2025 Georgia ANREP Annual Meeting
Clarkesville, GA

Poster Abstracts

Soil-Based Assessment of Site Productivity for Loblolly and Slash Pine Plantations in the Coastal Plain Region

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Southern pine plantations are a critical component of the southeastern U.S. forestry industry. In 2024, Georgia's forest industry contributed $42 billion in revenue output up 1.6% from 2021 and 140,787 jobs with compensation of $9.1 billion (USDA, 2024). Loblolly pine (Pinus taeda L.) and slash pine (P. elliottii Engelm. var. elliottii) are the two most important commercial species. Productivity assessment relies on site index (SI) and mean annual increment (MAI), traditionally based on outdated models. Recognizing the significance of keeping pace with advancements in forest management, the Natural Resources Conservation Service has partnered with the University of Georgia Warnell School of Forestry & Natural Resource to update SI and MAIs for planted loblolly and slash pine plantations in the Coastal Plain region. Loblolly pine consistently outperformed slash pine in most soil groups. Slash pine had slightly higher SI in poorly drained soils (D, G). Loblolly pine showed a stronger response to M1-P levels. Loblolly pine showed greater stand volume and green weight increments across most soil groups. Slash pine had more stable but lower growth potential, especially in low-nutrient sites. Based on results, productivity on most sites can be significantly increased through intensive management such as site preparation, herbaceous weed control, and fertilization.

Going Batty in Oconee County: Engaging families, busting myths, and promoting bat education through a community festival

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Bats act as an integral part of pest management for both natural and agricultural ecosystems in Georgia. However, due to habitat loss and disease, Georgia's bat populations are declining. Also, bats are often seen as a danger by humans, resulting in conflict when unwanted roosting occurs in dwellings. It is important to educate the public about the benefits of Georgia's flying mammals while providing them options to navigate potential conflict. Oconee County Extension has created the Oconee County Bat Festival to address the need for bat education and to provide a real-world example of bat-human conflict mitigation through providing housing for a local park's large bat population. The festival increased participants' knowledge, appreciation, and awareness of bats, including how they benefit the ecosystems in Georgia. Implementing practices learned at the festival can support local bat populations by providing suitable housing, reducing pesticide use, and encouraging insect diversity.

Two Years of the Lights Off, Fireflies On Project

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Research (Fallon et al, 2021)* along with Extension anecdotal evidence indicates that firefly populations are declining and the public lacks understanding on the habitat needs of these insects. Georgia is home to approximately fifty species of fireflies and Extension personnel report that many people cannot name a single species. Project collaborators UGA Extension, Fannin County Chamber of Commerce, and the Fannin County School System realized there was an opportunity to support firefly conservation and perhaps increase tourism to the area long-term. This model would be comparable to the sea turtle campaign used at Jekyll Island. The overarching goal of the project is to educate both mountain visitors and permanent residents resulting in better management practices in firefly conservation. Visitors take what they have learned while visiting and use it at their permanent homes. Long term, the mountain area could become a destination for those interested in seeing the natural firefly displays in the summer. Over 1,000 participants attended firefly educational workshops and presentations. 500+ students were reached through firefly lesson plans created with six local educators. July 2nd was proclaimed Firefly Day by Fannin County commissioners. Firefly lesson plans are now available for all educators; team will promote usage and share teacher contributions. Habitat gardens based on Clare Johnston's plans will be implemented in at least two Georgia counties

Using an Outdoor Classroom to Teach Homeowners and Students Coastal Gardening Techniques

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In an effort to better reach community members who are struggling with their home garden, Glynn County Master Gardeners have created the Meet Me in the Garden (MMITG) and 4-H Garden Club monthly meetings in the Madge Merritt 4-H Teaching Garden. These educational programs offer the opportunity for all community members to learn specifics of fruit, vegetable, pollinator, and native plant gardening in Coastal Georgia. In 2024, these programs reached a broad audience of homeowners and children who have gained new gardening skills. After MMITG, 13 participants have decided to continue learning side-by-side with the MGEV and are new Extension Volunteers. They have gone from simply seeking education to working hands-on and developing new skills. Throughout the last year, these new Extension Volunteers have dedicated 182 hours of service, guided by MGEV, and learn with every step of the way. Students have had the opportunity to learn by doing under the guidance of MGEV and their educational programming. Presently, there are 10 members who regularly attend these club meetings. MGEV add tremendously to the Glynn and McIntosh ANR Programming. They are able to provide education for adults and children by lecture, hands-on guidance, and casual conversation. The collective knowledge of these volunteers boosts our resources for Coastal Gardening. Their hard work demonstrates to our residents how to maintain a garden in conditions otherwise left out of the literature.

