 sentences, briefly describe the issue or problem that your project addresses.

Honey bees and the beekeeping industry are societal assets that need to be valued and sustained. Honey bees not only provide honey, but they are the world's most manageable pollinator, a source of healthful recreation for hundreds of thousands, and a viable direct contributor to agricultural production. Honey bees, along with other biotic pollinators, are threatened by many environmental stressors. Providing communities with trained and vetted experts on pollinators is an investment for science literacy and environmentally-sound local policies.

Briefly describe in non-technical terms how your major activities helped you achieve, or make significant progress toward, the goals and objectives described in your non-technical summary.

In 2002, the organizers of the annual Young Harris Beekeeping Institute inaugurated the Georgia Master Beekeeper program, building on models developed decades earlier by Cornell University and the Eastern Apicultural Society. Participants progress through four grades of increasing complexity and demands - Certified (entry level), Journeyman, Master, and Master Craftsman. The most difficult bottleneck is the Journeyman stage where participants must pass - with a perfect score of 100% - two grueling tests on insect and disease identification. The highest grade, Master Craftsman, requires an independent research project, an activity portfolio, and an oral theoretical and practical exam; it is intended to approximate the experience of a MS program. Two of these Master Craftsman projects have resulted in refereed scientific publications.

Briefly describe how your target audience benefited from your project's activities.

Popular demand has led us to expand Master Beekeeper training and testing sites to two deputized and vetted local beekeeping clubs - the Tri-County (Maysville area) and Metro (Atlanta) Beekeepers Associations. Additionally, in a high-visibility outreach effort the Master Beekeeper program has been extended to inmates in Georgia prisons <http://www.dcor.state.ga.us/NewsRoom/PressReleases/master-beekeeping-program-begin-lee-state-prison>. The addition of these multiple venues has led to a rapid increase in participation. In 2021, the 1000th participant passed her Certified exam and was inducted into the program. At press time, the Georgia Master Beekeeper program has 1081 participants representing 21 states, 381 zip codes, and two countries.

Briefly describe how the broader public benefited from your project's activities.

Honey bees are the world's most manageable pollinator and a viable direct contributor to agricultural production. Providing communities with trained and vetted experts on pollinators is an investment for science literacy and environmentally-sound local policies.

Comments (optional)

Describe and explain any major changes or problems encountered in approach. Additionally, note opportunities for training and professional development provided, how results have been disseminated to communities of interest, and any new details regarding what the project or program plans to do during the next reporting period to accomplish the goals.

N/A

Critical Issue

Sustainability, Conservation, and the Environment

Program/Project

Adding Value To Dairy Production

In 2-3 sentences, briefly describe the issue or problem that your project addresses.

The Putnam County Extension Agent was contacted by a large international energy/climate management corporation seeking opportunities to partner with local dairy producers in biogas production. Putnam County is an ideal location for this undertaking as the City of Eatonton owns and operates a natural gas distribution company and the needed infrastructure for biogas distribution and marketing currently exists. Area dairy producers also struggle with nutrient management issues relating to animal waste products. Narrow profit margins in the dairy industry have led to producers increasing the size of their operations to remain viable businesses. The necessary increase in herd numbers has exacerbated issues related to the handling, storage, disbursement, and land application of animal waste products. Regulatory issues relating to the storage and application of animal waste products are an everyday concern with larger dairy operations. Public perception also weighs heavily in day to day management decisions related to these dairies. As local population densities increase, complaints concerning odor and water quality concerns increase.

Briefly describe in non-technical terms how your major activities helped you achieve, or make significant progress toward, the goals and objectives described in your non-technical summary.

The Putnam Extension Agent worked with representatives of the energy/climate management corporation in identifying interested producers and in developing working relationships with them. He also worked with City of Eatonton officials to increase their understanding of the opportunity at hand, and develop pathways of cooperation concerning the marketing potential for locally produced biogas. The agent facilitated initial sampling to determine biotic content in animal waste products through the UGA Feed and Environmental Water Laboratory. Relationships were established with two large Putnam dairies both with over 1,200 animal units to participate in a feasibility study.

Briefly describe how your target audience benefited from your project's activities.

Two Putnam dairy farms with over 1,200 animal units each chose to participate in the program. They have worked with the international energy/climate management corporation to develop one system which will digest dairy waste from both farms. Farm A will host the digester site and biogas processing equipment. Farm B will pump its waste manure approximately 1.5 miles through a pipeline to Farm A. The two farms will incur no financial costs for the project. Each will receive 20-percent of the revenue generated by the sale of the biogas which is estimated to be \$40,000 to \$50,000 per farm. Additionally the corporation will return the methane-free digested material to each farm which will still be rich in nutrients for use as fertilizer, or further processed into a horticultural soil mixture. A local garden soil production facility has expressed interest in the remaining solids with a potential value of \$5,000 to \$10,000 annually per farm. In addition to the income from methane production the dairies will satisfy

nearly 100% of their nutrient management requirements by digesting their generated animal waste products. This will greatly reduce operating costs relating to manure application, application equipment maintenance and manual labor.

Under the agreement, involvement in the project costs the City of Eatonton nothing. The city will also take ownership of a new natural gas line extension into Greene County that will carry biogas not used by the Eatonton system to a neighboring natural gas service which serves Greene, Oglethorpe, Taliaferro and Madison counties.

Briefly describe how the broader public benefited from your project's activities.

Value added to dairy industry

Comments (optional)

Describe and explain any major changes or problems encountered in approach. Additionally, note opportunities for training and professional development provided, how results have been disseminated to communities of interest, and any new details regarding what the project or program plans to do during the next reporting period to accomplish the goals.

N/A

Critical Issue

Sustainability, Conservation, and the Environment

Program/Project

The Georgia 4-H Pollinator Ambassador Program

In 2-3 sentences, briefly describe the issue or problem that your project addresses.

Over the last several decades, the decline in pollinator species can be attributed to many causes – pests and pathogens, chemical exposure, loss of species and genetic diversity, changing climate, and habitat loss, degradation, and/or fragmentation. Because humans depend on plants and pollinators for food supply and healthy ecosystems, a balance must be maintained to sustain life on earth.

According to the USDA's Natural Resources Conservation Service...

- about 35% of the world's food crops depend on animal pollinators to reproduce
- more than 3,500 species of native bees help increase crop yields
- 1 out of every 3 bites of food we eat exists because of animal pollinators

Pollinators are essential for food production worldwide; the everyday person needs to know the importance of pollinators and how their behaviors can help protect pollinator populations. A growing body of research suggests that youth-adult partnerships are among the most effective ways to educate communities about important issues. As a new initiative for Georgia 4-H, 26 youth were selected as 4-H Pollinator Ambassadors.

Briefly describe in non-technical terms how your major activities helped you achieve, or make significant progress toward, the goals and objectives described in your non-technical summary.

Coordinated by Extension professionals at the county, district, and state level, the program was designed to give youth access to research-based information and natural resources content specialists to assist them in planning and disseminating pollinator-related information to others. It is well-known that youth can be change agents in their communities, and the earliest 4-H clubs were designed for club members to share their newly gained agricultural knowledge with their families and others.

Due to COVID-19, Pollinator Ambassadors participated in a 6-hour online, live training program. After the training, Pollinator Ambassadors were charged with completing 6 learning activities and 6 sharing activities throughout the year. In Grady County, ambassadors work with their 4-H Agents to provide monthly lessons at all the schools in Grady County, teaching students about how pollinators affect our ecosystems and food supply. Video recordings of activities and pollinator-related storybooks have also been shared on websites and social media. In late November, a large pollinator garden was installed at

the Shiver School in Grady County, funded through the grant project. Utilizing support from Shiver School FFA and Quail Forever, over 400 students and adults participated in the planting field day spreading seed and participating in a variety of hands-on demonstrations. Students planted native pollinators in hopes of attracting bees, butterflies, birds, moths, bats, ants, and lizards. All attendees were given wildflower seeds, a trowel, and literature about starting a pollinator garden at their place of residence.

Briefly describe how your target audience benefited from your project's activities.

The Pollinator Ambassador program had three evaluation experiences. After the 4-H Pollinator Ambassadors completed the training program, teens completed a short evaluation. All (n=17) youth indicated they were satisfied with the training program and learned new knowledge related to pollinators. One teen commented, "the hands-on activities and of course making new friends were the best part of the training. Also, it was 10 times better having great mentors," while another teen shared "the teachers were very knowledgeable about the subjects they taught, and I learned a lot." The success of the training was evident as a youth said they were most excited about "getting to be a leader in my community and sharing with others why pollinators are so important."

All surveyed Pollinator Ambassadors (n=17) have greater knowledge related to pollinators and plan to continue to take action in their communities. After participating in the 4-H Pollinator Habitat Program, all of the respondents indicated they now (a) understand how they can create and protect pollinator habitats, (b) understand why protecting pollinators and increasing their habitat is important to our food supply, and (c) are more interested in science and agriculture. One Ambassador commented, "Being a pollinator ambassador has really opened my eyes. It has really changed my perspective on things. It has helped me learn more about my 4-H project and also my surroundings. I am so grateful that I had this opportunity."

Following the youth-led workshops, over 93% (n=440) indicated knowing why protecting pollinators is important to our food supply and now know how to create pollinator habitats. Additionally, 78% are interested in science and agriculture as a result of participating in the program.

Briefly describe how the broader public benefited from your project's activities.

Pollinators are essential for food production worldwide; the everyday person needs to know the importance of pollinators and how their behaviors can help protect pollinator populations.

Comments (optional)

Describe and explain any major changes or problems encountered in approach. Additionally, note opportunities for training and professional development provided, how results have been disseminated to communities of interest, and any new details regarding what the project or program plans to do during the next reporting period to accomplish the goals.

N/A

Critical Issue

Sustainability, Conservation, and the Environment

Program/Project

Georgia Green Landscape Stewards, Sustainable Practices for Water Resources

In 2-3 sentences, briefly describe the issue or problem that your project addresses.

