



Alabama Cooperative Extension System

The Urban Difference: REPORT 2019



Alabama Extension at Alabama A&M University



UNP-2175



Today, the Alabama Cooperative Extension System serves 1.4 million people or 1 in 3 Alabama residents.



Alabama Extension at Alabama A&M University



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From the Administrators

In any given moment we have two options: to step forward into growth or step back into safety. - Abraham Maslow

In 2019, the Alabama Cooperative Extension System at Alabama A&M University continued to expand its partnerships, increase external funding, and strengthen its educational programs. As a result of these efforts, and with the help of capable partners, more Alabamians are:

- ▶ Making healthy food choices and engaging in physical activities to improve their mental and physical well-being
- ▶ Implementing child literacy strategies to help kids stay in school and become lifelong learners
- ▶ Preparing young innovative leaders through the pursuit of STEM education and early career exploration
- ▶ Learning to dispel myths about bioengineered plants that resist diseases and pests or advance medical discoveries
- ▶ Applying financial management strategies to reduce debt and to save for future endeavors

As 2019 drew to a close, we engaged in program planning for the new year and conducted internal training of staff in preparation for a year of exciting opportunities. However, the ensuing health crisis forced changes in both our operations and delivery of programs in significant ways. COVID-19 has undoubtedly, limited how we interact with our audiences. Although face-to-face engagement will always be a cornerstone of how Extension delivers knowledge, we sharpened our skills, enhanced our digital technology, and adapted our programs to more widely serve virtual audiences. You could say that COVID-19 presented us with an opportunity to try new modes of program delivery and to reach online users who were unaware of what Extension has to offer. These are the types of timely challenges that must be met if we are to continue moving Alabama Extension forward!

