AgriLIFE EXTENSION
Texas A&M System

Applied Research Report

Effect of Thrips (*Caliothrips phasiolii*) on Soybeans at Pod Fill (R5)

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Summary

A trial was conducted with the purpose of evaluating the effect thrips populations had on drought stressed soybeans. Endigo and Leverage insecticides were applied and thrips population counts, damage ratings, and leaf counts were assessed. The thrips caused significant damage but additional studies should be conducted to further evaluate this effect and determine best management practices.

Materials and Methods

A trial was established on 6 August 2009 for the purpose of determining the effect of thrips on Soybeans. The trial was laid out as a randomized complete block with three replications. Plots were 4 rows wide and 50 feet long.

Treatments were as follows:

1. Untreated
2. Endigo (5.14 oz/A) 6 August 2009
3. Leverage (4.88 oz/A) 6 August 2009

The thrips species was determined to be *Caliothrips phasiolii*. Insect counts were made by placing three trifoliates in a jar of soapy water from each plot 4, 8, 13 and 20 days after application. In the lab, the leaves were rinsed to dislodge thrips into the soapy water solution which was then filtered on coffee filters. Thrips were counted under magnification using a stereoscope.

Leaf counts were made on 26 August and damage ratings were conducted on 4 September.

Results and Discussion

Thrips control was obtained with the Endigo and Leverage treatments (Table 1).

While there were no differences in leaflets per plant at 20 days after application, the plants only had 10-16 leaflets per plant, showing the effects of the drought. The untreated plots had significantly higher damage than the insecticide treatments.

More work should be done investigating the impact this pest may have on soybean growth and production.

Table 1. Thrips populations at 3 days after application first application and 8 days after second application of insecticides (Calhoun County, 2009).

Rating Date		8/10/2009	8/14/2009	8/19/2009	8/26/2009
Rating Unit		/leaflet	/leaflet	/leaflet	/leaflet
Trt-Eval Interval		4 DA-A	8 DA-A	13 DA-A	20 DA-A
1 Untreated Check		9.7 a	36.3 a	56.0 a	70.2 a
2 Endigo	5.14 OZ/A	1.3 a	0.2 b	0.1 a	2.3 b
3 Leverage	4.88 OZ/A	2.8 a	2.0 b	2.1 a	8.1 b
LSD (P=.10)		101.8	220.3	668.5	33.9
CV		140.75	109.52	219.73	80.46
Treatment Prob(F)		0.3470	0.0584	0.2994	0.0327

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

Table 2. Leaflets per plant, 20 days after application (DA-A), and damage ratings 29 DA-A (Calhoun County, 2009).

		Leaflets per Plant	Damage Rating
Rating Date		8/26/2009	9/4/2009
Rating Unit		/plant	1-5
Trt-Eval Interval		20 DA-A	29 DA-A
1 Untreated Check		10 a	3.8 a
2 Endigo	5.14 OZ/A	15 a	2.2 b
3 Leverage	4.88 OZ/A	16 a	2.2 b
LSD (P=.10)		8.1	0.79
CV		33.53	16.8
Treatment Prob(F)		0.3095	0.0197

Means followed by same letter do not significantly differ (P=.10, LSD).
*Damage Rating: 1=good, 5=poor.