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**Report to the  
Southeastern Peanut Research Initiative  
Final Report (June 2, 2015)**

*Annual Report* **On Progress on Research Supported by the Grant**

“Integrated Management of Tomato Spotted Wilt, Leaf Spot, Rust, White Mold, and CBR in Peanut”

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Update:

- A. A field trial was conducted in which we evaluated the effects of cultivars Georgia-06G, Georgia-07W, Tifguard, Georgia Greener, Georgia-10T, and Georgia-12Y on incidence of spotted wilt and leaf spot. The test examined the performance of each of these lines under varying levels of fungicide inputs (0, 4, and 7 applications of fungicides that include chlorothalonil, tebuconazole). Spotted wilt pressure was moderate, but Georgia-12Y showed superior field resistance to all other cultivars. Early leaf spot pressure was extremely heavy. All cultivars show heavy defoliation in nontreated plots. Tifguard had least severe leaf spot severity in the 4 spray treatment.
- B. A field trial was conducted at the UGA-CPES Lang Farm to determine the effect of in-furrow Thimet applications on tomato spotted wilt severity and yield in peanut cultivars Georgia-06G, Georgia-07W, Georgia-09B, Georgia-10T, Georgia-11J, Georgia-12Y, and Tifguard. All cultivars did well, and there was an overall reduction in incidence of TSW with the use of Thimet. Yield of Georgia 12Y was 7309 lb/A, which was highest in the trial, followed by Georgia-10T and Georgia-06G.
- C. A field trial was conducted planted in which we sampled root tissue for the incidence of TSWV infection in Georgia-06G plots with and without Thimet. For each sampling, we tested the tap root for TSWV with ELISA. There was no indication of treatment effect on incidence of TSWV infection.
- D. Multiple field trials were planted in late-April, early-May to determine whether any of several non carbamate or organophosphorus insecticides can provide adequate control of tobacco thrips, without increasing the risk of losses to TSWV on Georgia-06G. Thrips pressure was intense. Thimet was superior to plots in which Cruiser Max was used for both thrips control and TSW suppression. Experimental insecticide Cyazypyr did well for thrips control, but had little effect

on incidence of spotted wilt. In most trials, in-furrow applications of insecticides for thrips control "ran out" before thrips pressure subsided. Follow-up applications of Orthene provided excellent thrips suppression, but had little effect on spotted wilt.

- E. A field trial was conducted in which multiple advanced peanut breeding lines were evaluated for field resistance to TSWV. The trial utilized sparse seeding rates, and no insecticide for thrips control. Genotypes include lines that have both high-oleic oil chemistry and resistance to the peanut root-knot nematode. Multiple lines showed field resistance similar to or better than that of Georgia-06G.
- F. A field experiment was conducted to examine the effects of in-furrow and early season applications of fungicides on leaf spot epidemics. Border rows were planted in May, and leaf spot epidemics were allowed to progress uninhibited. Plots were planted in mid-September. First leaf spot lesions were noted in nontreated plots on September 26. In-furrow applications of Proline fungicide provided protection from leaf spot until about 28 days after planting. Banded application of Proline at 21 days after planting showed even better potential for suppressing early season leaf spot.
- G.
- H.
- I.
- J.
- K.