Soil and water conservation, flood damage prevention, and water quality protection need to be addressed for all types of land use activities and property sizes to promote sustainable water resource practices. Sustainable water resource management on the individual property landscape can add up to large beneficial impacts on local water quality and availability. By incorporating soil and water conservation practices, stormwater control, and green infrastructure in home landscapes, property owners can help reduce negative impacts on Georgia's natural resources and protect water supplies for future generations.

Briefly describe in non-technical terms how your major activities helped you achieve, or make significant progress toward, the goals and objectives described in your non-technical summary.

With a small start-up grant from the University of Georgia Center for Urban Agriculture, the Georgia Green Landscape Stewards program was developed by UGA Extension ANR agents to provide fact-based information to property managers and help them implement sustainable resource practices in their landscape (<https://site.extension.uga.edu/georgiagreen/>). It is a certification program for businesses and residences in Georgia that promotes sustainable landscape maintenance actions and recognizes land owners for their efforts. A sustainable landscape action certification checklist was created to grade participation and assist with Green Landscape Steward qualification. A Georgia Green Landscape Stewards website and YouTube video channel were developed for participants that included stormwater, water quality, and conservation videos, presentations, and Extension agent resources. Water conservation, water quality, and stormwater webinars were presented to statewide zoom audiences in the spring of 2021. These presentations covered sustainable landscape actions that help protect surface water quality and water resource supplies. Soil and water conservation, smart irrigation, stormwater green infrastructure and rainwater infiltration were some of the topics covered.

Briefly describe how your target audience benefited from your project's activities.

Georgia Green Landscape Stewards are helping homeowners conserve natural resources by implementing sustainable landscape maintenance practices on their property. Over 1,200 viewers have watched educational component videos on the YouTube channel, and more than 2,200 unique visitors to the website have been educated on sustainable landscape practices in the program's first year (March – October 2021). Participants have reached certification level status at 65 different properties in Georgia, and the program is averaging more than 5 certified landscapes per month and will continue to grow. By applying sustainable water management practices, program participants are protecting water resources and saving maintenance and utility costs usually associated with traditional intensive landscaping methods.

Briefly describe how the broader public benefited from your project's activities.

Water Conservation

Comments (optional)

Describe and explain any major changes or problems encountered in approach. Additionally, note opportunities for training and professional development provided, how results have been disseminated to communities of interest, and any new details regarding what the project or program plans to do during the next reporting period to accomplish the goals.

N/A

Critical Issue

Sustainability, Conservation, and the Environment

Program/Project

Camden 4-H Partners with DNR to Offer Environmental Education Experiences

In 2-3 sentences, briefly describe the issue or problem that your project addresses.

Camden County is situated on the Georgia coast and offers many opportunities for outdoor recreation and environmental education. Almost half of the population is transient due to our military installation (Cragg, 2000). Many youth who come to live in Camden County do not have an understanding of the value and diversity of our coastal habitats and wildlife. Other youth in Camden County have not been exposed to quality and educational opportunities to interact and better understand the value of the natural resources located in and around Camden County. Environmental education plays a major role in creating social change that leads to solving environmental problems and ensuring environmental health (Clark, et. al, 2020, 381).

Briefly describe in non-technical terms how your major activities helped you achieve, or make significant progress toward, the goals and objectives described in your non-technical summary.

In an effort to improve appreciation of natural resources found in coastal Georgia, Camden County 4-H partnered with the GA DNR Coastal Resources Marine Educator to offer four environmental education programs to Camden County youth. Two one-day fishing programs were offered during spring break at a waterfront park in Camden County and two two-day summer programs were offered at the DNR site in Glynn County.

Participants in the one-day programs each received a fishing pole, instruction on how to properly rig the pole, instruction on how to throw a cast net, and participated in educational activities about habitat, adaptations, and sustainability. Participants in the two-day programs received all of the offerings included in the one-day programs in addition to marsh exploration, fish and squid dissection, touch tank interactions, a tour of a research vessel, and exposure to several career opportunities related to the environment, natural resources, and STEM.

Briefly describe how your target audience benefited from your project's activities.

35 Camden County youth received fishing poles provided by DNR through a grant funded program, with an estimated value of \$700. Each participant showed mastery by rigging their own poles in an exercise included in the programming. Youth were introduced to new career opportunities in STEM and environmental science fields, and demonstrated a growing appreciation for local natural resources. Participants learned how environmental scientists count fish populations, why sustainability is important, functionality of fish adaptations, and about fish habitats through hands-on projects and learning opportunities.

Due to the success of this partnership, this opportunity was shared with other counties, and two other counties were able to partner with DNR and offer similar experiences to their 4-H'ers.

Briefly describe how the broader public benefited from your project's activities.

Natural resource education

Comments (optional)

Describe and explain any major changes or problems encountered in approach. Additionally, note opportunities for training and professional development provided, how results have been disseminated to communities of interest, and any new details regarding what the project or program plans to do during the next reporting period to accomplish the goals.

N/A

Critical Issue

Sustainability, Conservation and the Environment

Program/Project

Extension's Response to Disasters

In 2-3 sentences, briefly describe the issue or problem that your project addresses.

Since 2016, Georgia has experienced five tropical storms. In addition, Georgia is susceptible to strong Summer and Spring storms. Tropical storms and other extreme events can cause widespread, long-term flooding and power outages. These can result in significant and costly agricultural damage, including crop and livestock losses, destruction of fruit and nut trees, and major interruptions of supply and logistics chains.

While a remote possibility, Georgia has two nuclear power plants in SE Georgia and has two located on our border. An outbreak of Avian influenza in the United States \$850 million is response activities and indemnity payments, with a total cost of \$3.3 billion. Finally, human-borne illness can negatively impact the economy in GA and nationwide. As seen with the COVID-19 pandemic, direct costs of illness and the ripple impacts on the economy can reduce the production of goods and services, can cause a recession whose impacts may last for several years.

Many UGA Extension faculty and staff that are involved in their community disaster responses. This can include being part of Emergency Operation Centers, gathering economic damage data, helping farmers and landowners navigate recovery programs, assisting in reopening offices, as well as supporting their own families during this time.

Post event studies have shown Extension employees feel unequipped to respond to all scenarios. Additionally, they report feeling overwhelmed by the requests from multiple sources, including federal, state and local entities, as well as Administration and their families. Collectively, these responses indicate that these individuals simply did not know what would be required of them in their capacity as a UGA employee (Ali, et al, 2020).

Briefly describe in non-technical terms how your major activities helped you achieve, or make significant progress toward, the goals and objectives described in your non-technical summary.

A USDA-NIFA Special Needs Grant was applied for to build the capacity of UGA Extension to respond to natural disasters and emergency preparedness. The proposal was awarded \$150,000 to develop specially trained small teams in each of the UGA Administrative districts. Teams will receive specialized training to accomplish the following objectives:

- 1) Develop internal capacity for UGA Extension to respond to natural disasters and emergencies;
- 2) Expand external collaborations with local, state and regional agencies who have a role in disaster response; and

3) Create and implement Continuity of Operations Plans (COOP) and a toolkit of resources for each UGA County Extension Office in Georgia.

District team members and team leaders have been identified. Leaders work in coordination with UGA Extension Administration to convey requests and training needs from the field and provide Administrative updates (including when and how to respond) to the field.

State Agency partners and contacts have been established to begin understanding UGA Extension's role in response and better understand our partners' place in response. Thus far, the project team has communicated with GEMA, GDA, DBHDD, DPH, and CEMA. Additional agencies and organizations may be sought based on feedback from team and partners.

A COOP template has been developed for the team members to use with each county in their district. Each COOP template will be revised as needed in each county to develop an individualized product suitable for the variation found from one county to the next.

The Principle Investigator and the Co-PIs coordinated, planned and hosted a 3-day training on emergency response for the members of the district teams. This included presentations by our partners on their response roles and what they view as Extension's role. Team meetings and activities were used to building a working relationship and scenario-based exercises to practice preparing for response. Subject matter trainings were held to build expertise in different areas, including impacts on wells, household cleanup, food safety, and family preparation. Finally, Mental Health and Wellbeing training for Extension responders was taught by UFL IFAS faculty. Three main results are highlighted below:

Briefly describe how your target audience benefited from your project's activities.

An initial three-day training was conducted with the teams in August 2021. Attendees were surveyed before and after the training regarding their ability/confidence to participate in an emergency or natural disaster response. The results are presented in the table below indicating increased capacity and confidence in the teams to fulfill the objectives of the program.

Before the Training	After the training
I am confident I can apply my knowledge and skills to respond to an emergency and/or natural disaster.	
Somewhat Confident	fairly confident
I am confident I can apply my knowledge and skills to help my district offices create a COOP.	
Somewhat Confident	Very confident
I believe my District Crisis team has the capability to respond to an emergency and/or natural disaster.	
Disagree	Agree

A follow-up training with Property Heirs will occur in October. This training highlights how generational properties can be impacted by disasters and what people need to do to help Georgians navigate relief programs in this circumstance

A Certified Emergency Response Training (CERT) will be hosted in winter 2022 to give district team members practical, hands-on experience in responding to disasters.

A training with an UGA Extension specialists on agricultural damage assessment using drones is being scheduled for winter 2022.

This program and these data were presented at the 2021 Extension Disaster Education Network (EDEN) Annual Meeting. As a result, additional collaborations with other state Extension Systems are being developed to support natural disaster and emergency response capacity in other regions of the country. In addition, the UGA Extension Delegation proposed and was awarded to host the 2023 EDEN Annual Meeting in Savannah Georgia.

Briefly describe how the broader public benefited from your project's activities.

Disaster preparedness

Comments (optional)

Describe and explain any major changes or problems encountered in approach. Additionally, note opportunities for training and professional development provided, how results have been disseminated to communities of interest, and any new details regarding what the project or program plans to do during the next reporting period to accomplish the goals.

