

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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Several new peanut cultivars have excellent yield potential and good field resistance to Tomato spotted wilt. This improved resistance allows more flexibility with factors such as planting date and seeding rates used in integrated management of 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.

Field experiments are conducted each year comparing new cultivars/breeding lines with and without in-furrow application of Thimet. In 2016, this trial included cultivars Georgia-06G, Georgia-12Y, Georgia-13M, Georgia-14N, TUF Runner 297, TUF Runner 511, FloRun 107, and FloRun 157. The trial was planted in early May using a seeding rate of approximately 4.5 seed/ft of row. Pressure from spotted wilt was up some compared to recent years. Incidence in nontreated FloRun 157 was 29.2%, compared to 23.8 with Thimet. Final incidence in Georgia-12T or Georgia-13M was 9.2% or lower even nontreated. Across all cultivars, application of Thimet reduced spotted wilt incidence from 17.1% to 11.1%. However yield responses varied from approximately 500 lb increase with Thimet in Georgia-06G and TUF Runner 297, to negative response in some entries.

Two trials were conducted to examine the effects of Velum Total, Admire, and AgLogic as in-furrow treatments on thrips damage, incidence of tomato spotted wilt, and yield on Georgia-06G in a field without CBR or rootknot nematode infestation. In both trials, thrips control with the 18 fl oz/A rate of Velum Total and AgLogic at 5lb/A was comparable to that of Thimet. Admire Pro applied in furrow also acceptable good thrips control. Application of Thimet in-furrow reduced incidence of spotted wilt from 21.4 % to 9.8% in one trial and 23.2% to 11.7% in the second. None of Velum Total, Admire, or AgLogic had any effect on spotted wilt. There were no differences in yield among any of those insecticide treatments in either trial.