

FUNGICIDE SENSITIVITY SCREENING OF TARGET SPOT IN COTTON AND SOYBEAN**T. Smith****H. Kelly****University of Tennessee****Jackson, TN****Z. Hansen****University of Tennessee****Knoxville, TN****Abstract**

Target spot (TS), caused by the fungus *Corynespora cassiicola*, is a foliar disease of cotton. Over recent years, TS has become a disease of concern in cotton production systems. Data for fungicide sensitivity and understanding potential impact on yield is lacking for *C. cassiicola*. The objective of this study was to conduct fungicide screening to monitor sensitivity in *C. cassiicola* in Tennessee cotton production. The sensitivity of 30 *C. cassiicola* isolates to 8 technical grade fungicides across multiple fungicide groups (FRAC Groups 1, 3, 7, and 11) was evaluated based on mycelial growth inhibition assays. The EC₅₀ of each fungicide was calculated. Field trials were also conducted 1 location for cotton in 2018-2020. Six fungicide products were evaluated among 1 cotton cultivar for efficacy on target spot. Cotton yield, defoliation, and TS were not affected in 2018, but Miravis TOP decreased defoliation and TS in 2019 while also increasing yield. In 2020, defoliation and yield were not impacted by fungicide treatments, but target spot was statistically reduced in all treatments compared to the untreated check. Pyraclostrobin, thiophanate methyl, and azoxystrobin had the highest EC₅₀ values. In vitro and field evaluations suggest that products that contain FRAC groups 7 and 3 have the potential to better protect yield from target spot compared to products containing groups 11 or 1 fungicides.