N/A

Critical Issue

Sustainability, Conservation and the Environment

Program/Project

Farm Business Strategies to Cope with Delayed Arrival of H-2A Workers During the Pandemic

Brief Title

Farm Business Strategies for Worker Delays

In 2-3 sentences, briefly describe the issue or problem that your project addresses.

When the pandemic's social distancing mandates substantially slowed overall economic activity, the farm sector was expected to thrive better than other industries as farming supplies the economy with essential goods that consumers prioritize in their purchase decisions during crises. Hence, the farm sector's real concern during the pandemic is not necessarily a decline in the total demand for its goods and services, but rather the price-related shocks and "disruptions to supply chains" that are partially driven by the mobility and availability of the needed labor force to sustain farm operations during the COVID-19 pandemic (Smith and Glauber, 2020).

The importance of the H-2A guest farmworker visa program in supplying the needed foreign farm labor inputs has actually grown in recent years. In 2019 it supplied more than 27.43% of the farming sector's total hired workers – a significant jump from about 7% ten years ago. When pandemic conditions kicked in, the government promptly released regulations that ensured that H-2A workers' availability will not be hampered. These include the temporary final rule, excluding H-2A visas from suspended visa processing activities at consular offices, and granting essential travel status to H-2A-related travels.

Indeed, H-2A foreign labor certification and visa petition approvals remained high by historical standards. However, port entry and border crossing data indicate an overall decline of about 96% -- especially in April 2020 when most farms started to require the services of farm workers. If farm businesses continued to face steady high consumer demand, how can they supply the market adequately if their labor force is deficient of workers – especially its usually highly reliable foreign workers hired under the H-2A program?

Briefly describe in non-technical terms how your major activities helped you achieve, or make significant progress toward, the goals and objectives described in your non-technical summary.

Through a grant from the Georgia Farm Bureau (GFB), a survey on the H-2A employment experiences of agribusiness firms during the pandemic was conducted in Georgia, North Carolina, and Florida – coincidentally among the top 5 H-2A state patrons over the past several years. The survey instrument was distributed via email to farms with approved H-2A farm labor certifications in the last quarter of 2019. These farm business patrons were retrieved from Department of Labor records.

Two outreach bulletins were developed to report the findings of the survey, with the first bulletin devoted to business effects of H-2A workers' delay and the farms' coping strategies; and a second bulletin focusing on the domestic farm employment alternative. Results of this study will be presented at the 2021 Annual GFB Convention in December. A journal article is also being prepared to be submitted to a major agribusiness journal.

Briefly describe how your target audience benefited from your project's activities.

Our study's results indicate that about 30 to 45 H-2A workers indeed arrived late in their work places during the pandemic. These workers were about 4 to 5 weeks late in their arrival. Given these operating constraints, farm business respondents to our survey indicated various coping strategies – the popular strategies being greater reliance on family members, reducing off-farm employment time, resigning from off-farm jobs, and modifying production methods in favor of less labor-intensive alternatives. These decisions, however, resulted in about 20% deterioration in their farm household incomes. The domestic labor alternative was only explored in 30% of the cases and resulted in a 16% reduction in incomes, perhaps due to relative lower worker productivities vis-à-vis their foreign (H-2A) counterparts.

Briefly describe how the broader public benefited from your project's activities.

Agribusiness sustainability

Comments (optional)

Describe and explain any major changes or problems encountered in approach. Additionally, note opportunities for training and professional development provided, how results have been disseminated to communities of interest, and any new details regarding what the project or program plans to do during the next reporting period to accomplish the goals.

N/A

Critical Issue

Sustainability, Conservation and the Environment

Program/Project

Economic Contribution of Georgia's Agriculture

In 2-3 sentences, briefly describe the issue or problem that your project addresses.

Like other segments of the economy, agriculture and related industries need to demonstrate to stakeholders their economic footprint within the overall economy to promote understanding of industry size and impact. Fully defining the industry impact includes documenting the linkages with related industries along the supply chain - input sectors, related manufacturing or processing, and the spending of employees in all of the sectors. Further, there is a gap of available information at the county level; important for understanding and addressing ag-related issues that may vary by county.

Briefly describe in non-technical terms how your major activities helped you achieve, or make significant progress toward, the goals and objectives described in your non-technical summary.

In order to address the need throughout the agriculture/agribusiness and economic development community, we use data collected through the Farm Gate Value Report (CAED) to help quantify the economic contribution of the primary ag sectors plus the related industries along the supply chain - input sectors, related manufacturing or processing, and the spending of employees in all of the sectors. Specialized economic software is used to implement input/output analysis, an approach which employs a model and large data sets to trace and quantify interdependencies between sectors producing products and those from which they purchase inputs. The result of the analysis gives both the economic output and jobs contribution of these important sectors, demonstrating the current economic footprint of food and fiber industries.

Briefly describe how your target audience benefited from your project's activities.

The figure for the value of Agriculture as the number one industry in Georgia is quoted widely in the popular press and research-related articles, as well as used by specific commodity and industry groups or for targeted analysis, such as in disaster assistance. Each year, over 10,000 of these summary booklets are printed and distributed by request at various CAED/CAES functions, to county leadership, to the Agriculture Commissioner and other economic development and agribusiness groups. In addition, the summary is designed and printed for easy online viewing and featured on the CAED website. A recent rollout of an online interactive map graphic featuring the results of the county-level analysis for each of Georgia's 159 counties has proven to be a valuable resource, garnering hundreds of views and thousands of tool-tip hovers each month.

Briefly describe how the broader public benefited from your project's activities.

Economic information about Georgia's agricultural industry available to the public.

Comments (optional)

Describe and explain any major changes or problems encountered in approach. Additionally, note opportunities for training and professional development provided, how results have been disseminated to communities of interest, and any new details regarding what the project or program plans to do during the next reporting period to accomplish the goals.

N/A

Critical Issue

Sustainability, Conservation and the Environment

Program/Project

So, You Want To Be A Farmer?

In 2-3 sentences, briefly describe the issue or problem that your project addresses.

From 2007 to 2017, the number of farms in Georgia decreased by 11% and the size of farms, in acres, increased by 10%, which is consistent with the recent national trend of fewer but larger agriculture operations. In the latest agriculture census from 2017, the USDA reported a new category of data on new and beginning producers. Based on this data, 35% of farms in Georgia are categorized as new or beginning operations and account for 24% of the agriculture land use in the state. It's important to note that 72% of these owner/operators have primary occupations outside of their farming enterprise which means they are often farming part-time and relying on other income sources as their primary funding (2017 USDA Agriculture Census). Further inspection of the data shows that over half of the new and beginning farms are under 50 acres in size, and the most popular commodities include beef cattle production (28%) and other crop production (23%), which encompasses small fruits/vegetables, tree nuts, hay, and other products.

The total market value of agriculture products sold and government payments received by new and beginning farmers in Georgia totaled over \$2.3 billion dollars in 2017. Despite this high market value, the breakdown of farms by economic class tells a different story, with 58% of operations producing less than \$5,000 in goods (2017 USDA Agriculture Census). A critical role of agricultural support organizations including Cooperative Extension, the USDA, the UGA Small Business Development Center, the NRCS, and others is to help improve small farm sustainability and profitability for long-term success in the industry.

It is clear that the increase of new and beginning farms in Georgia presents a unique opportunity for Cooperative Extension to reach both new and existing audiences with timely, research-based information. Common questions from new and beginning farmers often involve funding and grant opportunities, business development support, economic investment and outlook for different agriculture commodities, and production information for getting started. In August of 2021, the Lincoln County ANR agent developed a 12-week curriculum introducing new and beginning farmers to business and funding resources as well as an introduction to different agricultural commodities produced in Georgia.

Briefly describe in non-technical terms how your major activities helped you achieve, or make significant progress toward, the goals and objectives described in your non-technical summary.

From August to October of 2021, a twelve-week seminar series titled "So You Want to Be A Farmer" was held virtually. The program had 186 registrants from 105 counties in Georgia and 2 additional states, with an average weekly attendance of 19 participants. The UGA Small Business Development Center developed an introduction to farm management covering business planning and market evaluation, licensing and regulations, and financial recordkeeping and planning. NRCS presented an introduction to

soil and water conservation practices and grant funding opportunities for new and beginning producers, and Fort Valley State University provided a lesson on small ruminant production. UGA Extension Specialists presented on forage management and introduced cattle, poultry, and fruit and vegetable production, while UGA Extension Agents presented introductions to equine and swine operations as well as a round table discussion panel.

Briefly describe how your target audience benefited from your project's activities.

For each session, participants were asked to complete a voluntary post-program evaluation to determine their overall experience, knowledge change, and intention to use the information. A total of 85 responses were collected across all twelve sessions.

Overall, participants indicated their overall satisfaction with the program to be good or excellent 98% of the time, and over 93% indicated they would use information from the program in their operation. All participants indicated an increase in knowledge after the program compared to prior. Across all sessions, 42.6% of respondents indicated being very or extremely knowledgeable after the program compared to 9.3% prior to the program.

A final evaluation sent to participants at the conclusion of the series asked which sessions were perceived to be most useful or applicable. The identified most useful sessions were Financial Planning and Recordkeeping, Conservation and Funding, and Forage and Pasture Management. The least useful sessions were introductions to Equine and Swine operations. Most individuals identified interest in producing cattle, small ruminants, and small fruits and vegetables.

Feedback from participants included "Excellent presentation from very knowledgeable sources," "Lots of valuable tips and info I was not aware of with resources and guidance available that I will pursue in the future," and "looking forward to the journey with such great support from UGA."

So, You Want to Be A Farmer presented an opportunity for Cooperative Extension to expand and engage with new and beginning farmers. In a post-program evaluation, 100% of respondents indicated they would be interested in attending a hands-on field day. Future plans for 2022 include a quarterly new farmer field day in addition to a UGA Sustainable Agriculture Journeyman Farmer small fruits and vegetable program.

