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2011

## Standardization of Mississippi Peanut Variety Trials

Funded by National Peanut Board Grant

2011 Final Report Summary

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Trials were conducted on Mississippi Agricultural and Forestry Experiment Station land in two hill locations of Mississippi. Six commercially available varieties were planted in May at the two locations in four 36 inch wide, 52 foot long twin rows. All varieties were planted at a uniform seeding rate of 6 seeds per foot of row with a two row, twin drill Monosem vacuum planter. Fertilizer was applied according to soil test recommendations and all plots were grown under dry land conditions.

The plots were planted at the North Farm Research Center at Mississippi State University in Starkville, and at the Brown Loam Experiment Station in Raymond. Due to extremely dry conditions at the Brown Loam location plants didn't provide an adequate stand and many even died, so this location was abandoned. The Starkville location was dug with a two row digger on October 19, 2011 and harvested 5 days later.

There were significant differences among the 6 varieties with Florida 07 having the highest yield at 3,984.7 pounds per acre(lb/A) followed by Georgia 06G with 3,845.7 lb/A, GA Greener at 3,243.3 lb/A, GA 07W at 3,058.0 lb/A, TamNut 0L08 (Spanish variety) at 2,780.0 lb/A and last Ga 09B at 2,455.7 lb/A. The mean yield for the trial was 3,227 lb/A with a .1 LSD of 636 lb/A. The Spanish variety was included in the trial due to grower interest created by a production shortage resulting in growers being offered a bonus to grow the variety but yield was low compared to the runner varieties. The results of this first year of official peanut variety trials were not quite up to the average yield by growers of the Georgia 06G variety which is the most popular variety among Mississippi peanut growers. Plans are to expand these trials to 5 or 6 locations across the State in 2012.

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Final Report

to the

MISSISSIPPI PEANUT GROWERS ASSOCIATION

2011

**PROJECT TITLE:** “Standardization of Mississippi Peanut Variety Trials”

**PROJECT LEADER:** Brad A. Burgess, [bburgess@pss.msstate.edu](mailto:bburgess@pss.msstate.edu)

**OBJECTIVES:** To standardize varieties for testing over all test locations in Mississippi Peanut Variety Trials, in an effort to collect unbiased yield data.

**PROGRESS TO DATE:**

The peanut plots have been harvested, weighed and moisture recorded. After being recorded, the raw data was sorted by variety and sent to the MAFES statistician to be analyzed and convert the plot weights to pounds per acre. A sample from each variety was sent to Birdsong Peanuts, in Aberdeen, MS to be graded. Upon the collection of this data, a MAFES publication will be printed and these results will then be made available for producers in order to make future planting decisions.

Plans are already being made for the upcoming season to ensure that adequate land is requested at multiple locations and that the soil is tested prior to planting to ensure that proper fertility is applied to maximize the crops yield potential. We are hoping to acquire a tractor to be utilized to plant and harvest these peanut plots, as well as a digger and harvester. This equipment will be necessary, due to the fact that the other crops we are currently testing are grown on a row spacing of 30-inches or less. The acquisition of this equipment will be necessary to conduct these peanut variety trials efficiently and to provide this data in a timely manner.

A summary of this information will be available online at MSUcares.com, as well as a printed copy in the form of a MAFES information sheet.

# Peanut Variety Trials, 2011

*Brad Burgess*

## INTRODUCTION

Trials were conducted on Mississippi Agricultural and Forestry Experiment Station land in two geographical areas in the hill region of Mississippi. Commercially available peanut varieties were planted at both locations.

Plots consisted of four 36-inch-wide, 52-foot long, twin rows. Weeds were controlled by cultivation and/or herbicides. Only herbicides currently registered for use on peanuts were used in these studies, with strict adherence to all label instructions.

All varieties were treated with a fungicide seed treatment and an in-furrow insecticide. Experimental design was a randomized complete block with three replications at each location.

All varieties were planted at a uniform seeding rate of six seeds per foot and planted with a two-row, twin-drill, Monosem vacuum planter. Fertilizer was applied according to soil test recommendations. All these plots were grown under dryland conditions.

All plots were dug with a two-row peanut digger. After proper drying, the total plot area was harvested with a two-row, pull-type peanut combine. The harvested plots were weighed, moisture was determined, and yields were converted to pounds per acre, following statistical analysis.

