

Comparison of On-Farm Irrigation Scheduling Practices in Southeast Alabama Peanut Production

A. BOUSELMI, **B. A. DILLARD***, and J. A. KELTON, Alabama Cooperative Extension, Auburn, AL 36849; and K. B. BALKCOM, Crop, Soil and Environmental Sciences, Auburn University, Headland, AL 36345.

Irrigation scheduling can result in difficult decisions for producers when implementing irrigation on-farm. Farmers can oftentimes be faced with trying to determine if and when irrigation should be used based on highly variable factors such as potential rainfall, different soil types in a field, time needed to irrigate a field adequately, and so forth. For these reasons, there has been a lot of emphasis in the past 5 years on helping farmers schedule irrigation initiation and termination. In 2017, the Alabama Cooperative Extension System initiated research to identify the difference in four of the most common scheduling practices on peanut (*Arachis hypogaea*): checkbook method, PeanutFarm App, watermark probe, and capacitance probe. We also included a rain fed check plot. Each scheduling practice was replicated three times. Four row plots were planted and a drip irrigation line was run between the middle two rows (harvest rows of plot). Plots were irrigated as each treatment called for irrigation to reach the soil water holding capacity. After irrigating plots according to irrigation scheduling practice recommendations, yield was recorded for the peanut crop. The yields averaged 5227 lb. per acre for irrigated plots and 4482 lb. per acre for non-irrigated plots. Although there were some yield differences between treatments, the differences were not statistically significant. However, the 2017 crop season was an unusually wet year that did not require substantial supplemental irrigation applications. Further research is needed not only on peanuts but other crops as well to help growers establish effective irrigation scheduling practices.