Briefly describe how the broader public benefited from your project's activities.

Improves agricultural sustainability

Comments (optional)

Describe and explain any major changes or problems encountered in approach. Additionally, note opportunities for training and professional development provided, how results have been disseminated to communities of interest, and any new details regarding what the project or program plans to do during the next reporting period to accomplish the goals.

N/A

Critical Issue

Urban Agriculture

Program/Project

Griffin African American Oral History Project

In 2-3 sentences, briefly describe the issue or problem that your project addresses.

The Fairmont Community is located on the north side of Griffin, the largest city in Spalding County. Once a proud, middle-class African American community, the residents of Fairmont currently face challenges associated with poverty, as well as a history of exclusion, segregation, and neglect. The Fairmont Vocational High School dominated intellectual life in the community until it was closed in 1973, shortly after Griffin schools were integrated. The original Fairmont school building is a Rosenwald School. Julius Rosenwald, leader and founder of the Rosenwald Fund, worked with Booker T. Washington, local communities, and public school systems to construct schools, by leveraging community, public school system, and Rosenwald funds. Over the course of twenty years, over 5,000 Rosenwald schools were built in 15 states, and they played a significant role in the education of African Americans in the twentieth century. Very few Rosenwald schools remain today. The Fairmont Rosenwald is in exception condition for its age.

In 2015, John Cruickshank, the UGA Griffin Campus Librarian was asked to discover the origin of the name Fairmont. He made a presentation to the Educational Prosperity Initiative about the origin of the name and quickly realized that many in the audience participated in the local civil rights movement. A small group decided to attempt to record this history.

Briefly describe in non-technical terms how your major activities helped you achieve, or make significant progress toward, the goals and objectives described in your non-technical summary.

The oral history team consisted of UGA staff and faculty and the president of the local chapter of the National Association for the Advancement of Colored People (NAACP). They worked closely with UGA Special Collections Libraries and the Richard B. Russell Jr. Library for Political Research and Studies to developed procedures and methodologies to conduct the interviews and create the recordings. Interviewees were invited to recording sessions at the Georgia Center for Urban Agriculture on the Griffin Campus. The project received strong support in the community. Griffin Housing Authority; Spalding County Collaborative; Fairmont Alumni Association; University of Georgia Griffin campuses; the Educational Prosperity Initiative (an affiliate of the Spalding County Collaborative); and many other individuals supported this project, suggesting interviewees and helping to gain their confidence.

Briefly describe how your target audience benefited from your project's activities.

Ultimately the team interviewed 23 people who participated in Griffin's Civil Rights Movement (1965-1970s), lived through the changes brought on by the movement, or had unique perspective on the

community. The interviews last 1-2 hours. The Russell Library has hosted the interviews on online streaming platforms and created indexes and transcripts of the interviews. This allows both the public and researchers to easily and quickly search the interviews. The collection has been added to the archives of Richard B. Russell Library for Political Research and Studies and can be heard here: <https://georgiaoralhistory.libs.uga.edu/RBRL418GAA>

The Griffin civil rights movement serves as a microcosm for the county. Though local newspapers or other sources did not record the details of the movement, ordinary people did extraordinary things. This project records accomplishments, aspirations, survival skills, and the rich culture of the African American community in Griffin.

The impact of this project is far-reaching. The collection has helped diversify Special Collections Libraries' oral histories, making them more inclusive and representative of all Georgians. It has also created diverse teaching and student learning opportunities (including an experiential learning internship for a student assistant) that allow for engagement with histories and experiences of underrepresented and historically marginalized communities in Georgia.

[Briefly describe how the broader public benefited from your project's activities.](#)

On a local level community partnerships and engagement with municipal and community organizations were strengthened. The project helped shore up support for renovation of the Fairmont Rosenwald School and renovations of the building are now in progress. A steering committee was established to plan for the development of a museum in the school. The committee will use these recordings in both the museum and on the museum web site. The committee has also supported the creation of video interviews with Story First Films of Griffin, GA. Members of this oral history team are assisting with this project, creating video interviews of former alumni of Fairmont Vocational High School for inclusion in the museum.

[Comments \(optional\)](#)

[Describe and explain any major changes or problems encountered in approach. Additionally, note opportunities for training and professional development provided, how results have been disseminated to communities of interest, and any new details regarding what the project or program plans to do during the next reporting period to accomplish the goals.](#)

N/A

Critical Issue

Urban Agriculture

Program/Project

Virtual Journeyman Farmer Certificate Program

In 2-3 sentences, briefly describe the issue or problem that your project addresses.

Agriculture is the number one industry in Georgia, but the number of farms is declining, and the average age of farmers is around 60 years. New and beginning farmers – those with less than 10 years of experience – face numerous business start-up and sustainability challenges. According to the 2017 U.S. Census of Agriculture, Georgia farms are predominately family-owned (96%) and annually produce food, fiber, and timber goods with a market value of over \$9.5 billion. Once agricultural products leave the farm gate, transportation, processing, and retail sales of these products generates additional jobs and contributes around \$73.3 billion to Georgia's economy. Georgia is a national leader in forestry and the top producer or near the top for several commodities. Yet 44% of Georgia farms have less than \$2,500 in annual sales.

Briefly describe in non-technical terms how your major activities helped you achieve, or make significant progress toward, the goals and objectives described in your non-technical summary.

In 2021, the Forsyth County ANR agent coordinated, facilitated, and co-instructed the UGA Journeyman Farmer Certificate Program to provide new and beginning farmers with information and education essential to farm business success and sustainability. The 2-part program includes the four-session Small Farm Business Planning, a collaboration with the UGA Small Business Development Center, and the seven-session Vegetable and Small Fruit Production Training. To increase accessibility to remote and underserved clients, the program was offered as weekly live webinars from February to April of 2021.

Briefly describe how your target audience benefited from your project's activities.

Thirty-one trainees from 18 counties participated in the 4-week Small Farm Business Planning Training, with 26 (84%) completing attendance and testing requirements to earn a certificate of program completion. At the beginning of the course in February, none of the trainees had developed a business plan. In a July 2021 post-program survey over half of survey respondents stated they were using the business plan development tool introduced and demonstrated in the training. One respondent plans to use the program certificate as part of a farm loan application.

Thirty-eight trainees from 19 counties participated in the 7-week Vegetable and Small Fruit Production Training, including many who completed the Small Farm Business Planning Training. Twenty-seven trainees (71%) completed attendance and testing requirements to earn a certificate of program completion. In a July 2021 post-program survey, 92% of respondents indicated a gain of knowledge and competency in six vegetable and small fruit production decision areas, such as interpreting soil analysis reports, planning appropriate fertilizer applications, and finding resources for crop pest identification.

Over one-third of survey respondents had incorporated several recommended production practices, including integrated pest management, tractor safety, and crop planning, into their farm business.

Across both courses, 86% of post-program survey respondents rated the accessibility, affordability, and convenience of the virtual program as “much better” than an in-person program. Fifty-one percent of respondents rated the effectiveness of the virtual program as “much better” than an in-person course, while 36% thought the effectiveness of the virtual platform was somewhat better or about the same. Eighty-six percent stated that they were “extremely likely” both to recommend the Journeyman Farmer Course to others and to take another Extension course themselves based on their experience with the virtual Journeyman Farmer Certificate Program.

Briefly describe how the broader public benefited from your project's activities.

Support new/young farmers

Comments (optional)

Describe and explain any major changes or problems encountered in approach. Additionally, note opportunities for training and professional development provided, how results have been disseminated to communities of interest, and any new details regarding what the project or program plans to do during the next reporting period to accomplish the goals.

N/A

Critical Issue

Urban Agriculture

Program/Project

The Winterville Marigold Market

In 2-3 sentences, briefly describe the issue or problem that your project addresses.

With a population of just under 129,000 individuals, Athens is the 6th most populous city in Georgia. This number does not account for the thousands of students and tourists that reside in or visit the city, throughout the year. This makes Athens-Clarke County an important market option for farmers, in the region, hoping to sell their produce direct to consumer. The closest city with a population of at least this size, is Atlanta – located over 70 miles away. The Athens Farmers Market was established 15 years ago and has been highly successful but receives more vendor applications than it can accept, each year. They also only accept producers who are certified organic or certified naturally grown. There is room to support a growing farmer community in Athens and the surrounding areas, but there are some barriers to entering the Athens local food market, especially for small producers who are just getting started.

Briefly describe in non-technical terms how your major activities helped you achieve, or make significant progress toward, the goals and objectives described in your non-technical summary.

The City of Winterville teamed up with the Athens-Clarke County (ACC) Extension office, to create the Marigold Market, with the goals of addressing food insecurity in the east Athens area and also to foster the growth of a local food system and small businesses. As a fundamental partner, contributing to the success of the Marigold Market, ACC Extension participated in regular planning meetings, grant-writing meetings and board meetings, throughout the year, leading up to and during the market season. ACC Extension also helped find and recruit produce vendors and provided a pre-market produce safety presentation, for vendors. Because the goal of this market was to reduce barriers for small and beginning producers, the board decided to offer multiple vendor participation options. A vendor can commit to the whole season, to one month or even one week at a time. This allows more flexibility for a producer to participate, as they are able, depending on if they have enough money for vendor fees, enough staff or enough produce, on a given week or month. The board also used some of the Georgia Food Oasis grant funds, that were awarded to the Market, for purchasing tables and tents that could be made available to vendors, if they are unable to provide their own. Another decision that the board made, in order to reduce market entry barriers was to not require organic practices. The Marigold Market promotes and educates producers about produce safety and best management practices on-farm, but does not require organic or CNG certification.

Briefly describe how your target audience benefited from your project's activities.

The Market has grown steadily during the first in-person season. It regularly receives approximately 300 visitors to each Saturday market. It has provided a venue for over 30 local, small businesses to sell their products to the community. From May through September, of this season, total sales have amounted to \$47,627. This money goes directly back to the vendors. \$22,633 has gone to farmer vendors. There are

14 farmers participating, on some level, at the Market, this season. For over half of these farmers, it is their first time selling their product at a market.

