## Spatial Assessment of Tomato Spotted Wilt Virus to Varying Gap Lengths Within Uniform Peanut Stands.

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Peanut (*Arachis hypogaea* L.) producers in Georgia every year are faced with the concern of Tomato spotted wilt virus (*Tospovirus*; TSWV) reducing yields. Incidence of TSWV is often more prevalent in reduced plant populations and at the ends of rows or adjacent to missing areas of row. Field experiments were conducted at the University of Georgia's Lang-Rigdon Farm in Tifton, GA and duplicated in 2018 and 2019. The objectives were to determine the most optimum method of replanting a uniform stand based on varying length of gaps to minimize TSWV incidence on grade and yield. A second objective was to quantify the differences in TSWV incidence from gap edges or adjacent rows to missing segments of row. Plots were thinned to 6.6 plants/m except for one standard 13.1 plants/m check plot. Plants were removed from random sections of row to establish 0.61 m, 1.22 m, or 1.83 m of consecutive row length where no plants would grow. Each length was pulled either once or twice per 10.36 m row as separate treatments. All gap scenarios were factorially replicated with replant treatments as follows: 1) no replant, 2) replant only in the length of gaps, and 3) replant the entire length of row. All replant treatments were made at a rate of 13.1 seed/m at 19 days after original planting, approximately 8 cm to the side of the original row. Tomato spotted wilt virus was assessed on an 8 cm basis for the entire length of each row. All data were pooled over the two years of the study. There was a negative linear correlation between pod yield and percentage of TSWV, with a 389 kg/ha decrease in yield for every 10% increase of TSWV. There was no difference in percentage of TSWV between no replant (35%) and replanting only in the gap (33%), but there was less virus in the full row replant (26%) treatment. Full row supplemental replanting was beneficial in decreasing TSWV incidence resulting in an increased yield over the two year period of this study.