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2015

**Report to the  
Southeastern Peanut Research Initiative  
Final Report, March 16ov 7, 2017  
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 Priaxor fungicide for leaf spot efficacy, compared primarily to Headline, which it is proposed to replace. Various timings were evaluated to examine curative and protectant activity, as well as duration of control of these fungicides. Leaf spot pressure was intense. Headline did not perform as well as in previous years compared to the chlorothalonil standard. Priaxor performed much better. Isolates of *C. personatum* are being assayed for resistance to pyraclostrobin, the a.i. in Headline, and the trial was repeated in 2016 with additional strobilurin fungicides for comparison, and likewise, none of strobilurin fungicides performed as well as Priaxor.
- B. A field trial was conducted at the UGA-CPES Rigdon Farm to determine the effect of in-furrow Thimet applications on tomato spotted wilt severity and yield in peanut cultivars Georgia-06G, Georgia-11J, Georgia-12Y, Georgia-13M, Georgia-14N, TUF Runner 297, TUF Runner 511, TUF Runner 727, TifNV-High-OL and Tifguard. TSW pressure was relatively light, but Thimet suppressed spotted wilt across varieties. Across Thimet treatments, incidence was lowest in Georgia-12Y and TifNV-HiO/L, and highest in TUF Runner 727. However, yield increases with Thimet were minimal, and not significant. Similar trials were conducted in 2016 and are planned for 2017.
- C. Multiple field trials were conducted 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 or TUFRunner 727. Thrips pressure was heavy in earlier planted trials. In-furrow applications of Admire alone or “Velum Total”, for which the insecticide component is the same as Admire, did well for thrips control. In 2015,

experimental insecticide Cyazypyr did well for thrips control, but indications are it may be too expensive for peanut producers. None of the insecticides evaluated except Thimet had significant effect on incidence of spotted wilt. Data across several years and trials were examined, indicating imidacloprid either alone or combined with fluopyram, is basically neutral on TSW.

- E. Two trials were conducted in which multiple advanced peanut breeding lines were being evaluated for field resistance to TSWV. The trials 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. In one of those trials, multiple lines were planted without fungicide seed treatment. Several lines showed better emergence and early season vigor than Georgia-06G. Several lines showed spotted wilt resistance as good as or better than that of Georgia-06G, and several showed better leaf spot resistance and had better yield under non-sprayed conditions. Similar trials were conducted in 2016 for the more promising of those lines. Spotted wilt pressure was greater in 2016 than, and several lines showed to be more resistant than Georgia-06G in both years.
- 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 are being allowed to progress uninhibited. Plots were planted in August after epidemics in the border rows are severe. Epidemics in the plots increased rapidly after emergence of the plants. In-furrow applications of Proline, Velum Total, and Propulse all showed substantial activity against leaf spot. Velum total provided longer suppression of leaf spot than Proline. Trials in 2016 also indicated that Velum treatments can replace one or more early season leaf spot sprays, with effects of Velum Total on leaf spot epidemics evident well into the leaf spot epidemics. Additional trials are planned for 2017
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