The success and support that the market has from the city of Winterville has led to the creation of the Marigold collective. This collective will be a food and agricultural hub for the area; providing a market, a food hub, a commercial kitchen and a honey house. The honey house will provide a space for honey producers to extract and bottle honey that can be sold direct to consumer or in a wholesale market. Thanks to a collaboration with the Eastern Piedmont Beekeepers Association, and a grant funded by Georgia Beekeepers Association, there is equipment and a space for the honey house to begin as early as fall 2021.

Briefly describe how the broader public benefited from your project's activities.

The success and support that the market has from the city of Winterville has led to the creation of the Marigold collective. This collective will be a food and agricultural hub for the area; providing a market, a food hub, a commercial kitchen and a honey house. The honey house will provide a space for honey producers to extract and bottle honey that can be sold direct to consumer or in a wholesale market. Thanks to a collaboration with the Eastern Piedmont Beekeepers Association, and a grant funded by Georgia Beekeepers Association, there is equipment and a space for the honey house to begin as early as fall 2021.

Comments (optional)

Describe and explain any major changes or problems encountered in approach. Additionally, note opportunities for training and professional development provided, how results have been disseminated to communities of interest, and any new details regarding what the project or program plans to do during the next reporting period to accomplish the goals.

N/A

Critical Issue

Urban Agriculture

Program/Project

“Get Growing” Webinar Series Connects Plant Enthusiasts for Health and Well-being

In 2-3 sentences, briefly describe the issue or problem that your project addresses.

Research has established that increased frequency of gardening activities is correlated with increased well-being and reduced stress. Additionally, gardening activities support connections with other individuals, such as neighbors and family members. The COVID-19 pandemic isolated individuals from social interaction. Some individuals experienced depression, stress, and anxiety. Simultaneously, individuals turned to plants and gardening for something to do and occupy their new-found time during the pandemic.

As pandemic conditions persisted and infection rates spiked again in 2021, individuals continued to experience isolation and stress. This could be more pronounced among individuals who are retired and lack the daily professional interactions with others in addition to those with family members and friends. American Association of Retired Persons (AARP) approached UGA Extension for assistance in providing virtual engagement for AARP members for the purpose of reducing stress and offering an antidote to depression and isolation.

Briefly describe in non-technical terms how your major activities helped you achieve, or make significant progress toward, the goals and objectives described in your non-technical summary.

UGA Extension faculty and AARP Associate State Director of Community Outreach collaborated to host a webinar series for AARP members spanning five months (May-September 2021). Each webinar included a segment on the health and well-being benefits of consumer horticulture, a horticultural topic and related hands-on horticultural activity, and a final segment on the Georgia Master Gardener Extension Volunteer Program. Seven Extension faculty delivered the horticultural content, while the AARP partner promoted the sessions, coordinated registration, and sent out follow-up emails prepared for each session. Follow-up emails included an evaluation survey, links to Extension publications related to the topic, and information for the next webinar. A total of 278 AARP members from 24 Georgia counties participated in the five webinars.

Briefly describe how your target audience benefited from your project’s activities.

While almost half of participants (48.5%) indicated prior experience with the various horticultural topics, they did not consider themselves especially experienced as gardeners ($M = 2.74$, $SD = 1.373$, 5-point scale). Participants averaged 83% accuracy in post-session horticultural questions related to the sessions that they attended. After the webinar, most respondents indicated an intention to read recommended Extension publications (83.3%), contact the Extension office (68.2%), or start a gardening project, such as the one presented in the session they attended (93.9%).

Post-series evaluations revealed that the majority of respondents (82.9%) agreed that gardening and working with plants offer a way to reduce stress and anxiety. Respondents felt somewhat connected to other people who like gardening and indicated a high level of encouragement after the webinar (5-point scale, 1=strongly disagree, 5=strongly agree; M=4.38, SD=.956). Says cohost AARP Associate State Director of Community Outreach, “The series provided a mental break from hearing about the current climate of politics and COVID-19. It was wonderful to be able to meet our members where they are and inform them about something they love doing.”

Briefly describe how the broader public benefited from your project's activities.

Educational content on gardening available to the public.

Comments (optional)

Describe and explain any major changes or problems encountered in approach. Additionally, note opportunities for training and professional development provided, how results have been disseminated to communities of interest, and any new details regarding what the project or program plans to do during the next reporting period to accomplish the goals.

N/A

Critical Issue

Youth & Family Development

Program/Project

Virtual Cooking Club

In 2-3 sentences, briefly describe the issue or problem that your project addresses.

According to the CDC, the national obesity rate for youth (2-19 years) is 18.5%. Learning basic cooking skills can encourage youth to choose and prepare healthy foods for themselves. Youth cooking interventions have been shown to have positive outcomes on diet behaviors, such as increased fruit and vegetable consumption and decreased fast food consumption.

Briefly describe in non-technical terms how your major activities helped you achieve, or make significant progress toward, the goals and objectives described in your non-technical summary.

Since April 2020, UGA and University of Idaho Extension pivoted from in-person cooking clubs to offer 23 two-hour live cook-a-long workshops for youth of all ages with adult supervision. Throughout each class, nutrition and food safety principles are taught through the hands-on preparation of two dishes. Session objectives include making youth more comfortable and confident in the kitchen through practicing cooking techniques, knife skills, and following recipes, while gaining knowledge and acceptance of nutritious foods and safe food handling.

Over 950 children and parents attended virtual cooking club since April of 2020 from 10 Georgia counties and 5 states. Average attendance was 43 participants with 68% of families attending two or more sessions, tripling attendance compared to in-person programming.

Post evaluations and unsolicited feedback showed 88% gained food safety and nutrition knowledge, 92% increased self-efficacy for cooking, 93% of participants gained cooking skills and 100% of recipes had been made again by participant families. Participants valued each free cooking class at an average of \$33.

Briefly describe how your target audience benefited from your project's activities.

Testimonials showed participants had:

Increased Interest & Confidence in Cooking: “[My 5-year-old] felt such a huge sense of accomplishment being able to make dinner and treats for our family and it’s been so fun to see how proud she is and listen to her tell dad all about it over the dinner she made.”

Increased Cooking Skills, Food Safety & Nutrition Knowledge: “My 10-year-old daughter is learning a very important skill in cooking and is also being prepared, organized, and careful with cooking tools and the stove. All while having fun!”

Positive Family Interactions & Quality Time: “It has brought my 8-year-old and I closer as this is 'our' thing we do together. [This] is a very worthwhile project that we have taken very seriously during quarantine!”

Briefly describe how the broader public benefited from your project's activities.

Program helps youth have better diet behaviors.

Comments (optional)

Describe and explain any major changes or problems encountered in approach. Additionally, note opportunities for training and professional development provided, how results have been disseminated to communities of interest, and any new details regarding what the project or program plans to do during the next reporting period to accomplish the goals.

N/A

Critical Issue

Youth & Family Development

Program/Project

Extension R.E.A.D.S.

In 2-3 sentences, briefly describe the issue or problem that your project addresses.

Unfortunately, many Georgia families have no age-appropriate books available in their homes, and this problem is especially prevalent in low-income households (Berk, 2009). Additionally, a study conducted by the International Association for the Evaluation of Educational Achievement found that without libraries, 61% of low-income families do not have a single book suitable for a child. As a result, many families rely on the public library system and school libraries for access to books for their children. In March of 2020, the COVID-19 pandemic added to the challenges families had with access to books. Because of the Governor's Executive Orders to close all schools in Georgia and shelter in place, access to schools and public libraries became impossible. Now, over a year later, some schools and libraries are still closed to the public.

Briefly describe in non-technical terms how your major activities helped you achieve, or make significant progress toward, the goals and objectives described in your non-technical summary.

To combat the challenges Georgia's youth and parents are facing with literacy that have been exacerbated by the COVID-19 pandemic, UGA Extension and the State Botanical Garden of Georgia joined forces to offer Extension R.E.A.D.S (Reaching and Empowering All Developing Scholars). This statewide initiative kicked off during the 2021 Read Across America Week with the goal of promoting youth literacy in an engaging and hands-on manner. Resources include books read aloud for various grade levels, including one written and illustrated by Georgia 4-H members, virtual tours at the State Botanical Garden, hands-on science experiments conducted as part of Sweet Science Wednesdays and Zoom into Science sessions with special guests from all across the country. Resources were made available to the public on the Extension R.E.A.D.S. website and shared statewide with all Extension faculty and staff and local school system administrators and educators around the state. During the first month alone, the materials and resources earned a collective reach of over 1,850 contacts! In addition to celebrating Read Across America Week, the team utilized themed promotional campaigns to highlight the educational resources. Campaigns have included Georgia Agriculture Week, National Fresh Fruit and Vegetables Month and National Family Fun Month. New resources are added regularly and can be accessed on the Extension R.E.A.D.S. website.

Briefly describe how your target audience benefited from your project's activities.

This partnership has led to the creation and organization of over 65 virtual, educational resources developed or shared by more than 45 faculty, staff, and volunteers within UGA Extension and the State Botanical Garden. As of August 2021, the project materials and resources have a collective reach of over 5,900 contacts. In evaluation of Extension R.E.A.D.S., the STEM Team Lead Teacher from the Colquitt County School System stated, "Teachers are always looking for ways to get students more engaged in reading. The COVID-19 pandemic brought up an even greater need for more literacy resources as students were not able to access books from schools and/or libraries. Literacy is such an important,

foundational aspect of a child's education, and the Extension R.E.A.D.S. program helps to provide students with access to engaging books. This is a great resource for students to use to gain exposure to books that they otherwise would not be able to access.”

Briefly describe how the broader public benefited from your project's activities.

