

1763 Direct and indirect sampling methods for tarnished plant bug in flowering cotton

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A complex of hemipteran insects, especially the tarnished plant bug, *Lygus lineolaris* , has become a major target of insecticides in flowering cotton in the mid-southern United States. Nine direct and indirect sampling methods were evaluated for bias, precision and efficiency in cotton throughout the Mid-South during 2005 and 2006. The tarnished plant bug represented 94% of the bug complex in both years. Sweep-net and black drop-cloth methods were more efficient than other direct sampling methods, but biased toward adults and nymphs, respectively. Sampling dirty blooms was the most efficient indirect sampling method. The sweep-net, whole-plant and dirty-bloom methods were more accurate than the other sampling methods evaluated based on correlations with other sampling methods. Variability attributed to the person collecting the sample was significant for all sampling methods, but least significant for the dirty-square method. These data are being used to revise sampling guideline and develop new treatment thresholds in the Mid South.