Plots were planted at the R.R. Foil Plant Science Research Center (North Farm) at Mississippi State University and at the Brown Loam Branch Experiment Station in Raymond. Results from the MSU site are reported in this information sheet.

The plots planted at the Raymond location had inadequate soil moisture at the time of planting and suffered from severe drought stress in combination with high temperatures for several weeks following planting. Some plots emerged to fair stand while others germinated and then died, due to the lack of soil moisture. This location was abandoned because insufficient stands were achieved to conduct a yield trial.

## MISSISSIPPI STATE UNIVERSITY CROP SUMMARY

Peanut plots were planted into a well-prepared seedbed with adequate soil moisture for germination. Timely rains after planting resulted in all plots emerging quickly to a uniform stand. The growing season was hot

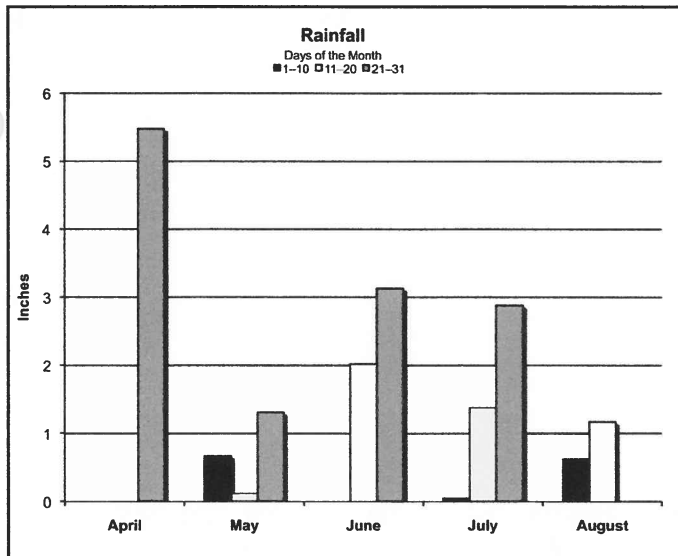
and dry, resulting in very little disease pressure. However, occasional showers throughout the growing season allowed for decent yields. Harvest was completed with no problems.

Burgess is operations manager of MAFES Variety Evaluations. Recognition is given to Jake Bullard and Jerry W. Nail, Research Technicians for the Variety Testing Program, for their assistance in packaging, planting, harvesting, and recording plot data; and Dennis Rowe for Statistical Analyses. This publication was prepared by Dixie Albright, Office Associate for MAFES Research Support Units. It was published by the Office of Agricultural Communications, a unit of the Division of Agriculture, Forestry, and Veterinary Medicine at Mississippi State University.



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Soil type..... Adaton Silt Loam  
 Soil pH..... 5.4  
 Soil fertility..... P=H, K=H  
 Fertilizer added..... Preplant — K<sub>2</sub>O @ 100 lb/A and Poultry litter @ 2 T/A  
 Postemergence — Borsol @ 12.8 oz/A on July 29 and August 24  
 Herbicide application ..... Preemergence — Dual II Magnum @ 24 oz/A on May 24  
 Postemergence — Select @ 12 oz/A on July 29 and August 24  
 Fungicide application ..... Provost @ 7.2 oz/A on July 29  
 Headline @ 20 oz/A on August 24  
 Previous crop ..... Corn  
 Planting date ..... May 24  
 Digging date ..... October 19  
 Harvest date ..... October 24

### Rainfall Summary

	Inches
April .....	5.48
May .....	2.10
June .....	5.15
July .....	4.31
August .....	1.80
<b>Total .....</b>	<b>18.84</b>

Table 1. Results from six peanut varieties grown without irrigation on an Adaton silt loam soil at the MSU MAFES Headquarters, Starkville, 2011.<sup>1</sup>

Brand	Variety	Yield lb/A	Seed no./lb	Moisture %
Georgia	Greener	3,243.3	810	8.3
Florida	07	3,984.7	640	8.0
Georgia	06G	3,845.7	630	8.5
Georgia	09B	2,455.7	760	9.0
TamNut	0L08	2,780.0	910	8.9
Georgia	07W	3,058.0	840	8.5
Mean		3,227		
LSD .1		636		
Error df		10		
CV		25.5		
R square		53.5		

<sup>1</sup>Planted May 24; Dug October 19; Harvested October 24



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