In addition to addressing issues with access to engaging and educational literacy resources, the collaboration benefitted Extension and the State Botanical Garden of Georgia. Increased manpower is always a priority for county-level Extension leaders. This program gave both staff and volunteers the opportunity to work together to meet the needs of communities. In addition to engaging active volunteers, the program helped build capacity for Extension by recruiting seven new volunteers. During a time of decreased social interaction, Extension R.E.A.D.S. also empowered 4-H youth to share their passions by submitting videos of them reading books related to their 4-H projects for others. As units of Public Service and Outreach at the University of Georgia, the missions of Extension and the State Botanical Garden are to serve the entire state of Georgia. By collaborating on this project, the State Botanical Garden has been able to expand virtual content to reach communities they typically cannot reach to share the resources of the garden and enhance literacy education by providing hands-on activities and garden tours. Extension R.E.A.D.S. will continue to address issues with literacy and enhance the resources available to youth, parents and teachers by recruiting new volunteers and adding new resources to the online collection.

Comments (optional)

Describe and explain any major changes or problems encountered in approach. Additionally, note opportunities for training and professional development provided, how results have been disseminated to communities of interest, and any new details regarding what the project or program plans to do during the next reporting period to accomplish the goals.

N/A

Critical Issue

Youth & Family Development

Program/Project

4-H State Officers Build Leadership

In 2-3 sentences, briefly describe the issue or problem that your project addresses.

The mission of Georgia 4-H is to assist youth in acquiring knowledge, developing life skills, and forming attitudes that will enable them to become self-directing, productive and contributing members of society. This mission is largely accomplished by providing various leadership opportunities for our state's youth in partnership with caring adults trained in positive youth development. The 4-H Study of Positive Youth Development found that youth involved in 4-H are 3.4 times more likely to contribute to their communities than youth who do not participate in 4-H. Leadership studies indicate that youth who participate in leadership roles are highly motivated and more developmentally adjusted than their peers, and, in general, are more likely to feel an improved sense of support from their local communities (Anderson, Sabatelli, and Trachtenberg, 2006). Furthermore, if adolescents are to develop the skills necessary for adulthood, they must learn basic skills for everyday life (Carnegie Council for Adolescent Development, 1995). Through training, members of the Georgia 4-H State Board of Directors gain skills in public speaking, etiquette, social interaction, decision making, teamwork, and other leadership and life skills that build self-esteem.

Briefly describe in non-technical terms how your major activities helped you achieve, or make significant progress toward, the goals and objectives described in your non-technical summary.

Georgia 4-H State Officers go through an intensive three day training in which they are taught how to present and speak at a podium, theme planning, etiquette, donor relations, leadership and personality styles, teamwork, and more. The training is designed and implemented by members of the state 4-H faculty and involves numerous guest presenters. Newly-elected officers are also assigned prior Board members to serve as mentors and are given the chance to meet together during the training. Additional training and planning sessions are held throughout the year via in-person and online meetings. State 4-H faculty serve as advisers to the Board -- setting high expectations, creating a safe environment, and providing constructive feedback on an ongoing basis. Board members are empowered to exercise independence and shine in a variety of settings and before diverse audiences as they represent the more than 190,000 4-H youth in Georgia.

Briefly describe how your target audience benefited from your project's activities.

The nine youth members of the 2020-21 Georgia 4-H State Board of Directors and nine members of the 2021-22 4-H State Board collectively traveled more than 9,000 miles in their roles as State 4-H Officers, representing Georgia 4-H at over 30 events. Each officer participated in over 150 hours of training. They met and had meaningful engagement with approximately 50 people of influence. State Officers also wrote more than 150 thank you notes to donors, volunteers, stakeholders, and supporters on behalf of all members of Georgia 4-H. These data points are especially impressive considering the limitations

imposed by the ongoing COVID-19 pandemic. Our state officers have been able to demonstrate leadership, model stability, and embrace optimism as they helped lead some of our largest virtual and in-person programs during the pandemic.

[Briefly describe how the broader public benefited from your project's activities.](#)

Dr. Kay Kelsey, in “The Sharpening Stone: A Phenomenological Study of Youth Leadership Experiences as a 4-H State Board of Director” (submitted for publication), used a phenomenological research design to understand and describe the essence of the state officers’ lived experience. From this research, Dr. Kelsey concluded that the Georgia 4-H State Board of Directors Program, “in addition to an average of 7.68 years as a 4-H member, served to improve and sharpen members’ leadership and life skills....” Also, “members made statistically significant positive changes for 100% of the questions for communication; 100% for decision making; 100% for understanding self; 100% for working with groups; 50% for management; 80% for learning; and 25% for getting along with others.” These results were true, regardless of the specific position an individual held on the Board.

Importantly, members “defined leadership as ‘serving others’ and engaged in community service. 4-H afforded members a plethora of opportunities to gain confidence, express their authentic selves, and transition into adulthood with an increased sense of self-awareness, increased responsibility, and autonomy. They translated their service to others in a variety of community service projects. This finding is similar to Boyd, Herring, and Briers (1992) and Fitzpatrick et al. (2005) who reported that 4-H alumni spent seven years on average in 4-H programs and benefited from length of exposure to positive youth development activities.”

“Adult 4-H leaders were influential on members’ development by teaching just-in-time lessons on diversity, inclusion, kindness, finding one’s authentic voice, reciprocity, and being nurturing. Adult leaders treated members with respect and set high expectations for personal behavior and performance....” Through participation as a State Board of Director (SBD), “[m]embers were aware of their ability to grow and contribute meaningful leadership not only in the context of 4-H but also in their families, schools, and communities. Overall, the SBD experience helped members to sharpen their LLS by offering structured training, creating a supportive environment for risk taking, giving members autonomy, holding high expectations for performance, and providing feedback.”

Reference: Kelsey, K. (manuscript submitted for publication). The Sharpening Stone: A Phenomenological Study of Youth Leadership Experiences as a 4-H State Board of Director.

Comments (optional)

Describe and explain any major changes or problems encountered in approach. Additionally, note opportunities for training and professional development provided, how results have been disseminated to communities of interest, and any new details regarding what the project or program plans to do during the next reporting period to accomplish the goals.

N/A

Critical Issue

Youth & Family Development

Program/Project

4-H at Home Grant related to Plant Biotechnology

In 2-3 sentences, briefly describe the issue or problem that your project addresses.

Plants are the key to a healthy and sustainable food system. In addition to providing oxygen, plants supply 90% of human calorie intake and 80% of human protein intake. Animal products are the remainder of these intakes; it is important to note that animals must derive their nutrition from plants (Chawla, 2009). As the world population continues to expand, there is a critical need to address food supply concerns. Kalia (2018) explains that plant biotechnology “encompasses a multitude of scientific tools and techniques for screening and genetic manipulation of plants to develop beneficial or useful plant/plant products.” Plant breeding and biotechnology assist in the developing of new varieties and traits, leading to higher-yielding crops and food with improved nutrition, taste, and storage life.

Farmers and producers have been modifying plant genes for more than 10,000 years. Many “modern” or common vegetables and fruits were domesticated through plant breeding programs. Additionally, plant biotechnology also allows for the modification of plant traits such as insect resistance, disease resistance, and herbicide tolerance. In the United States, the majority of all corn, soybeans, and cotton are grown using biotechnology. While 4-H is certainly rooted in agriculture production, there are no curriculum sets offered by National 4-H Council related to plant breeding and biotechnology. Furthermore, while traditional in-school science education teaches biology and genetic content to youth, it is estimated very few formal science programs teach plant biotechnology to students before college.

Briefly describe in non-technical terms how your major activities helped you achieve, or make significant progress toward, the goals and objectives described in your non-technical summary.

Through a partnership with National 4-H Council and funded by U.S. Department of Agriculture (USDA) Agriculture and Food Research Initiative (AFRI), Georgia 4-H was awarded the 4-H at Home Grant. The \$15,000 award supported the creation of lesson plans and materials for National 4-H Council to share via the 4-H at Home platform. Aligned with the first priority area for the USDA-AFRI, Georgia 4-H created six lesson modules related to plant biotechnology for middle (grades 6-8) school 4-H youth. According to USDA-AFRI, the Plant Health and Production and Plant Products (PHPPP) program area of the AFRI “was established to increase knowledge of plant systems and the various factors that affect agricultural plant productivity.” Additionally, this project aligned with the National 4-H Mission Mandate of science, technology, engineering, and mathematics (STEM).

The goal of the six-part series is for young people to gain a greater understanding and appreciation of plant/crop production and plant biotechnology, while exposing youth to potential career opportunities. The proposed lesson module topics include: (a) plant classification, (b) parts of a plant and plants we eat, (c) simple plant genetics, (d) wild mustard selective breeding, (e) engineering a greenhouse, and (f) apple taste-testing. Aligned with the experiential learning process (Kolb, 1984) and the framework

provided by National 4-H Council, each learning experience included a description of the activity, supplies & materials, activity steps, formative assessment, reflection questions, and a connection to one or more agriculture-related workforce development opportunity.

To ensure high-quality, interactive, and fun lessons, Georgia 4-H piloted three of the activities during 4-H Summer Camp offered at Rock Eagle 4-H Center. Each cabin was provided a STEM kit with lesson plans and resources for youth to build designer plants, engineer a greenhouse, and play the mustard mania board game. Due to COVID-19 protocols, each cabin acted as a cohort during the week of camp, and there were times (inclement weather, etc.) when adults may have had to facilitate activities with campers. Not only was Georgia 4-H able to pilot the lessons and receive feedback, but adult leaders did not have to prepare or pack any materials or resources.

[Briefly describe how your target audience benefited from your project's activities.](#)

Adult leaders (faculty, staff, and volunteers) participating in Summer Camp at Rock Eagle 4-H Center were able to access the STEM kit during their weekly camping session. State 4-H staff and counselors prepared and restocked the kits on a weekly basis, creating an easy-to-implement model for adult leaders. While adult leaders were not required to facilitate the activities or report their actions, it is easily estimated over 1,000 youth benefitted from the STEM kits.

