Project titled Analysis of Production Costs for SE Peanut Producers is a project to conduct economic analyses for SPRI research projects that lend themselves to economic analysis and conduct research related to costs and returns and profitability of peanut production.

An Economic Analysis of Herbicide Control of Purple Nutsedge in Peanut
O.D. WILLIAMS*, University of Georgia, Athens, 30602, N.B. SMITH, T. GREY, R. S. TUBBS, University of Georgia, Tifton, GA 31793, T. WEBSTER, USDA/ARS, Crop Protection and Management Research Unit, Tifton, GA.

During a low price market environment, farmers may be tempted to reduce rates of herbicides to control costs. A research project examining varying rates of the herbicide Cadre was conducted by Dr. Tim Grey, Dr. Scott Tubbs and Dr. Ted Webster in 2014. The first objective of this study is to determine how varying rates of Cadre would affect yield and tuber emergence. The second objective is to compare the economic returns of varying rates of Cadre. The methodology used to conduct the analysis was as follows: A) Use 2014 UGA peanut budget to estimate costs on per acre basis, adjusting the chemical cost to determine cost and returns. B) Use the National Loan Rate for peanuts as the price to estimate revenues. C) A base peanut grade of 73.5% SMK and sound splits was assumed.

Yield data was collected peanut planted in 30" diameter, countersunk outdoor microplots in Tifton, GA in April 2014. Sample weights were converted to lbs/acre and adjusted to 7% moisture.

Economic results for the first year showed no treatment giving the highest return above variable costs of $288.72 per acre (no fixed costs, land rent or management charge). Among the three treatments, the half rate or 2 ounces gave the highest returns above variable costs at $285.07 per acre.
First year data is inconclusive with regard to returns based on yield. The follow up analysis to this study will include data results from the most recent experimental planting which was done in April of 2015. Evaluate economic impact of grade as well as yield in future trials. Results were presented at the 2015 American Peanut Research and Education Society Annual Meeting.

**Economic Decision Aid for Replanting Peanut**

Carlos J. Ruiz¹, Nathan B. Smith¹, Scott Tubbs², Jason M. Sarver³, John P. Beasley⁴

¹University of Georgia, Department of Agricultural and Applied Economics, 2360 Rainwater Road, Tifton, GA 31793. ²University of Georgia, Department of Crop and Soil Sciences, 2360 Rainwater Road, Tifton, GA 31793. ³Mississippi State University, Department of Plant and Soil Sciences, Mississippi State, MS 39762. ⁴Auburn University, Department of Crop, Soil and Environmental Sciences, 202 Funchess Hall, Auburn University, AL 36849

A replant decision tool for Georgia peanut farmers was developed based on results from Ph.D. study by Jason Sarvor under direction of Dr. Scott Tubbs. A search for additional data from planting date and seeding rate studies was undertaken and usable data from previous studies by Dr. Beasley and Dr. Tubbs were included in developing the models and decision aid. Four different locations, Attapulgus, Midville, Plains and Tifton were investigated for differences to include in the model as a variable for different soil types. This replant decision tool is aimed to help farmers and county agents to go through the making decision process of whether or not to replant a sparse stand. The tool is an Excel spreadsheet designed for users to estimate the economic net return for different “what if” scenarios. At present, the tool is developed for irrigated peanut crops due to data only from irrigated studies. Further research for non-irrigated crops is needed to add estimate an expected yield based on replant date, stand count and seeding rate. Results have been
presented at APRES and GACAA annual meetings. This work has been developed by an UGA Graduate student as part of his thesis dissertation work and is expected to be published in an agricultural journal.

**ARC and PLC tools for the 2014 Farm Bill**

A spreadsheet tool was developed to estimate expected ARC and PLC program payments for growers to use to make election decisions. The PI and select county agents used the spreadsheet to show differences in ARC and PLC programs for peanuts. This tool shows at what price and yield a payment would trigger based on the benchmark revenue guarantee under the Agricultural Risk Coverage program. It is based on 5 year Olympic average of 2009 through 2013 county yield and US marketing year average price. The tool has a matrix that shows at different levels of marketing year price and yields what could be the potential payment expected from the program. A farmer can look for his/her yield on the matrix and the current market year average price for peanuts from the Peanut Market Price Tool below and estimate the PLC payment for peanuts in making decisions on financing and planting the next year.

**Peanut Market Price Tool**

The NASS season average price is used to calculate the PLC payment under the new farm bill. A spreadsheet tool was developed that tracked weekly peanut marketings and prices by type for the 2014 and 2015 crops. The tool was developed to give growers and lenders a way to follow the weekly price and progress of the marketing year. It calculated the marketing year average price by type for all peanuts and the year progressed. The calculation turned out to be quite accurate in estimating the 2014 PLC payment. USDA published an average price in December but did not update it until the end of the marketing year. Spreadsheet was posted on the UGA Agricultural and Applied Economics webpage under the Extension link. website [http://www.agecon.uga.edu/extension/](http://www.agecon.uga.edu/extension/)

**Economic Analysis of the Peanut Crop Rotation**

An economic analysis for peanut rotation aimed to evaluate economic differences between short and long peanut rotation scenarios was developed. Data from Dr. Scott Tubbs long term cropping systems project was used where results were available for 2013 and 2014 that included three and four year rotations. Usable data was found for peanut and cotton rotations, the corn yield results were not reliable for estimating returns for corn in the rotation. Results so far, indicate that 3 and 4 year rotations provide higher net returns. One year rotation was statistically lower compared to 2, 3 and 4 year rotations due to additional fungicide costs incurred in the short rotation. Data from 2015 will be add to the analysis in order to improve statistical validity.

**Peanut Warehouse Licenses report**

The large 2014 and 2015 peanut crops contributed an oversupply of peanuts in the US. Looking to 2016, storage is seen a concern. With the help of research assistant hired through the grant, all peanut warehouse licenses with tonnage figures was collected from USDA. A 2014 peanut warehouse database by license, location and capacity was created.
using a pivot table in Excel spreadsheet. This report was used by the National Center for Peanut Competitiveness for mapping peanut warehouse locations across US.

**Certified Seed Production Peanut Acres**
The correlation between certified seed acres and peanut plantings was analyzed. Certified seed acres dating back to 1990 through 2014 was obtained from Georgia Crop Improvement Association and Georgia Seed Association. A report was compiled using seed production acres certified by type and variety as well as producer. The certified seed acres was compared with planted acres to see if there is a strong correlation that could be used to project planted acres the next year. No strong correlation was found.

**Economic Analysis of Velum and Telone II**
An economic analysis was conducted for a county demonstration in Mitchell County on nematode control of peanut with Velum Total versus Telone and non-treated treatment. Differences in yield and grade achieved versus additional cost of pesticides were analyzed. According to this study, Telone II showed better results in terms grade, yield and return over variable cost for the one year of data. In the first year, yield and grade achieved by Velum treatment did not cover the cost of treatment compared to Telone. Additional years of data are needed to make any statistical inferences.

**Peanut Crop Insurance Price Calculator**
Revenue insurance is now available for peanuts and the spring Reference Price and fall Harvest Price is determined by a formula using cotton, soymeal and wheat futures during a month long time period. A spreadsheet and table was created and posted online to follow the price discovery periods of Jan 15-Feb 14 and Oct 1-Oct 30. The report was available on the Georgia Peanut Commission website, www.gapeanuts.com, and the UGA-Agricultural and Economics department website http://www.agecon.uga.edu/extension/.