Instructions: Please supply an abstract, in English, of no more than 400 words, fitting on a single page, submitted in Word, and using the following format, in 10 point Arial font and spacing of 1.5 lines:

**Peanut Value Chain Circular Bioeconomy Systems: Opportunities for optimizing resources use and biomass valorization**

*Nicole Nunoo (PhD), Anil Banstola, Gopinath Munisamy, Jodi Johnson Maynard.*
*University of Georgia*
*Miller Plant Sciences Building,*
*120 Carlton St,*
*Athens, GA, USA*
*Nicole.Nunoo@uga.edu*

Abstract
The peanut industry is a cornerstone of Georgia's agricultural economy, generating over $2 billion annually and accounting for more than half of U.S. peanut production. While kernels dominate market value, substantial peanut biomass co-products including shells, skins, oil meal, and vines, remain underutilized. This exploratory study examined opportunities to integrate circular bioeconomy (CBS) principles into the peanut value chain, emphasizing pathways for biomass valorization. Drawing on a comprehensive literature review and pilot interviews with academic and industry experts/stakeholders (n=10), we identified emerging applications. The pilot highlighted both opportunities and challenges: while stakeholders recognized strong market potential in nutraceuticals and sustainable packaging, concerns persist around scalability, processing infrastructure, and economic feasibility. The next steps of this project include the development of integrated circularity models, public-private-academic demonstration projects, and socio-behavioral research on adoption barriers. By advancing cross-sector collaboration and embedding CBS principles into agricultural research and extension, Georgia is well-positioned to lead in circular bioeconomy innovation for peanuts.