“These are great lessons for any time, but it’s always a plus when an outstanding curriculum can meet a very practical need,” said Georgia 4-H camping specialist Charlie Wurst. “COVID restrictions made us restructure our plans for rainy day activities, and it was great to have top-notch programming available to our leaders in each of our 45 cabins in the event inclement weather disrupted the regular camp schedule.”

One 4-H leader commented before camp, “Thank you! I really appreciate this resource. These activities are much better than what I have in my bag right now for camp. I thought of a few things, but they are not as in-depth with learning objectives.” While another leader shared, “the STEM kits were great! At first, I was a little reluctant because I didn’t want them to feel like they were doing school work, but the activities were so much fun that the kids asked to do one every day! I look forward to using the resources with my county program.”

[Briefly describe how the broader public benefited from your project's activities.](#)

Lesson plans were submitted to National 4-H Council for formatting and publication on the 4-H at Home website.

Comments (optional)

Describe and explain any major changes or problems encountered in approach. Additionally, note opportunities for training and professional development provided, how results have been disseminated to communities of interest, and any new details regarding what the project or program plans to do during the next reporting period to accomplish the goals.

N/A

Critical Issue

Youth & Family Development

Program/Project

4-H Volunteers Enable More Youth to Engage in Positive Youth Development Opportunities

In 2-3 sentences, briefly describe the issue or problem that your project addresses.

Across Georgia communities, the poverty rate for children is higher than the national average (18%), with communities in Georgia ranging from 5-45% and a state average of 21%. Georgia 4-H youth programming is designed to extend research and education from the University of Georgia to support positive youth development in areas such as leadership and citizenship and can fight against the factors contributing to persistent poverty in Georgia.

A ten-year longitudinal study completed on 4-H in 42 states by Tufts University in 2012 indicated that 4-H youth are more likely to make community contributions and civically engage in their communities. They're also more likely to make healthier choices and participate in science. The study noted that this positive youth development trajectory may also extend into adulthood – thus potentially into community 4-H volunteer programs. Key inputs for 4-H'ers to achieve success, as noted by the study, are leadership experiences, education outside of school, and adult mentoring (Tufts University, 2012).

While Georgia population grows, the Extension state and local budgets have not allowed for hiring more 4-H youth development professionals to further extend the beneficial programs of 4-H to the growing population. Thus, one of the biggest needs in Georgia 4-H includes more human capacity to engage more young people with the positive benefits of youth development that Georgia 4-H can offer.

Briefly describe in non-technical terms how your major activities helped you achieve, or make significant progress toward, the goals and objectives described in your non-technical summary.

More than 200 Extension faculty have received training through the two-hour course, Volunteer Development 101, and more than 50 faculty with 4-H responsibilities have completed Volunteer Management – Level 2 during onboarding. These courses included an introduction to volunteer service planning and engagement, with the second focusing on extending program capacity through the development of volunteer-led clubs. Faculty are instructed to design new volunteer initiatives, engage volunteers, and start new volunteer-led programs.

In addition, state 4-H faculty lead volunteer onboarding procedures to support proper background clearance and training for new volunteers working with youth. Specialized trainings have been developed in various areas and are offered throughout the year to support volunteer coaches and project leaders for further preparedness and increased impact. An updated Project Achievement Portfolio asynchronous training was launched to prepare State 4-H Congress judges for their role, and

the UGA Extension Well Connected Communities Master Volunteer Academy was developed to support adult and youth volunteers with increasing community wellness.

[Briefly describe how your target audience benefited from your project's activities.](#)

Volunteers are mission-centric as they chaperoned 4-H events and camps, led 4-H clubs, judged projects, and coached judging and project teams. Last year, more than 4,020 adult volunteers and nearly 1,320 teen volunteers were active. More than 2,000 of these adult volunteers engaged in roles that included working with youth, with 2,004 completing the annual youth protection training, which has been shown to prepare volunteers for their service role (Hobbs & Dorn, in review).

In the 4-H program year 2021, nearly 1,140 adult volunteers supported 228 statewide events (as recorded in 4-H Enrollment) and filled 2,334 volunteer shifts. This volunteer service enhanced Extension's capacity to serve more than 23,000 additional youth, when considering leader to youth ratios. Specifically, 125 of these adult leaders dedicated a full week to support summer camps, with 11 leaders devoting duplicate weeks. Also, volunteers enabled 312 more 4-H clubs last year. This collective service included approximately 60,000 volunteer service hours, the organizational financial equivalency of more than \$1.7M.

Over the past five years, trained coaches and judges for youth programs continued to increase. Active volunteer credentials from the past year included:

- 177 active volunteers have completed the Getting Started volunteer orientation,
- 682 active volunteers have completed a Project Achievement judge training,
- 50 active volunteers have completed foods lab leader training,
- 142 active volunteers have completed a coaches' certification (such as Cotton Boll and Consumer Judging, Forestry Judging, Land Judging, Poultry Judging, and Wildlife Judging),
- 940 active volunteers have completed SAFE Target Sports Certification, and
- Six active adult and teen volunteers completed the 40-hour pilot Well Connected Communities Master Volunteer Academy.

[Briefly describe how the broader public benefited from your project's activities.](#)

The increase in the number of supporters enhanced the organizational capacity to reach and serve more youth, ultimately developing more contributing citizens for Georgia who, according to the Tufts Study (2012) are more likely to make healthier choices and participate in science. Furthermore, these newly recruited leaders also have the opportunity to further enhance their leadership and service skills as they contribute to 4-H programs.

Comments (optional)

Describe and explain any major changes or problems encountered in approach. Additionally, note opportunities for training and professional development provided, how results have been disseminated to communities of interest, and any new details regarding what the project or program plans to do during the next reporting period to accomplish the goals.

N/A

Critical Issue

Youth & Family Development

Program/Project

4-H'ers Earn College Scholarships

In 2-3 sentences, briefly describe the issue or problem that your project addresses.

Small, rural Georgia counties with high poverty levels often find it difficult to provide youth development opportunities with the limited means of its population. Youth from low-income rural counties do not have the same opportunities as those who live in urban or high populated area. Poverty affects the opportunities youth have to participate in extracurricular activities that provide experiences for life skills. According to the National Center for Education Statistics, rural high school graduates are the least likely to head off to college. College enrollment rates among 18-to-24-year-olds in U.S. cities, suburbs and towns all exceed 40%. But for rural young adults, the rate is 29.3%. Young adults in cities have the highest college enrollment rate, 47.7.

Briefly describe in non-technical terms how your major activities helped you achieve, or make significant progress toward, the goals and objectives described in your non-technical summary.

Randolph County 4-H is a valued partner in our small, rural community teaching life skills while giving the support as caring, adult leaders. Every child deserves the opportunity to succeed. That's why Youth Development is so important. We must engage youth in positive opportunities while preparing and equipping them to meet the challenges of adulthood and achieve their full potential. 4-H provides many opportunities to explore many places, topics, learn to speak in public, leadership while participating in 4-H through county, district and state events to expand knowledge in various areas of academic opportunities, STEM, leadership, community service.

Briefly describe how your target audience benefited from your project's activities.

Three graduating 4-H'ers were offered a combined amount of \$ 150,000 in scholarships to various colleges in which they applied. The three 4-H'ers applied to 27 colleges and accepted to 25 colleges with a total of \$95,000 in scholarship based on academic toward college education. The youth believe the reason for the scholarships were their vast experience of being a part of 4-H, learning to help others in our community, speaking in public and researching topics and learning to be a leader by holding leadership roles and being a leader in the community to help others and mentor younger 4-H'ers. These 4-H'ers took part in Project Achievement each year from 5th grade through 12th grade, served as ambassadors, served as a district board officer, while being very active leaders in the community and serving as teen leaders.

" 4-H has provided me with experience in public speaking, leadership and being involved in my community."

“ I really do believe 4-H was a huge part in why I got accepted to many of the colleges because it allowed me to make a difference in our rural community. It gave me an outlet to actually do community service projects and compete across the state which might not stand out when your living in Atlanta but look like I am coming from our small town of Cuthbert.”

“Because of 4-H, I am a better decision maker because it taught me to better assess situations and prioritize”

Briefly describe how the broader public benefited from your project's activities.

Increased potential for rural students to go to college

Comments (optional)

Describe and explain any major changes or problems encountered in approach. Additionally, note opportunities for training and professional development provided, how results have been disseminated to communities of interest, and any new details regarding what the project or program plans to do during the next reporting period to accomplish the goals.

N/A

Critical Issue

Youth & Family Development

Program/Project

Child Passenger Safety Among Culturally Diverse Audiences

In 2-3 sentences, briefly describe the issue or problem that your project addresses.

According to the National Highway Traffic Safety Administration (NHTSA), motor vehicle crashes are a leading cause of death for children. When correctly installed and used, car seats reduce the risk for death by 71 percent in infants and 54 percent in toddlers. Although most people think they use their car seats correctly, actual car seat inspections show that 80-90 percent are installed or used incorrectly. In Georgia, seatbelt observations showed 66 percent of all passenger fatalities age 5 years and older were unrestrained. Tattnall County is a rural community with a high percentage of Hispanic population. Many of our Hispanic population is vulnerable due to coming from Mexico where the child passenger laws are very different than Georgia child passenger safety laws and standards. This population has little knowledge of the use of car seats and the stages of seats for children. They have little knowledge of the use of seatbelts due to not using them in Mexico.

Briefly describe in non-technical terms how your major activities helped you achieve, or make significant progress toward, the goals and objectives described in your non-technical summary.

