

ADDITION OF STARTER FERTILIZER TO SHORTEN THE WINDOW OF SUSCEPTIBILITY TO THRIPS**J.D. Griffin****R. S. Tubbs****G. H. Harris****M. D. Toews****University of Georgia****Tifton, GA****Abstract**

In an effort to decrease seedling cotton susceptibility to thrips injury, we compared in-furrow and seed-applied insecticides under three fertilization schemes: base fertilizer only (500 lb per acre of 5-10-15), base fertilizer plus starter fertilizer (10 gal per acre of 10-34-0), or starter fertilizer only. Variable nitrogen rates were applied at sidedress so that all plants received the same total amount of nitrogen over the entire trial. Thrips are the most consistent insect pests of seedling cotton in the southeastern United States. Infestations are correlated with leaf curling, delayed crop maturity, stand loss, and reduced yield. Plants are most susceptible to thrips injury from seedling through four true leaves. This experiment was conducted on conventionally tilled soil utilizing an early planting date, April 27, under irrigated conditions. We estimated adult and immature thrips populations, number of true leaves, and visual plant damage at 14, 21, and 28 days after planting. Across insecticide treatments, immature thrips populations and damage ratings were similar when comparing plants receiving starter fertilizer to plants receiving base fertilizer only, suggesting that starter fertilizer did not confer any thrips suppression. At the final sample date, plants receiving in-furrow insecticide and starter fertilizer scored better on visual appearance than plants receiving seed applied insecticide and starter fertilizer. Importantly, plants receiving base fertilizer plus starter fertilizer exhibited one more true leaf at 28 days after planting than plants receiving base fertilizer only. Finally, plants receiving starter fertilizer yielded better (>300 lb seed cotton per acre) than plants not receiving starter fertilizer. These results support our hypothesis that starter fertilizer will deliver more rapid growth during the most susceptible plant stage, thereby reducing the window of susceptibility to thrips injury.