External Funding: \$8.6 million

Direct Face-to-Face Contacts: 382,209

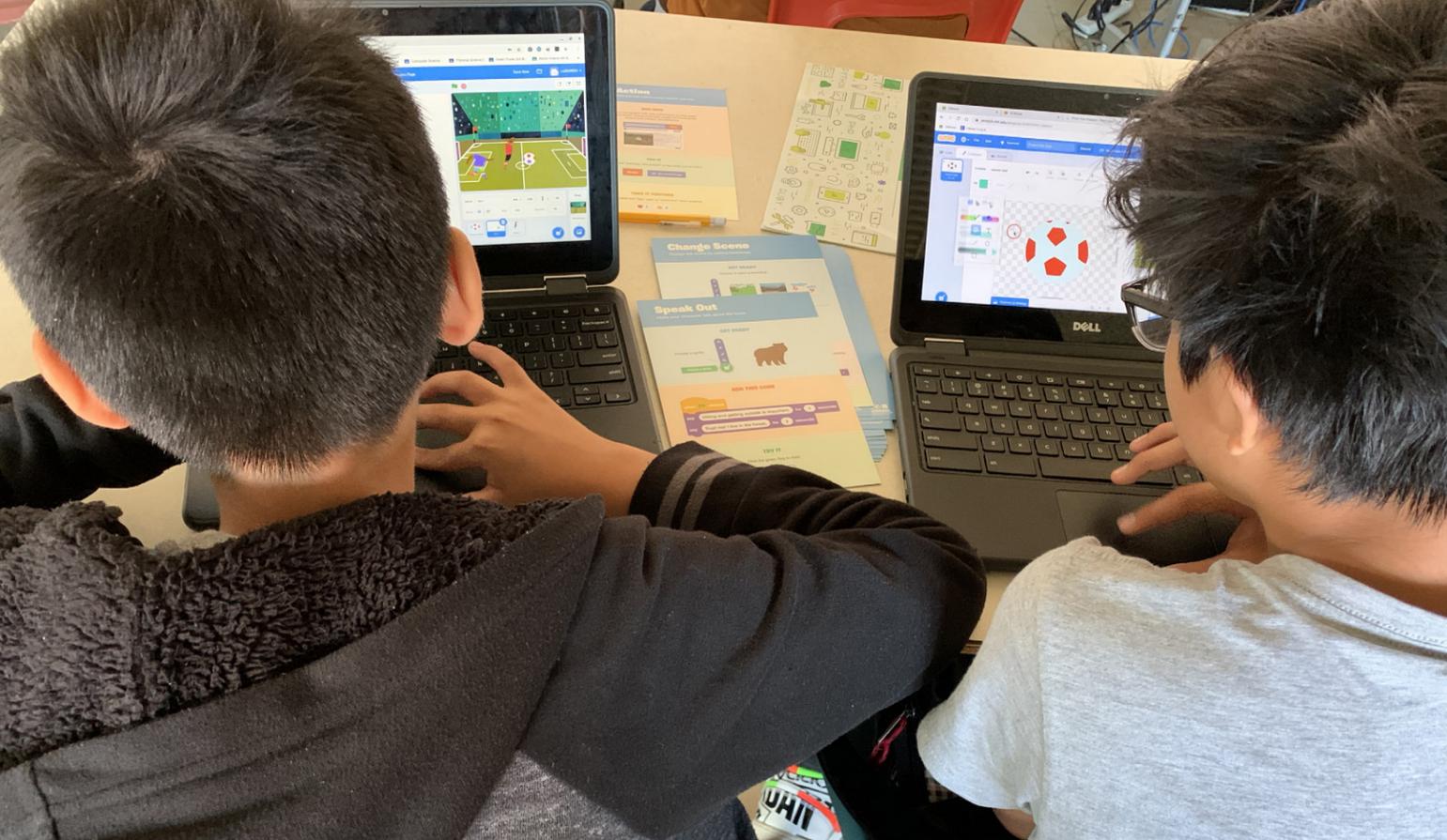
Indirect Contacts: 2,122,306

- Social Media: 578,407 Facebook User Reach
- Facebook User Engagements: 9,099
- Radio: 440,300*
- TV: 1,094,500*

Volunteer Hours: 11,017

Partnerships: 10 MOU partnerships & 93 informal community partnerships

*Data reflects Huntsville-Decatur-Florence metropolitan areas.



Students engaged in 2019 National Youth Science Day coding activity. Photo credit: Jessica Williams

Alabama 4-H and Youth Development

► STEM education prepares future generations to lead in global innovation.

Future Innovators Need STEM

Science, technology, engineering, and mathematics (STEM) education has become a top priority for the United States and the Alabama Department of Education. STEM fields are growing at nearly twice the rate of other occupations, and are expected to reach more than 9 million by 2022. In order to keep pace with the rest of the world, it's important for Alabama to develop workers to fill these positions, particularly since most college graduates do not enter STEM fields. These workers will need to be problem solvers, critical thinkers, communicators, and innovators. The Alabama 4-H STREAM (Science, Technology, Reading, Engineering, Agriculture, and Mathematics) program helps youth to develop critical thinking skills that are essential in STEM careers for solving real world problems and issues.

In addition to STEM, Alabama Extension's STREAM program added a core reading component needed to understand content area instruction and to actively engage

in STEM activities. Outcomes in 2019 revealed the following:

- 1,780 urban youth completed six engaging hands-on lessons and activities in STREAM, totaling 10,680 contact hours.
- 1,495 (84%) youth demonstrated creativity, critical-thinking, collaboration and problem-solving skills.
- After 419 youth attended STEM Day at Alabama A&M University, 243 (58%) of the participants were interested in STEM-related careers and 331 (79%) youth showed an increase in the ability to analyze data to draw conclusions.



www.aces.edu/STREAM



Animal Sciences and Forages

► Raising goats on forestland can lead to economic and environmental benefits by removing invasive plants and reducing animal food costs.

Raising Goats on Forestland

In March 2019, Alabama Extension at Alabama A&M University (AAMU), in partnership with AAMU's Department of Biological and Environmental Sciences, was awarded a three-year capacity grant for \$346,670 to fund the project "Advantages of Using Forestland for Meat Goat Production." The principal and co-principal investigators are Dr. Kozma Naka and Dr. Valens Niyigena, respectively. The primary focus of the project is to explore how browsing goats can be used to clear understory vegetation in urban areas.

Specific project goals are to:

- Increase awareness of agroforestry's economic, social, and environmental benefits to farmers and forest landowners on small and medium-sized farms.
- Educate stakeholders about factors that lead to successful meat goat enterprises. Factors include revenue generated by carcass weights, average weight gain, and lower death rates caused by internal parasitism.
- Educate producers about developing an operating budget, including all the variables that affect value and the total income generated to calculate the break-even point.
- Educate producers on how to determine the in-out price analysis level that is required to cover the cost of producing goat meat under forestland management.
- Inform producers about goat browsing, controlled soil erosion, and how to improve soil fertility through carbon and nitrogen recycling.

The results of the study will be used to increase awareness of agroforestry's economic, social, and environmental benefits to farmers and forest landowners on small and medium-sized farms. Specifically, goat producers will be able to determine costs associated with producing goat meat using forestland.

