

Distribution of stink bugs in the MS Delta

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INTRODUCTION:

There are numerous insect pests of soybean in the MS Delta. There is a complex of caterpillar pests including various looper species and the bollworm. Most of these feed on the leaves of the soybean plant with the exception of bollworms which feed also on blooms and pods. The other major insect complex of soybean are stink bugs. These insects feed directly on the developing seeds with piercing and sucking mouthparts. The major stink bug pests include the green, southern green, brown and redbanded stink bugs. Recently a new invasive species has been detected in soybean in MS, the kudzu bug, *Megacopta cribraria*. Kudzu bugs have caused substantial damage to soybean crops in areas with a large population. The kudzu bugs along with the kudzu bug nymphs feed on the stems and leaves and may potentially cause defoliation if large amounts are allowed to thrive within the soybean crop (Zhang et al., 2012).

MATERIALS AND METHODS:

Potential early season wild host plants of stink bugs were sampled during the spring to identify hosts that may contribute to populations moving into soybean. Also, soybean fields were sampled across the MS Delta to examine their abundance and distribution on soybean. The numbers of kudzu bugs were also recorded in all samples. The materials used for sampling consist primarily of sweep nets. There are many major insect pests that we sample for that can cause damage to the crop. On average, there were 150 sweeps done on wild hosts to sample for stink bugs and 300 sweeps done on producer soybean fields. When large numbers of stink bugs or kudzu bugs were detected, insecticide assays using glass vials were administered to examine tolerance to different insecticides.



Kudzu bug on soybean leaf

RESULTS AND DISCUSSION:

Sampling for stink bugs on wild hosts in Mississippi began during the first week of April 2014. The first stink bug collected was a brown stink bug from crimson clover on April 10th in Warren, Co., MS. Brown stink bugs have been the most common stink bug collected from seven different wild hosts including: crimson clover, white clover, hairy vetch, daisy fleabane, pigweed, horseweed and wild geranium. Most redbanded stink bugs have been collected from crimson clover with a single adult collected from hairy vetch. Four kudzu bugs were collected on crimson clover. Green stink bugs were the predominant species collected from early-season soybean fields. There were a number of Kudzu bugs found in the fields that were sampled in the Vicksburg area and populations on soybean appear to be confined to that area of the Delta. Collections of kudzu bug were made from Vicksburg and they are currently being examined for their tolerance to both pyrethroid and organophosphate insecticides in glass vial assays similar to those used by Snodgrass (1996).

REFERENCES:

- Snodgrass, G. L. 1996. Glass-vial bioassay to estimate insecticide resistance in adult tarnished plant bugs (Heteroptera: Miridae). *J. Econ. Entomol.* 89: 1053-1059.
- Zhang, Y., J. L. Hanula, and S. Horn. 2012. The Biology and Preliminary Host Range of *Megacopta cribraria* (Heteroptera: Plataspidae) and Its Impact on Kudzu Growth. *Environmental Entomology* 41:1, 40-50

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