

Tarnished Plant Bug Sampling Methods and Thresholds

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In the Mid-South, tarnished plant bug (TPB), *Lygus lineolaris*, has become a more significant pest in mid-season cotton production over the last 10 years as a result of changing production practices. As a result, most mid-season insecticides are now targeted at this insect. Most sampling and threshold research on TPB has focused on pre-bloom feeding, so researchers, consultants and growers have less confidence in mid-season plant bug recommendations. The objectives of this presentation are to share recent research on TPB sampling methods and thresholds being conducted in the Mid-South.

Sampling method research began in 2005 and continued in 2006. Results show that sweep nets are very efficient for monitoring adults while black drop cloths are the best method for monitoring nymphs. Dirty blooms are a very efficient sampling method, but dirty squares are more highly correlated with other sampling methods and with yield. By comparing counts by the various methods, we conclude that the current sweep net and whole plant sampling method thresholds are high in relation to the drop cloth threshold.

An early season threshold trial showed no benefit from automatic weekly applications prior to bloom under low insect pressure, and these automatic applications have the potential to flare other pests, so they should be avoided.

Several mid-season threshold trials have been conducted over the last few years. In general they show that tarnished plant bug damage can be significant. A threshold of 10% dirty squares, 1 TPB per 2 row ft on a drop cloth, or 10 TPB per 100 sweeps seem to be equivalent appropriate thresholds. However, more data is needed under diverse circumstances before these thresholds can be used with confidence.