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2014

**NATIONAL PEANUT BOARD / SOUTHEAST PEANUT RESEARCH
INITIATIVE**

FINAL REPORT for WORK DONE UNDER RESEARCH AGREEMENT # GACCP
PNUT MATRITY DET Monfort

INSTITUTION: University of Georgia

PROJECT TITLE: Expanding the PeanutFARM tools to offer a Smartphone
app to peanut growers

RES. AGR. NO.:

PROJECT LEADER: Dr. Walter Scott Monfort

EXPIRATION DATE: 30 June 2017

SPRI CONTACT: Joy Purvis

NPB CONTACT: Bob Parker

FINAL REPORT: The following trial was planted in Georgia in crop year 2016 evaluating improved methods for peanut maturity determination. The Peanut Farm APP is continuing to be evaluated and validated with the trials listed below before release to growers. We had more County agents using the PeanutFarm APP in 2016 and 2017 to help track the maturity of the peanut crop through the year and to determine when to start digging.

Planting Date X Harvest Date Trial

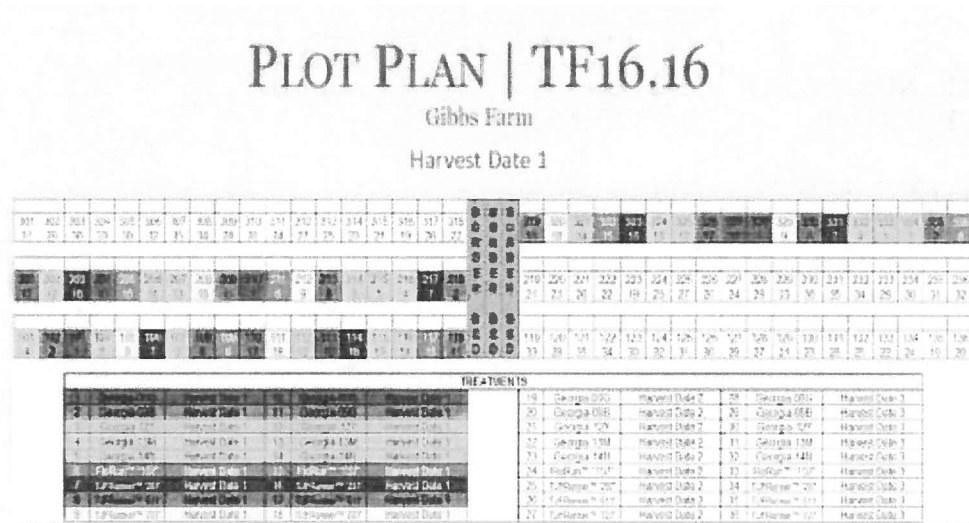
A trial was established to evaluate an adjusted Growing Degree Day (aGDD) model for peanut to improve the accuracy of maturity determination. The model was developed by Dr. Diane Rowland (currently peanut physiologist at the University of Florida) and Dr. Wilson Faircloth (currently with Syngenta) when they were research scientists with the USDA-ARS National Peanut Research Lab. The model is now being run as a part of the "Peanut FARM" web site.

This trial was established to evaluate the response of Georgia-06G, Georgia-12Y, Georgia-13M, Georgia-14N, TUFRunner™ 297, TUFRunner™ 511, TUFRunner™ 727 and FloRun 157 cultivars to various harvest dates based on the adjusted Growing Degree Day model discussed above. There was one planting date for each cultivar, May 13, 2016. The four harvest dates were based on the following aGDD accumulations – 2,400, 2,500, 2,600, and 2,700; however, due to a problem with the Georgia Weather System during the 2400 aGDD time period all 2400 aGDD plots were harvest at the 2500 time period. Based on earlier research the optimal harvest time, based on maximized yield and grade, is approximately 2,500 aGDD. The trial was blocked the four harvest dates by four cultivars were established as a 2 X 2 factorial. Individual plots were two rows (single row pattern) by 40 feet in length and there were 4 replications. Date to be collected include aGDD, Hull-Scrape Profile, yield, and grade factors. Like previous years, the 2500

aGDD time period was the optimum for most cultivars. The grade responses across cultivars and times were highly variable likely due to the extreme environmental conditions observed in 2016. See Data Slides Below:

Results

Harvest Date (Adjusted Degree Days) x Cultivar Trial



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PRODUCTION PRACTICES | TF16.14