Visit www.aces.edu/go/MeatGoatProject for more information regarding this project.

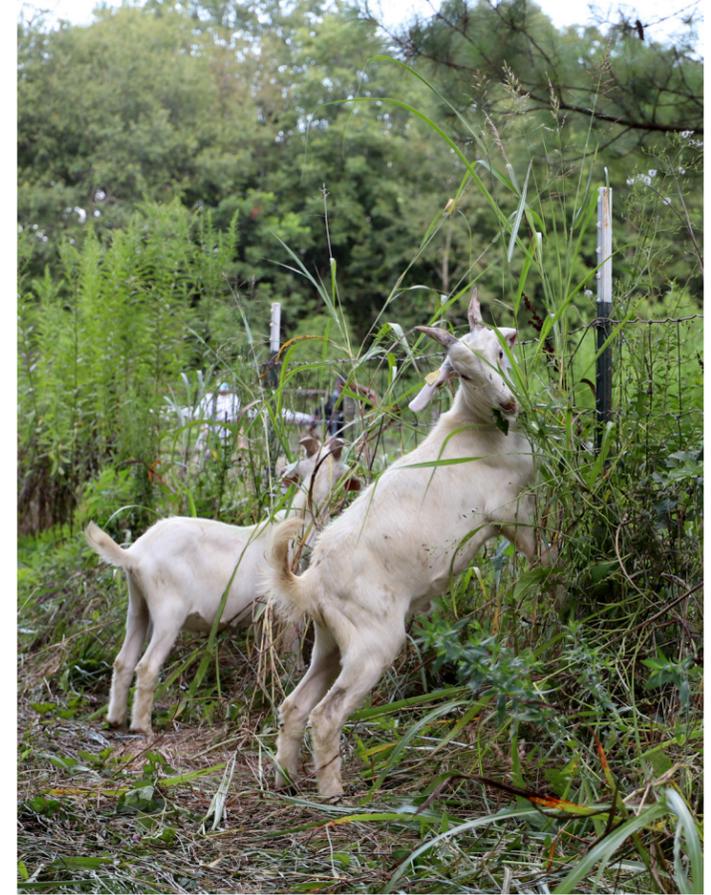


Photo 1: Goats at AAMU's Winfred Thomas Agricultural Research Station. Photo 2: Animal Sciences Specialist Valens Niyigena and Darren Beachem, operations technician, at AAMU's Agribition Center. Photo credit: Shannon Schoeneweiss

Community Resource Development

► Helping youth to define career goals early can improve high school and college retention rates.

Early Career Goals Improve Retention

The *Career Readiness for All* (2019) report published by the Coalition for Career Development states that America has spent too little for resources in career development among middle and high school students. Student interests are usually developed by the eighth grade. However, many students enter and leave high school without clear career goals based on their interests and plans to achieve those goals. A third of these youth delay going to college, and if they do go on to college, many end up spending an extra year or two in school. This adds up to additional costs and time to earn a two-year or a four-year degree. Experts advise that youth explore career interests in middle school to improve the likelihood of identifying career options early. Career Countdown meets that objective by helping middle and high school students develop career and educational plans to get them on the right career path.

In 2019, Career Countdown was implemented among 4,150 middle and high school students. Consequently, post-delayed survey data collected among 1,407 participants indicated the following:

- 1,196 (85%) planned to conduct additional research on careers of interest. This was a 10 percentage point increase over the percentage of students who indicated plans to complete research on the pre-implementation survey.
- 1,050 (74.6%) of participants indicated intent to complete an education plan, an 11.7 percentage point increase over the percentage of students indicating intent pre-implementation.
- 1,180 (83.9%) indicated understanding that performance in school carries over to performance on a job; again an increase over pre-implementation results.
- There was also a slight increase in the percentages of reported hours spent studying per week (3.1%).



www.aces.edu/careercountdown



Consumer Sciences and Personal Financial Management

► Financial literacy enables consumers to tackle debt, save money, and make smart financial investments.

The 2020 TIAA Institute-GFLEC Personal Finance Index (P-Fin Index study conducted by the Global Financial Literacy Excellence Center and TIAA on financial literacy), reports that a little more than half of Americans still live paycheck-to-paycheck and are uncomfortable with financial concepts and practices. Many of these Americans also continue to wallow in financial debt that prohibits them reaching their financial goals. Financial literacy and money management education enables individuals to understand key financial terms and to make wise money management decisions.

