

#32  
2001/2002/2003  
FINAL

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

~~QUARTERLY~~ PROGRESS REPORT for WORK DONE UNDER RESEARCH  
AGREEMENT #25-21-RF328-679

QUARTER ENDING: 30 June 2004

INSTITUTION: University of Georgia

PROJECT TITLE: Development, Evaluation, and Economic Feasibility of  
Systems for Planting, Producing, and Harvesting Peanut in Multiple Row Spacing

RES. AGR. NO.: 25-21-RF328-679

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

EXPIRATION DATE: 31 December 2003

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**FINAL REPORT:** Research trials were conducted in crop years 2001, 2002, and 2003 evaluating peanut yield and grade response when planted in single, twin, and triple row patterns. Tests were conducted at the following locations: 2001 – Tifton, Plains, Midville, and Attapulcus in Georgia and Headland, AL; 2002 – Tifton, Plains, Midville, and Attapulcus in Georgia, Headland, AL, Marianna, FL, and Blackville, SC; 2003 – Tifton, Plains, and Midville in Georgia, Headland, AL, and Marianna, FL. Cultivars included in the tests were: Georgia Green, AgraTech 201, C-99R, and Georgia-02C in 2001; Georgia Green, AgraTech 201, and C-99R in 2002; and Georgia Green, Carver, and Georgia-02C in 2003. Georgia Green was the only cultivar common in all three years at all locations. Seeding rate was six seed per foot of row on the single row pattern, three seed per foot of row on the twin row pattern, and two seed per foot of row on the triple row pattern. The single row pattern has the rows spaced 36 inches apart. On the twin row pattern, the pairs of rows on each side of the bed were spaced 6 inches apart with the most outside rows spaced 36 inches apart. In the triple row pattern, the outside most rows were spaced 36 inches apart and the set of triple rows on each side of the bed were spaced 6 inches apart, leaving a 12-inch spacing in the row middle.

Plot size was based on field size and in most cases included plots that was one bed in width and several hundred feet long. At some locations, plot length was 50 feet in length and plots were harvested with a plot combine. University based recommendations were used to manage the trials for pest control and irrigation decisions during the growing season. The Hull-Scrape Maturity Profile Method was utilized to determine optimal harvest date. Spotted wilt disease ratings were made just prior to harvest. Yield and grade data were collected at each site. The weight from each individual plot was converted to a per acre basis at seven percent moisture. A five-pound sample was collected from each

plot and sent to the Federal-State Inspection Service for grade factor determination. All data were analyzed using SAS Proc Mixed.

Data analysis indicated that there was not a significant difference in yield or grade between the twin row and triple row patterns when averaged over cultivars, locations, and years. Both of these patterns had a significantly higher yield and percent total sound mature kernels than the single row pattern. In one of the three years there was significantly less spotted wilt disease in the triple row pattern when compared to the twin row pattern. However, when the data were combined over the three years, there was no difference in the level of spotted wilt disease between twin and triple row patterns. The results of this research indicate to us that there is no advantage of the triple row pattern over the twin row pattern. The data continues to support the advantage of the twin row pattern over the single row pattern.