

MANAGING TARNISHED PLANT BUGS IN MISSISSIPPI COTTON**Jeff Gore****Mississippi State University, Delta Research and Extension Center****Stoneville, MS****Angus Catchot****Mississippi State University Extension Service, Dept. of Entomology****Starkville, MS****Gordon Snodgrass****Ryan Jackson****USDA-ARS, Southern Insect Management Research Unit****Stoneville, MS****Abstract**

The tarnished plant bug has become the most important insect pest of cotton in the Mississippi Delta. Experiments were conducted in Stoneville, MS to address tarnished plant bug management issues. The first experiment demonstrated the relationship between the maturity of a cotton variety and tarnished plant bug management. An early maturing cotton variety (Deltapine 444BR) required fewer insecticide applications than a late maturing cotton variety (Deltapine 555BR). The later maturing variety suffered greater yield losses than the early maturing variety. In 2007 and 2008, the late maturing variety suffered yield losses from both early and late season tarnished plant bug infestations. The early maturing variety suffered yield losses only from early season infestations in 2007 and late season infestations in 2008. In a separate experiment, the importance of shortening spray intervals and rotating insecticides was demonstrated. Spray intervals of 4 or 5 days resulted in better control of tarnished plant bugs than intervals of 6 or 7 days. Also, alternating insecticides reduced the frequency of applications. The greatest yield losses associated with tarnished plant bugs during the flowering period occurred during the third through sixth weeks of flowering. Finally, a plant based threshold was tested for monitoring tarnished plant bug densities in cotton. A threshold of 10% damaged squares resulted similar insecticide applications and similar yields to that observed with the current recommended threshold. Results from these experiments provide a basis for developing a sound integrated pest management program to manage insecticide resistant tarnished plant bugs in the Mississippi Delta.