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Interim Report
Southeastern Peanut Research Initiative
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Title: Continued development of integrated management systems using resistant genotypes, cultural practices, and pesticide for the control of spotted wilt, fungal diseases, nematodes, and insect pests of peanut.

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Report: Studies were conducted at three outlying research units to assess the efficacy of recommended fungicides for the control of foliar and soilborne diseases on partially resistant peanut cultivars. Of the three locations, development of early and late leaf spot at the WGREC site was suppressed by an extended period of hot, dry weather patterns. When compared to chlorothalonil alone, a reduction in CBR incidence and significant yield response was obtained with Folicur 3.6F but not the other fungicide programs. At the PBU site, best control of early leaf spot was given by the Headline program. Reductions in white mold incidence were obtained with the Provost 433SC, Bravo Ultrex + Moncut DF, and Artisan programs. These same fungicide programs also significantly increased yield over the chlorothalonil standard. Fungicide programs modeled on The Peanut Disease Risk Program were evaluated at two locations. Overall, the medium risk and to a lesser extent low risk programs often proved as effective as the standard 7 application high risk programs in controlling early leaf spot and rust on partially leaf spot-resistant peanut cultivars. Despite 2 or 3 fewer total applications, yield response with the medium and low risk programs, respectively, also had yields similar to those obtained with the high risk programs. At the WGREC, CBR incidence was reduced by 90% but also sizable yield gains were obtained when an in-furrow application of Proline 480 fungicide was combined with a block 4-application treatment regime of Provost 433SC or Proline 480. Peanut cultivars were screened for their response to TSWV, leaf spot diseases, rust, white mold, and yields at three locations. At the GCREC, the lowest TSWV and late leaf spot ratings were recorded for AP-3 and GA03L. The highest level of white mold damage was found on AT3085RO. Highest yields were recorded for AP-3. While TSWV pressure was low at PBU, significant differences in the reaction of commercial peanut cultivars to early leaf spot and white mold were seen. Most notably, AT3081R and AT3085RO suffered heavier white mold damage compared with all other peanut cultivars except Carver. Highest yields were recorded for AP-3, GA03L, GA02C, C-99R, and Georgia Green. Abstracts highlighting the results of supported projects will be presented at the 2008 American Peanut Research and Education and American Phytopathological Society Annual Meetings.

Report was prepared by Austin Hagan