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Project Title: Burrower bug occurrence as affected by environment and its role on aflatoxin contamination of runner peanut. *Incl + Summary*

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Progress Report (Final, through June 2014)

In 2013, this study was expanded to two study sites—at the Wiregrass Research Center in southeast Alabama and E.V. Smith’s Plant Breeding Unit in east central Alabama. At both sites, pitfall traps were installed to capture burrower bugs. In addition, rain-out shelters were placed over some plots to establish drought in those plots. Counts of burrower bugs have been consistently low at both sites and in all plots; however, because a larger number of traps were deployed, more burrower bugs were trapped in 2013 than had been recorded in preceding years. As in preceding years, more burrower bugs were found in covered plots (i.e., drought-imposed plots) than rainfed plots, and in plots under a reduced tillage system compared to conventionally tilled plots. Statistical analysis is on-going.

The study at Wiregrass REC includes four planting dates. At optimum maturity for each planting date, seed samples were collected from each plot and assayed for aflatoxin content. Aflatoxin content was very low, so assays were done using a method with higher sensitivity than in preceding years. Similar to results of 2011 and 2012, seed with burrower damage had higher aflatoxin content.

This was the third year of the study at Wiregrass, but the first year at E.V. Smith.