The FLIP: Financial Literacy in Progress series helps consumers develop wise buying habits, good credit, a spending plan, and strategies to avoid fraud and reduce debt. In 2019, 317 participants that completed the four-lesson series learned how to develop financial goals, identify financial leaks, and create and reconcile a spending plan. In addition, 601 program participants completed a credit report for the first time and 208 program participants were trained to use PowerPay, a debt elimination software program.



www.aces.edu/go/FLIP



Urban Regional Extension Agent Cynthia Whittaker facilitates Career Countdown session with County Extension Coordinator Matt Hartzell at West Blockton Middle School in Bibb County. Photo credit: Mark Hartzell

Photo 1: Piggy bank. Photo credit: iStock image by artisteer

Photo 2: Parent and child hold a toy house. Photo credit: iStock image by twinsterphoto



Family reading together. Photo credit: iStock image by Prostock-Studio

Family and Child Development

► Child literacy programs lay the foundation for children to be successful throughout their lives.

Advancing Child Literacy

Most students learn to read by the third grade; however, by the fourth grade, they read to comprehend their studies. The reading level of fourth graders in Alabama fell below the national average in 2019. Students that do not grasp basic skills, such as reading by grade 4, could end up dropping out of high school. Low-income students may be particularly vulnerable if they live in distressed environments.

Alabama Extension believes that parents and guardians should take an active role in providing positive outcomes for children, and the sooner the better. Programs like Alabama Extension's PCREP: Parent-Child Reading Enhancement Program train parents and guardians in child literacy skills in

five key areas: phonemic awareness, phonics, vocabulary, comprehension, and fluency.

As a result of this training, 253 (85%) parents and guardians completed the entire four-lesson PCREP series. After two months, the following outcomes occurred:

- 228 (90%) saw improvement in their ability to teach reading.
- 220 (87%) saw improvement in their child's reading ability.
- 215 (85%) used reading strategies learned from the program to teach reading.
- 215 (85%) increased the amount of time they spent reading with their children.
- 197 (78%) focused on the five components of reading to teach their children to read.



www.aces.edu/go/Read

Forestry, Wildlife and Natural Resources

► STEM mentorship programs help to advance research and reduce staff shortages in STEM careers.

STEM Students in Action

It's no secret that minority students are underrepresented in STEM fields. Mentoring opportunities like the Agricultural Science Extension Mentorship Program (ASEMP), gives minority students an edge in both their academic and professional pursuits.

From June 3-July 15, 2019, Alabama Extension at AAMU in partnership with Alabama A&M University and Tennessee State University, hosted its second, summer mentorship program. Eight undergraduate STEM majors with a minimum grade point average of 3.0 were selected after a nationwide search and paired with mentors from diverse backgrounds. The ASEMP students engaged in short- and long-term field, classroom, and laboratory exercises, site visits, workshops, and service-learning projects. These projects focused on the importance of giving back to the community and various STEM-related subjects. For example, they utilized ELISA test kits to detect levels of carbamazepine (anticonvulsant medication)

and sulfamethoxazole (antibiotic) in the East Fork Stones and Cumberland rivers of Southern Tennessee. In addition, the students were required to develop Extension publications and to conduct a final presentation about their mentorship experiences.

ASEMP is a program activity of Alabama Extension's Synergistic Efforts to Reduce Pharmaceutical Impacts on the Environment program. Evaluation of the mentees revealed significant knowledge gains concerning pharmaceutical and personal care product issues as well as increased interest in Extension and science careers. Qualitative data further revealed satisfaction with activities and the learning experiences. Today, most of the students like Zac Moss, who was a double major at Auburn University, have gone on to pursue STEM-related research, education, and career opportunities in cancer research, communications, public health, cell and molecular biology, addiction neuroscience, food safety, and kinesiology.



www.aces.edu/serpie



ASEMP Mentor & Mentees: Ravneet Kaur, TSU graduate mentor; Arthur Lee III, Zari McCullers, Shameka Funches, Chelsea Quinn, Zac Moss, Taneaia Surles, Justin Hanna, & Mackenzie Hutchinson. Photo credit: Dr. Sam Dennis



Zac Moss, ASEMP 2019 attendee. Photo credit: Auburn University



Corn growing in a field. Photo credit: iStock image by Kwangmoozaa



Shopping basket filled with groceries. Photo credit: iStock image by Kritchanut



Family dances to get fit. Photo credit: iStock image by fizkes

Home Grounds, Gardens and Home Pests

► Educating consumers about GMOs reduces public fear associated with bioengineered food.

