

NPB 199 (GA)

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

PID 199
BID 448
AD GA-77

FINAL REPORT for WORK DONE UNDER RESEARCH AGREEMENT # 26-31-5 RE671-381 GACCP BAHIAGRASS BEASL

INSTITUTION: University of Georgia

PROJECT TITLE: Influence of Kill Date (Fall vs. Spring) and Tillage on Peanuts after Bahiagrass

RES. AGR. NO.: 26-31-RE671-381

PROJECT LEADER: Dr. John P. Beasley, Jr.

EXPIRATION DATE: 31 December 2006

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FINAL REPORT: A trial comparing the effect of kill date on bahiagrass grass was established in fall 2005. Treatments were established in a 2X2 factorial with fall versus spring killed bahiagrass as one factor and strip tillage versus conventional tillage as the other factor. The experimental design was a randomized complete block with four replications. The plots were 8 rows wide (24 feet) by 75 feet long. The bahiagrass was in the second year following cotton. The plots that were killed in the fall were sprayed with 1 quart per acre of Roundup in November 2005. The spring killed plots were sprayed with 1 quart per acre of Roundup in March 2006. A second application of Roundup was required in April, one month ahead of planting. Plots that were conventional tillage were deep turned with a moldboard bottom plow and bedded. The strip till plots were created using a KMC strip till rig with a sub soil shank. The cultivar 'AP-3' was planted on 12 May 2006. The trial was maintained season long in 2006 using University of Georgia peanut production recommendations for planting, irrigating, and pest management. Plots were dug on 28 September 2006 and combined on 2 October 2006. Data collected included yield and grade factors. Yield was determined by collecting plot weights, converting it to pounds per acre, and adjusting the weights to 7% moisture. A five-pound sample was collected randomly from each plot for grade determination by Federal-State Inspection Service grade technicians.

All data is presented in the table below. Analysis of yield data indicated no interaction between bahiagrass kill date and tillage type ($p > 0.05$). There was a significant difference between tillage types but no difference for yield between kill dates. There was no interaction between kill date and tillage for total sound mature kernels (TSMK) but there was a significant difference between tillage types and kill dates. The first year of this study indicated that yield was not affected by the timing of burning down the bahiagrass for planting peanut. However, there was a significantly higher yield for the conventional tillage compared to the strip tillage when averaged over bahiagrass kill dates. There was a

significantly higher TSMK percent for strip tillage when averaged over kill date. There was a significantly higher TSMK percent for the fall killed bahiagrass compared to the spring killed bahiagrass.

Bahiagrass kill date	Tillage	Yield	Percent TSMK
Fall	Strip	5053 ab	75 a
Fall	Conventional	6205 a	72 b
Spring	Strip	4847 b	73 b
Spring	Conventional	5958 ab	72 b
Kill date averaged over tillage			
Fall		5629	73 a
Spring		5402	72 b
Tillage averaged over kill date			
Strip		4950 b	74 a
Conventional		6081 a	72 b