Gibbs Farm

Planting Date: May 13 th , 2016	Digging Date 1: October 6 th , 2016	Harvest Date 1 (2561 GDDs): October 10 th , 2016
	Digging Date 2: October 12 th , 2016	Harvest Date 2 (2633 GDDs): October 20 th , 2016
	Digging Date 3: October 20 th , 2016	Harvest Date 3 (2708 GDDs): October 25 th , 2016

Cultivars: Georgia-06G, Georgia-09B, Georgia-12Y, Georgia-13M, Georgia-14N, FloRun '157', TUFRunner™ '297', TUFRunner™ '511', TUFRunner™ '727'

GDDs: 2500, 2600, 2700

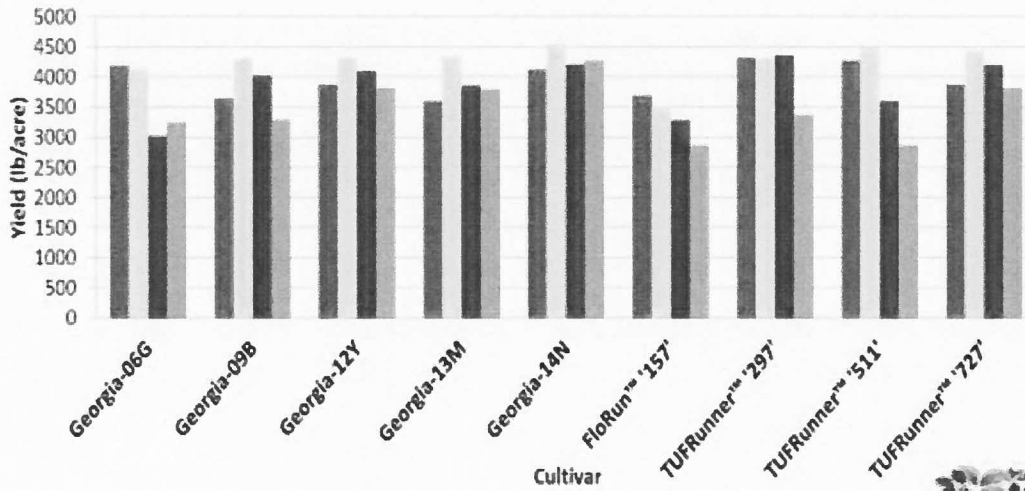
Row Pattern: Single Row

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NET YIELD | TF16.16

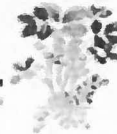
Gibbs Farm



Harvest Date 1 (2561 GDDs)
 Harvest Date 2 (2561 GDDs)

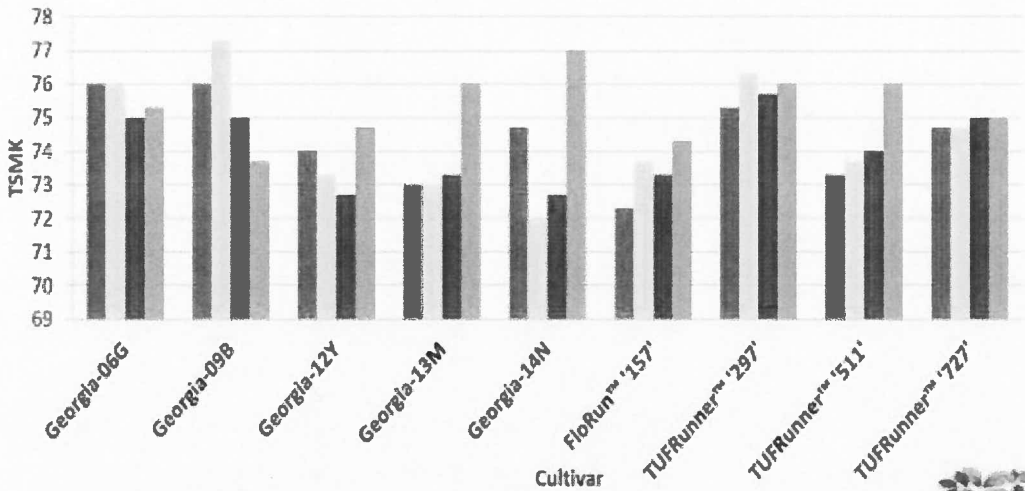
Harvest Date 3 (2633 GDDs)
 Harvest Date 4 (2708 GDDs)

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GRADE (TSMK) | TF16.16

Gibbs Farm



Harvest Date 1 (2561 GDDs)
 Harvest Date 2 (2561 GDDs)

Harvest Date 3 (2633 GDDs)
 Harvest Date 4 (2708 GDDs)

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