

**Effect of In-Furrow and Foliar Insecticide Treatments on Tomato Spotted Wilt and Yield in New TSWV Resistant Cultivars and Breeding Lines**

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Pressure from spotted wilt and yield losses to the virus were up in 2022 compared to previous years. Several new peanut cultivars have excellent yield potential and good field resistance to Tomato spotted wilt. Use of phorate (Thimet) insecticide has been a major factor in management of Tomato spotted wilt with results often more obvious during years with high pressure from the virus. Objectives of this project included determining the response of new peanut cultivars to Thimet and whether Thimet is needed on these cultivars.

Field experiments were conducted comparing new cultivars with and without in-furrow application of Thimet insecticide. Cultivars Georgia-06G, Georgia-12Y, Georgia-16HO, Georgia-18RU, Georgia-19HP, Georgia-20HO, FloRun T61, TUF Runner 297, TUFRunner 511, TifNV High O/L, TifNV High O/L, and AU-NPL 17. The trial was planted on May 3, 2022 using a seeding rate of approximately 4.5 seed/ft of row. Incidence in nontreated Georgia-06G was 49.1%, compared to 29.2% with Thimet. Final incidence in nontreated plots was similar for Georgia-12T, TUF Runner 297, TifNV-HG, and AU-NPL 17 with incidence of 31.3 % or lower. All cultivars had a significant reduction of TSW with Thimet. Averaged across all varieties, use of Thimet reduced incidence to from 41% to 19.7% and increased yield from 4332 to 5662. In plots with Thimet, yields were highest in TifNV-HG, TUF Runner 297, Georgia-19HP, FloRun T61, and Georgia 16HO with yields of 5881 to 6286 lb/A, compared to 5345 lb/A for Georgia-06G.

A field experiment was conducted to determine the effect of multiple insecticides on incidence of TSW on TUF Runner 511. Treatments included Vydate, Aglogic, and Verimark as well as Thimet in-furrow. Treatments also included foliar applications of Orthene. Vydate, Aglogic, and Verimark did well for thrips control, but none of these were comparable to Thimet for TSW suppression. Final incidence in nontreated plots was 45.1%, where incidence in plots with Thimet was 19.2%