An Economic Analysis of Cover Crop Utilization in Georgia Cotton and Peanut Production

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Cover crops have long been known to yield numerous agricultural production benefits as well as positive externalities to society. Cover crop has the potential to improve weed control, increase moisture filtration, and reduce fertilizer usage. Erosion control was the primary motivation for farmers to adopt cover crops, and remained the primary reason that Georgia cotton and peanut producers continued to implement cover crops in their operations. Motivations for planting cover crops ranged from combating soil erosion to reducing necessary tillage and numerous other factors as demonstrated. Cover crop use significantly impacts cash crop budgeting variables. Farmer participants indicated that they found cover crops to have most beneficial impact in dry-years and over the long-term. Various budget changes identified have been as apparent as reduced tillage or as subtle as fluctuations in required management time.

Growing Green Leaders: Teaching 4-H Youth the Value of Environmental Education

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According to an article from Michigan State University Extension published in July 2015, it states that "today's children have exchanged bicycles for Wii consuls and tree houses for iPads. A report released by the University of Michigan's Institute for Social Research found that the average child in America between the ages of six and 17 spends just seven minutes a day in unstructured outdoor play. That represents a 50 percent decline over 20 years. In other words, over the span of a generation American children are now spending half as much time outdoors" (Hintzen, 2015). Health experts have said that spending time outdoors in green spaces, surrounded by nature has proved many mental and physical benefits; some of these benefits are reduced anxiety, depression, and stress (Hintzen, 2015). A study published in the International Journal of Environmental Research and Public Health titled "Determinants of Outdoor Time in Children and Youth" states that "children and youth who are more physically active reap multiple benefits, including better motor and cognitive development, greater cardiovascular fitness, reduced cardiometabolic risk, and improved bone health. However, the majority of children and youth worldwide do not meet current physical activity" (Larouche et al., 2023). Because of these nationwide statistics, Franklin and White County 4-H Agents worked together to provide a new opportunity for their 4-H students to learn in an outdoor setting while gaining an appreciation for the natural environment around them. There was a total of 17 participants during the summer 2025 series, which was a slight increase in participation of students who attended the summer day camp series the previous summer. With this increase, students are beginning to recognize how exciting it can be to learn about environmental education through engaging outdoor activities. Parents/guardians also mentioned how they loved the variety of learning activities the students got to experience in all three days. From these results, we can conclude that 4-H participants enjoyed learning in a technology-free environment with peers and felt that the camp was a beneficial opportunity they may not experience anywhere but through 4-H.

Reece Farm Demonstration Woodland Botanical Garden
Jacob Williams - Union/Towns County Extension

Southern Appalachia has strong ties back to the plants that are native to the area. Over time as development has increased, harvesting has occurred, and people have moved, some of the knowledge of native plants has been lost. This project in North Georgia is aimed to restore that knowledge, and introduce the public to native woodland plants. The Reece Farm garden also features a native orchard. The garden and the orchard are both in the process of being created. Plants have been planted in each, but there are plans to add more plants in the near future. The Reece Farm where the garden is planted is a heritage museum where the poet Byron Herbert Reece once farmed. The land is nestled in a valley along Wolf Creek just north of Vogel State Park. This heritage farm is an ideal location for a demonstration garden because of the history that it promotes and the accessibility that the public has to it. As this garden grows, it will be an outdoor classroom where people can learn about woodland botanicals, where to find them, how to propagate them, how to grow them, how to harvest them, and what to do with them post-harvest. As the garden is established and grows, it will be a center for hands on learning and demonstration. Educational events will be hosted there to teach the public and forest farmers about how to cultivate woodland botanicals and native fruits. Programs on seed saving and propagation will assist new growers to get started with their own production at home.

Factors and Barriers of Extension Programming Adoption: A Case Study of Georgia Green Landscape Stewards
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Because Cooperative Extension agents decide what educational programs to offer to clients, they serve as gatekeepers of Extension information dispersal. Previous studies have shown that Extension education is effective in increasing client knowledge and influencing adoption of recommended practices, suggested that interaction with Extension educators has more influence on client behavior change than use of Extension publications alone, and examined the characteristics of Extension clients. There is a gap, however, in studies concerning the adoption and utilization of new programs by Extension agents. There is a further gap in Diffusion of Innovation studies addressing motivations for adopting an innovation, as well as reasons to reject it. Options for increasing program adoption in counties with lack of time and support could include: Continually promote GGLS; Introduce to new personnel in first year; Program promotion from upper management, specialists (professors); Other county agents assist with GGLS in counties heavily focused in agriculture.