

Assessment of Cultural Controls to Reduce the Incidence of Tomato Spotted Wilt Virus in Peanut in North Carolina.

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Tomato Spotted Wilt virus (TSWV) has recently become one of the most devastating pathogens of peanut in North Carolina. North Carolina peanut growers saw a dramatic increase in infestations of TSWV in 2002. Certain cultural techniques in Georgia have been shown to lessen the amount of virus, and these were evaluated to determine their effect on TSWV incidence. The production systems are discrete between the runner-type peanuts grown in GA and the virginia-type peanuts in NC, thereby requiring that these practices be evaluated in our region. Treatments in NC included plant populations, varieties, twin- and single-row plantings, reduced tillage, planting dates, and in-furrow insecticides. During the growing seasons of 2001 and 2002, we compared plant populations of 2, 4, and 5 plants per row of foot; varieties Gregory, NC V-11 and Perry, twin- and single-rows; conventional tillage and strip tillage, early and late planting dates; and Thimet and Temik. We scouted research plots for visual symptoms of TSWV monthly in 2001, and weekly in 2002. For each year color-coded flags were used to indicate the time of appearance of visual symptoms. In 2001, flagged plants were tested for presence of the virus using the ImmunoStrip test system (AgDia, Elkhart, IN). High plant populations had less virus than lower plant populations, Gregory was infected with less virus than either NC V-11 or Perry, twin-rows had a lower amount of virus compared to single-rows, preliminarily strip-tillage has had less virus than conventional tillage, and peanut treated with in-furrow Thimet had less incidence of virus than those treated in-furrow with Temik.