In 2014, the Tattnall County Family and Consumer Sciences Agent obtained national certification as a Child Passenger Safety Technician in response to the community's needs. The County Agent collaborated with other technicians to provide safety seat checks and inspections. The Agent also collaborated with the local migrant head start, Telamon Corporation, to provide education and offer once-monthly and by-appointment child passenger safety classes. Parents and Caregivers who attend the class also receive a new convertible car seat or booster seat depending on the needs of their children provided by the Buckle Up for Life Grant from Toyota and the Cincinnati Children's Hospital Injury Prevention Program. Each 2-hour class instructs parents on the importance and proper use of child safety seats and is followed by hands-on installation assistance tailored to the parent's vehicle. The parent is responsible for installing the seat and securing the child, and the FACS Agent inspects the installation before the parent leaves the site. The County Agent worked with a Spanish translator to provide the classes in Spanish and English. All materials given out in the class were two sided with English and Spanish versions.

Briefly describe how your target audience benefited from your project's activities.

One Hundred Tattnall County children in the Hispanic community received safe car seats at 15 separate classes in 2019-21. The provided seats are available locally for \$95, so the program saved economically-disadvantaged parents approximately \$9,500. According to the staff at Telamon corporation, the car seat program has impacted so many children in their center. "These children were riding in vehicles with no car seats or seatbelts. Our parents didn't know any better," said Telamon Staff member Nieves Blocker. She observes children being dropped off and picked up in vehicles with no car seats. Since the

child passenger safety classes, Mrs. Nieves has observed a 100% increase in children buckled up in the back seat. Parents are more comfortable buckling their children up. 99% of parents that attended the classes indicated they understand Georgia Laws on Child Passenger Safety and feel confident in using the car seats for their children. At the beginning of each class, the County Agent observed how the children were riding. 90% of the children weren't in car seats at all and 10% were riding in car seats that were out of date or installed improperly. After parents completed the educational class, parents demonstrated 100% ability to install child seats in vehicle correctly. Parents have expressed gratitude for the program and are referring other Hispanic parents to the program for child safety assistance. The results of the car seat program, an increase in parent knowledge and skills are observed immediately. The program is measured by the ability of the parent to properly install their child's seat in their vehicle. Before the class many parents either do not have a seat for their child or arrive in an unsafe restraint, but leave properly and safely restrained due to the parent's knowledge gain. The County Agent has published an article in the Journal of the National Extension Association of Family and Consumer Sciences in the 2020 edition on "Extension Programs are not a One sizes Fits All when working with Culturally Diverse Audience in Child Passenger Safety. The Agent also has been invited to presented a poster presentation at five National Professional Association Conferences on Culturally diverse programming.

Comments from participants include: one mother of two said, "I was told by a family member that I had to have it but I didn't have any idea what to do with it. Now I understand and feel so much better about my kids riding in the car. Thank you for teaching me how to keep my kids safe." A father, "Thank you so much for helping me understanding the seats. I want my kids safe but I didn't know what kind of seat my kids needed to be in. Now, I can keep them safe."

Briefly describe how the broader public benefited from your project's activities.

Reduced risk of child fatalities in car accidents.

Comments (optional)

Describe and explain any major changes or problems encountered in approach. Additionally, note opportunities for training and professional development provided, how results have been disseminated to communities of interest, and any new details regarding what the project or program plans to do during the next reporting period to accomplish the goals.

N/A

Critical Issue

Youth & Family Development

Program/Project

Supporting Parents From The First Steps

In 2-3 sentences, briefly describe the issue or problem that your project addresses.

Due to on-going COVID-19 safety guidelines during FY 2021, face-to-face screening in the local birthing hospital, Piedmont Columbus Regional, was restricted. The First Steps Coordinator had to shift to virtual and telephone platforms. With most of the screening done via phone call. This required an adjustment to the typical engagement strategies used when in person.

Briefly describe in non-technical terms how your major activities helped you achieve, or make significant progress toward, the goals and objectives described in your non-technical summary.

A personal screening with each participant is conducted to determine the resources they may need to create the best environment for their family. After the screening, the family is provided a First Steps packet that includes a localized community resource guide, New Parent Guide, and brochures for local and online resources. When more on-going support is needed, a referral to one of the UGA Extension Home Visiting programs is offered.

The primary platform for screening prenatal and new parents during FY 2021 was via telephone using approved information supplied by Piedmont Columbus Regional.

Another change involved distribution of the First Steps packets that are usually given in-person. During FY 2021 First Steps packets had to be mailed during the COVID-19 restrictions which resulted in a gap between screening and family access to the informational packet. An innovation developed by the First Steps Coordinator during this time was a Digital First Steps packet. This digital tool for participants includes links to community and online resources for families in the six informational categories included in the basic First Steps packet. After screening, the digital packet can be emailed to participants to provide quicker access to some of the most frequently needed resources.

Briefly describe how your target audience benefited from your project's activities.

During the FY 2021 grant year, 568 families were screened, received a First Steps packet, and were referred to local community resources. These screenings resulted in 1,269 referrals to community resources. While reasons for community referrals varied by participant, the most frequent reasons for referrals during FY 2021 were Parenting Resources, Books/Reading Materials, Health Care, Tobacco Cessation, Care Seat Safety, and Nutrition Education. Additionally, the First Steps screenings during FY 2021 resulted in 153 referrals to UGA Extension Home Visiting Programs.

Throughout the year, the First Steps Coordinator provides a follow-up call with First Steps participants to conduct a short satisfaction survey. During FY 2021 there were 141 surveys conducted (25%) of First Steps participants. Ninety-one percent (91%) stated that the materials were helpful. Eighty-five percent (85%) were pleased with the service they received from First

Steps and 84% said that they would contact us again if they needed additional services.

Briefly describe how the broader public benefited from your project's activities.

Community benefits from services and resources being used efficiently.

Comments (optional)

Describe and explain any major changes or problems encountered in approach. Additionally, note opportunities for training and professional development provided, how results have been disseminated to communities of interest, and any new details regarding what the project or program plans to do during the next reporting period to accomplish the goals.

Optional

Critical Issue

Youth & Family Development

Program/Project

We can all be HEROES for others!

In 2-3 sentences, briefly describe the issue or problem that your project addresses.

4-H's mission is to give ALL youth equal access to opportunity by assisting youth in acquiring knowledge, developing life skills, and forming attitudes that will enable them to become self-directing, productive and contributing members of society. 14% of youth, age 3-21 in the United States, receive special education services under the Individuals with Disabilities Education Act (IDEA). The Georgia Department of Education states that all students must have an equitable opportunity for school completion and successful postsecondary outcomes. Pulaski 4-H has had inclusion classes with special education students, but something was lacking. The students needed more one-on-one time with lessons that were geared toward their learning objectives and differing learning styles. Because of COVID-19, all classes became self-contained. The perfect timing was created to start something just for special education youth.

Briefly describe in non-technical terms how your major activities helped you achieve, or make significant progress toward, the goals and objectives described in your non-technical summary.

As a partner with public education in Georgia, Pulaski 4-H seeks to afford opportunities in 4-H to ALL youth, including those with special education needs. With the guidance of the PCES administration and special education teachers, Pulaski 4-H created the H.E.R.O.E.S. program for 4th & 5th grade special educational students. With a safe, inclusive environment, 4-H helps special education youth learn life skills, engage in hands-on lessons over Healthy Living and STEM, and help them become the best version of themselves. H.E.R.O.E.S. was created with the guiding principles (positive youth development, partnerships, & education) and essential elements to help special education youth see themselves as unique individuals with special skills through the relationships formed with teen leaders and 4-H staff (alongside other students when COVID-19 restrictions lift). Youth participants were given the opportunity to interact with non-disabled youth and caring adults to improve important life skills like communication, self-awareness, self-confidence, making connections, focus & self-control, & critical thinking.

Across our curricula and programs, the national 4-H essential elements (belonging, mastery, generosity, & independence) are embedded into the learning experience to promote positive youth development. The H.E.R.O.E.S. program allows youth to feel and believe they are important and their life has meaning, that they are capable of experiencing success at solving problems or challenges, that they are cared about, that they feel a sense of connection to others, and that they are able to engage in decision making and learn to act accordingly. Pulaski 4-H strives to create a safe and inclusive environment to young people of all beliefs and backgrounds regardless of their gender, race, ethnicity, and/or disability. Pulaski 4-H sees two 4th & 5th grade special education classes, with 16 youth total, that require varied

teaching techniques, once a month to focus on learning in a fun and engaging way. Healthy Living lessons are taught with literacy, craft, take home, and STEM components.

Briefly describe how your target audience benefited from your project's activities.

Pulaski 4-H has had such success with H.E.R.O.E.S. in 2020-2021 that it will continue in the 2021-2022 school year & hopefully expand into the middle school special education classes too. Three invited presentations (National Epsilon Sigma Phi Conference, Kentucky Volunteer Conference, & Georgia Association Extension 4-H Youth Development Professionals Conference) and 1 poster (Georgia Epsilon Sigma Phi) has been given or will be given soon to inform others about the H.E.R.O.E.S. program, how to replicate it, and how important & rewarding inclusion programming can be to a local 4-H program and beyond. Two other states, South Dakota & Kentucky, have inquired about the HEROES program along with other counties within Georgia. 100% of participants and teachers enjoyed the lessons & 95% of youth actively engaged. A teacher was quoted saying, "Thank you for allowing my students the chance to feel normal during such a difficult year! They love 4-H & look forward to it each month!"

Pulaski 4-H is affording opportunities for ALL youth to learn and engage in experiential learning to assist youth in acquiring knowledge, developing life skills, and forming attitudes that will enable them to become self-directing, productive and contributing members of society. All youth have their own uniqueness and special skills & qualities, and H.E.R.O.E.S. was created to help youth recognize, respect, and celebrate those special and extraordinary qualities about others. We can all be HEROES for others!

Briefly describe how the broader public benefited from your project's activities.

Positive youth development opportunities

Comments (optional)

Describe and explain any major changes or problems encountered in approach. Additionally, note opportunities for training and professional development provided, how results have been disseminated to communities of interest, and any new details regarding what the project or program plans to do during the next reporting period to accomplish the goals.

N/A