

Annual report + Summary

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## Determining the Viability of Nitrogen Rescue Treatments in Mississippi Peanuts

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2017 Research Report

Research work completed from January 1, 2017 until September 15, 2017

Work related to this project was initiated at the Mississippi State University North Farm in Starkville, MS. Two sub-projects within this main project were planted in one field at this location, while the final sub-project was planted in two fields at this location. Projects included Nitrogen Rescue, Nitrogen Timing, and Inoculant Rescue. In Stoneville, projects included Nitrogen Rescue and Nitrogen Timing. Planting date for all three projects in Starkville was April 20, 2017. Cultivar Georgia-06G was planted for all tests. The nitrogen rescue test in both Starkville included 20 treatments; 30, 60, 90, 120, 150, and 180 lb actual nitrogen as ammonium sulfate, ammonium nitrate, and UAN, in addition to 1 untreated non-inoculated, and 1 untreated inoculated plot. Nitrogen treatments went out on June 13, 2017. A SPAD meter was used on July 10 to measure leaf chlorophyll content, and plants were biomassed on July 28. Nitrogen timing included 8 treatments, with 90 pounds of nitrogen as ammonium sulfate being applied at either a single timing or split across timings of 20, 40, or 60 days after emergence, plus both an inoculated and non-inoculated control that received no nitrogen. At Starkville, nitrogen was applied on May 30, June 20, and July 10, 2017. SPAD meters were used on June 7 and July 17. Plots were biomassed on August 7. Finally, at Starkville the inoculant rescue test included 11 treatments, with non-inoculated plots receiving inoculant at 1x, 2x, and 5x rate via either knifing in or streamed next to the row. This was compared to three rates of ammonium sulfate in addition to a non-inoculated and inoculated control that received no supplemental nitrogen or inoculant. Inoculant and nitrogen were applied on June 8, 2017. SPAD meters were used in the plots on June 8, 2017 and the plots were biomassed on August 1, 2017. Plots will be dug and harvested as soon as weather permits.