EVALUATION OF SAMPLING TECHNIQUES FOR STINKBUGS IN SOYBEANS

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SUMMARY:

A trial was conducted with the purpose of comparing the sting bug captures of beat sheet and sweep net insect sampling methods in soybeans. Whole fields were scouted using both the beat sheet and sweep net sampling methods at ten locations per field over a four week period from soybean fields in Calhoun and Victoria Counties. Stink bug captures were not different for the species captured: Southern Green, Green or Brown Stink Bugs. Red Banded Stink Bugs were captured in very low number with both sweep net and beat sheet.

OBJECTIVE:

The objective of this project was to compare the sting bug captures of beat sheet and sweep net insect sampling methods in soybeans.

MATERIALS and METHODS:

Whole fields were scouted using both the beat sheet and sweep net sampling methods at ten locations per field. Both sampling methods were conducted within 20 feet of one another. The beat sheet samples consisted of sampling 3 feet of row at each location; 1.5 feet from each of two adjacent rows. Sweep net sampling consisted of ten sweeps with a 15-inch hoop sweep net across one row while walking down the row. The length of row sampled with the sweep net ranged from 20-25 feet.

For the purpose of comparing the sampling methods, the number of stink bug captures was converted into bugs per foot. This was accomplished by dividing the number of stink bugs captured in the sweep net per 100 sweeps by thirty-six. Previous research has indicated that 36 southern green stink bugs per 100 sweeps is similar to 1 stink bug captured per foot by the beat sheet method.

Sampling was conducted over a four week period from soybean fields in Calhoun and Victoria Counties. A total of 20 scouting events occurred.

RESULTS and DISCUSSIONS:

The number of stink bugs captured per foot was similar for both sampling methods evaluated (Table 1). This was expected for the species captured in the soybean fields in 2008 since there was very low incidence of the red-banded stink bug (*Peizodorus guldinii*).

Previous work has indicated that the sampling methods used are similar for the green, southern green and brown stink bugs. However, in a 2006 study, the red-banded stink bug was captured in greater numbers with a sweep net than a beat sheet.

Table 1. Stink bug populations (bugs per foot) from beat sheet and sweep net sampling techniques.

	Green Stink Bug	Southern Green Stink Bug	Brown Stink Bug	Red-Banded Stink Bugs
Beat Sheet	0.00 a	0.73 a	0.40 a	0.07 a
Sweep Net	0.02 a	0.74 a	0.33 a	0.09 a
LSD (P=.10)	0.033	0.403	0.155	0.098
CV	547.72	85.09	65.69	191.0
Replicate F	1.000	5.843	7.246	1.572
Replicate Prob(F)	0.5000	0.0011	0.0003	0.2040
Treatment F	1.000	0.001	0.571	0.220
Treatment Prob(F)	0.3343	0.9749	0.4624	0.6460

Means followed by same letter do not significantly differ (P=.10, LSD)

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