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 2019 and 2020 compared to recent 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. Objectives of this project included determining the response of new peanut cultivars to Thimet and whether Thimet is needed on these cultivars. In 2020, we were not allowed to plant on UGA

In 2020, field experiments were conducted comparing new cultivars lines with and without in-furrow application of Thimet insecticide. In 2020, this trial included cultivars Georgia-06G, Georgia-12Y, Georgia-14N, Georgia-16HO, Georgia-18RU, TUF Runner 297, TUFRuner 331TifNV High O/L, and AU-NPL 17. The trial was planted on May 1, 2018 using a seeding rate of approximately 4.5 seed/ft of row. Incidence in nontreated Georgia-06G was 16.7%, compared to 6.7% with Thimet. Final incidence in Georgia-12T, AU-NPL 17, or TifNV High O/L was 7.1% or lower Averaged across all varieties, use of Thimet reduced incidence to from 10.6% to 5.9% and increased yield from 5564 to 5851. Averaged across Thimet and no Thimet treatmens yields in Georgia-18RU, Georgia-16HO, and Georgia-12Y were 6492, 6412, and 5908 lb/A, respectively, compared to 5681 for Georgia-06G.

Velum Total, the combination of Fluopyram and Imidacloprid will likely be replaced by Velum Prime, which contains only Fluopyram. In 2020, on TUFRunner-511, neither product reduced incidence of spotted wilt compared to the nontreated. Incidence of spotted wilt in treatments receiving Thimet were 12.7% or lower, compared with 23.0 in the nontreated. A new product, “SP2700” (Ninja) was evaluated. Applied in combination with Orthene as an early foliar spray, SP2700 reduced incidence of spotted wilt compared to the Orthene alone. Experiments are planned for 2021 with earlier planting dates to determine if effects observed are consistent.

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