Dispelling Public Food Myths

Food has been genetically altered since the beginning of time. Scientists use modified plants to resist diseases and pests, for medicine and vaccines, and to increase food production. But not all consumers are convinced that genetically modified foods are safe although there is no scientific evidence to the contrary. That's why programs like Food Facts are critical to debunk genetically modified organism (GMO) myths. Even the government is now on board in educating consumers about genetically engineered food through Feed Your Mind, an initiative of the Food and Drug Administration, the Environmental Protection Agency, and the USDA.

In 2019, 1,274 individuals were educated about GMOs and 1,121 (88%) agreed to purchase bioengineered food. They were also confident that GMOS were safe to consume. In addition, bioengineered and traditional demonstration corn plots were planted at AAMU's Winfred Thomas Agricultural Research Station and the Agribition Center. Sixty-three participants completed an online survey after sampling the

corn. The top three cultivars favored (first to third) were SV9010SA (bioengineered experimental), Temptation II (bioengineered), and Silver Queen (conventional). Forty-six (73%) participants were familiar with bioengineered foods and 38 (60%) considered the technology useful. Unfortunately, 25 (40%) of the participants were unsure if bioengineered foods were safe. As a result of the program, 25 (40%) of the participants did want to learn more about the use of biotechnology in developing and producing foods.



www.aces.edu/go/HomeGrounds

Human Nutrition, Diet and Health

► Exercise helps to extend life by improving mental and physical well-being.

Improving Physical and Mental Well-Being

Americans are not fond of exercising. In fact, the United States Department of Health and Human Services (DHHS) estimates that only 1 in 3 kids and only 5% of adults engage in some form of exercise daily. Furthermore, at least 80% of adults are not meeting DHHS's *Physical Activity Guidelines for Americans*, particularly when it comes to aerobic exercise that gets the heart pumping. Muscle strengthening exercises are also important for greater coordination and endurance. Both forms of exercise, aerobic and muscle toning, are ideal for weight loss and will improve mental health, strengthen bones and muscles, reduce risks associated with chronic diseases, and improve poor sleeping habits.

Since its inception, the Urban SNAP-Ed: Supplemental Nutrition Assistance Program-Education has taught Alabamians the importance of not only eating healthy, but adding physical activity to their daily lives. In 2019, after completing 10 hours of training, post-assessments indicated



Green spinach and cucumber salad, white rice and chicken fillet baked with thyme and lemon. Photo credit: iStock image by VeranikaSmirnaya

that daily physical activity among 1,538 adults increased 28% from 62% to 90%, and by 35% among 2,227 youth from 55% to 90%.



www.aces.edu/go/UrbanSNAPed



Human Nutrition, Diet and Health

► Good health strategies like eating a healthy diet and exercising can improve quality of life.

Hypertension: The Silent Killer

High blood pressure or hypertension is sometimes referred to as the “silent killer” because typical signs or symptoms do not occur. Hypertension is the second leading cause of kidney disease. The Centers for Disease Control and Prevention estimates that only 1 in 4 Americans have their high blood pressure under control. In Alabama, 21.1% of individuals aged 18-44 have high blood pressure. Among persons aged 45-64 the rate is 53.1% and 67.3% among adults age 65 and older. Many health experts recommend eating a healthy diet and engaging in exercise to reduce hypertension rates, as well as taking medication, if prescribed.

The CHAMPION: Community Health Aerobic and Motivational Program Initiating Optimal Nutrition is designed to improve eating habits, encourage physical activity, and improve health literacy. In 2019, 423 individuals completed the CHAMPION series. While post-test surveys indicated that participants changed their eating habits, data collected among 148 adults also indicated that at least 107 (72%) began to engage in 30 or more minutes of physical activity per day. Seventy-five (51%) engaged in moderate aerobic activities 4-5 days per week for 30-60 minutes. One hundred fifteen (78%) adults engaged in strength training 2-3 days per week for 30-60 minutes.

Last year, the program also started a campaign called Walking Like a CHAMPION to encourage people to walk as a daily form of exercise. Since December 2020, approximately 2,000 people have joined the Walking Like a CHAMPION initiative.



www.aces.edu/CHAMPION

Photo 1: Walking for health. Photo credit: Shanetria Brown

Photo 2: A man talks with his doctor about health diagnosis. Photo Credit: iStock image by Rawpixel



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