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Grant Report  
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**Title:** Integrated management of TSWV, leaf spot, rust, stem rot, and *Cylindrocladium* black rot on peanut.

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**Results:** A fungicide screening as well as a peanut variety trial was conducted at the Plant Breeding Unit in Tallahassee, AL. In the fungicide screening study early leaf spot intensity was higher and yield lower for Tifguard as compared with Georgia-06G. Stem rot incidence, which was low, was similar on both varieties. When compared with Headline 2.09SC, equally effective early leaf spot control was obtained with all fungicide programs except for Convoy + Bravo WeatherStik, and Bravo WeatherStik alone. While stem rot incidence was low, significant differences in disease damage were noted. Only the Abound 2SC, 8 fl oz/A Provost 433SC, and Convoy + Bravo WeatherStik programs recorded fewer stem rot loci than Bravo WeatherStik alone. Yield was higher for the Abound 2SC program when compared with the Quash or Bravo WeatherStik alone programs. In the peanut variety trial on eight runner and 5 Virginia market type peanut varieties, incidence of TSWV was very low and no differences in disease incidence were noted. Equally high ELS indices were recorded for the runner peanut varieties Florida 07, Georgia-09B, Georgia-10T, Georgia 07W, and Tifguard as well as all Virginia peanut varieties. Georgia Greener had a lower ELS rating than Georgia 09B, Georgia-10T, Tifguard, Perry, Gregory, and Florida 07. While stem rot incidence was equally low on all runner peanut varieties, the Virginia peanut varieties Gregory, NCVII, and Perry had similarly higher ratings for this disease. Among the runner peanut varieties, Florida 07 had higher yields except for Georgia-07W. Similarly high yields were noted for the Virginia peanut varieties Bailey, Perry, and Sugg. At the Wiregrass Research and Extension Center, the impact of fungicide inputs on the yield as well as the reaction of commercial peanut varieties to leaf spot diseases and stem rot was assessed. Incidence of TSWV was near zero on all varieties. While leaf spot intensity was equally high on Georgia Green and Georgia-09B, similarly low disease ratings were recorded for all remaining peanut varieties except for Georgia-06G. With the exception of Georgia Greener, significantly lower stem rot indices were noted for the remaining varieties receiving the high input compared with standard season-long Bravo WeatherStik fungicide program. With the standard fungicide program, stem rot incidence was higher in Florida 107 than the remaining peanut varieties except for Georgia-09B, Georgia Green, and Georgia-06G. Under the high input fungicide program, Georgia 10T and Flavorrunner suffered less stem rot damage than Georgia Green or Florida 107. Significant yield gains were obtained with the high input compared with standard input fungicide program on all varieties except for Florida 07, Flavorrunner 458, Georgia-10T, and Georgia Greener. Florida 07 under the standard input fungicide program had higher yields than all other varieties except Flavorrunner 458, while Georgia-06G under the high input fungicide program had higher yields than Georgia 10T, Georgia Greener, and Tifguard. The influence of seed dressing, in-furrow, and at-cracking insecticide treatments on the incidence of TSWV and stem rot, thrips damage, and the yield of three peanut varieties was evaluated on Flavorrunner 458, Georgia Green, and Georgia-06G peanut varieties. Flavorrunner 458, which is a Hi-Oleic Florunner peanut, proved most sensitive to thrips, TSWV, and stem rot as well as having the lowest yields among the three peanut varieties screened. While thrips damage ratings and stem rot incidence did not differ between the past and current industry standards Georgia Green and Georgia-06G, respectively, TSWV incidence was lower and yield higher for the latter peanut variety. With few exceptions, Temik 15G provided better protection from thrips than any other

insecticide treatment, particularly on the thrips sensitive variety Flavorrunner 458. On Georgia Green and Georgia-06G, CruiserMAXX seed dressing as well as either one or both rates of Admire Pro proved as effective as Temik 15G in limiting thrips feeding damage to peanut foliage. In contrast, azadirachtin (neem concentrate) failed to reduce thrips damage ratings when compared with the non-treated control on all three peanut varieties. Across all three peanut varieties, considerable differences in the level of thrips control were noted for all insecticide treatments except for Temik 15G, which gave the same level of thrips protection on Flavorrunner 458, Georgia Green, and Georgia-06G.

Reports for 2011 Peanut field research studies conducted at Outlying Research Units can be viewed in the AAES online publication Peanut Disease Control Field Trial 2011: Experimental Fungicide and Cultivar Trials - <http://repo.lib.auburn.edu/repo/bitstream/handle/123456789/44100/enpp16.pdf?sequence=2>.