Project Title: University of Georgia Agronomic Research and Extension Programs to Address Economic Sustainability of Peanut Production

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Agronomic Research and Extension Activities

1. **Agronomic Research:** Multiple research trials were conducted to continue to access the yield and quality impacts of row spacing, seeding rate, planting dates, tillage practices, harvest date, and varietal resistance to TSWV. Trials were conducted on the Tifton campus (Ponder, ABAC, & RDC), Attapulgus research station, at the Midville Research Station, and at the Sunbelt Expo. Trials have indicated that there are still yield and quality improvements with conventional tillage, early planting, and twin row configurations.

   Lastly, research trials have been initiated to evaluate new technologies to assist in increasing productivity and profitability. In 2018, two field trials were conducted to develop a method for estimating peanut health using aerial imagery as well as validating the Australian Yield Estimator. In these trials data collection consisted of chlorophyll estimates, nutrient estimates, and fluorescence estimates. The first step to analyzing this data is to determine a correction value based on this data for commercially grown varieties in Georgia. This data is still being analyzed.

2. **Extension Field Demonstration Program -** An extensive on-farm field demonstration program for peanuts is conducted each year by the University of Georgia Extension Peanut Team in cooperation with county extension agents. The focus of these on-farm demonstrations is increased profitability through production management. The on-farm trials in 2018 consisted of variety trials in Colquitt County, Berrien County, Bullock County, Early County and Jenkins County comparing newly released Cultivars compared to Georgia-06G. There were also inoculant, foliar fertilizer and growth regulator trials conducted on-farm in Early, Mitchell, Randolph, Truetlen, Grady, and Colquitt counties. The results of the variety trials have indicated several of the newer varieties are similar in productivity and quality as Georgia-06G with Georgia-18RU showing great potential. The assessment of plant growth regulators are showing positive results on most varieties with excessive vine growth and even Georgia-06G. Some of the on-farm Growth Regulator trials are showing an increase in yield of more than 300 lbs per acre with reduced rates. Furthermore, these on-farm demonstrations helps the peanut team educate many of the newer agents we now have in the county extension system.

3. **Peanut Industry and Extension Support** – The funding support for travel was utilized to attend and present my peanut research at APRES and National/Regional Agronomy meetings along with multiple national peanut update presentations at several national industry meetings. These funds have also supported my travel throughout Georgia in order to help county agents and growers with peanut related issues. I made over 65 county visits throughout the season and made more than 75 presentations in 2018.

4. **Dissemination of information from all Peanut Research and Extension Programs.** The information compiled through the many research and extension faculty is disseminated through several agent training, research field days and field visits throughout the year. The research results and recommendations are also provided through publications like the peanut update and the UGA peanut team website. We are continuing to updating our Web pages and peanut publications so that growers can have the most up to date information.