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Evaluation of optimum peanut rotation length as affected by the presence or absence of soybean in rotation

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2016 Research Report
Research work completed from January 1, 2016 until December 31, 2016

Work related to this project was initiated at the Mississippi State University North Farm in Starkville, MS. Peanut cultivar Georgia-06G was planted on April 27, 2016. Corn was also planted on this date. Cotton and soybean were planted on May 4. Cotton received 100 lb/acre of nitrogen as ammonium sulfate on June 21 and corn received 150 lb/acre of nitrogen as UAN. Weed and disease control have been appropriate for each crop in the trial.

Peanut plots were dug on September 15 and harvested on September 21 and are currently being analyzed for yield and grade.

Because this is a rotation test, final results will not be available until after year five, when all plots will be planted to peanuts after varying rotations lengths. While the entire value of the project will not be realized until the completion of two more growing seasons, some preliminary data was gathered in the 2016 season. Five treatments of the ten treatment experiment were in peanut in 2016. One treatment had been continuous peanut. Two treatments were peanut following cotton in 2015, which had followed peanut in 2014. The remaining two treatments were peanut following soybean in 2015, which had followed peanut in 2014. Peanut following peanut yielded 4,613 lb/acre. Peanut following a single year of cotton between peanut crops yielded 4,195 lb/acre. Peanut following a single year of soybean between peanut crop averaged 4,890 lb/acre. While these results were not significantly different, the numbers were somewhat surprising and are likely explained by variability within the field and an overall lack of disease pressure in the 2016 season compared to the 2015 season.

Peanut grading began in February 2017 and was completed in March 2017. Grade results are currently being compiled.