



Applied Research Report

Insecticidal Control of the Red-Banded Stink Bug (*Piezodorus guildinii*) in Soybeans

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Summary

A trial was conducted with the purpose of evaluating various insecticides for the control of red-banded stink bugs in late planted soybeans. Orthene, Karate, Baythroid XL and Mustang Max reduced the numbers of red-banded stink bugs while Vydate did not differ from the untreated plots.

Objectives

The objective of this project was to evaluate insecticides for the control of red-banded stink bugs in late planted soybeans.

Materials and Methods

A soybean field was scouted for insect pests and when stink bug populations exceeded economic thresholds, insecticide efficacy trials were initiated. The pretreatment stink bug population was 70 red-banded stink bugs (*Piezodorus guildinii*) per 100 sweeps.

The soybeans were grown on 38 inch rows. Plots were 12 rows, 25 feet long. Insecticide applications were made with a 6-row boom, used with the following parameters:

Operating Pressure:	35 psi
Nozzle type, size:	Hollow cone, TX-6
Nozzle spacing:	20 inches
Spray volume:	6.5 gallons per acre
Ground speed:	3 miles per hour
Propellant:	CO ₂

Treatments were as follows:

- 1) Untreated
- 2) Orthene, 1.0 lbs/A
- 3) Karate, 1.92 oz/A
- 4) Baythroid XL, 2.8 oz/A
- 5) Vydate, 17 oz/A
- 6) Mustang Max, 4 oz/A

Evaluations were conducted 1, 3, 6 and 9 days after treatment (DAT). Sample size was 20 sweeps per plot with a standard 15 inch sweep net.

Results and Discussion

While numerical reductions in stink bug numbers was seen by 3 DAT (Table 1), the number of red-banded stink bugs per 100 sweeps was not statistically different for any insecticidal treatments until 6 DAT (Table 2). Orthene, Karate, Baythroid XL and Mustang Max reduced the numbers of red-banded stink bugs while Vydate did not differ from the untreated plots.

The insecticide treatments continued to have fewer red-banded stink bugs at 7 DAT.

Comparisons of particular interest indicate the pyrethroids Karate, Baythroid XL and Mustang Max provided adequate control of the red-banded stink bug in this trial. It is important to note that Vydate is not labeled for stink bug control in soybeans and should not be applied to soybean crops.

Table 1. Comparison of foliar insecticides 1 and 3 days after treatment for control of red-banded stink bug on soybeans (bugs captured per 100 sweeps), Shane May Farm, Calhoun County, TX 2006.

Treatment	Rate	Adult	Nymph	Total	Adult	Nymph	Total
		7/19/2006 1 DAT	7/19/2006 1 DAT	7/19/2006 1 DAT	7/21/2006 3 DAT	7/21/2006 3 DAT	7/21/2006 3 DAT
Untreated		23.3 a	0 a	23.3 a	53.3 a	1.7 a	55 a
Orthene	1 LB/A	11.7 a	1.7 a	13.3 a	3.3 a	0 a	3.3 a
Karate	1.92 FL OZ/A	20.0 a	3.3 a	23.3 a	5.0 a	0 a	5.0 a
Baythroid XL	2.8 FL OZ/A	6.7 a	0 a	6.7 a	8.3 a	0 a	8.3 a
Vydate	17 FL OZ/A	1.7 a	0 a	1.7 a	6.7 a	0 a	6.7 a
Mustang Max	4 FL OZ/A	0 a	0 a	0 a	3.3 a	0 a	3.3 a
LSD (P=.05)		20.98	4.98	22.07	40.06	2.14	39.36
Standard Deviation		11.53	2.74	12.13	22.02	1.18	21.63
CV		109.28	328.63	106.54	165.17	424.26	158.95
Replicate F		0.511	0.556	0.717	1.271	1	1.267
Replicate Prob(F)		0.6145	0.5905	0.5117	0.3221	0.4019	0.3232
Treatment F		2.071	0.778	2.183	2.399	1	2.659
Treatment Prob(F)		0.1531	0.5875	0.1374	0.112	0.4651	0.0883

Means followed by same letter do not significantly differ (P=.05, LSD)

Table 2. Comparison of foliar insecticides 6 and 9 days after treatment for control of red-banded stink bug on soybeans (bugs captured per 100 sweeps), Shane May Farm, Calhoun County, TX 2006.

Treatment	Rate	Adult		Nymph		Total		Adult		Nymph		Total	
		7/24/2006	7/24/2006	7/24/2006	7/24/2006	7/27/2006	7/27/2006	7/27/2006	7/27/2006	7/27/2006	7/27/2006	7/27/2006	7/27/2006
		6 DAT		6 DAT		6 DAT		9 DAT		9 DAT		9 DAT	
Untreated		35	a	3.3	a	38.3	a	23.3	a	3.3	a	26.7	a
Orthene	1 LB/A	13.3	bc	1.7	a	15	bc	18.3	a	3.3	a	21.7	a
Karate	1.92 FL OZ/A	18.3	bc	0	a	18.3	bc	15	a	8.3	a	23.3	a
Baythroid XL	2.8 FL OZ/A	8.3	c	0	a	8.3	c	8.3	a	0	a	8.3	a
Vydate	17 FL OZ/A	25	ab	0	a	25	b	10	a	1.7	a	11.7	a
Mustang Max	4 FL OZ/A	13.3	bc	0	a	13.3	bc	5	a	0	a	5	a
LSD (P=.05)		13.15		2.88		13.04		20.27		8.73		25.11	
Standard Deviation		7.23		1.58		7.17		11.14		4.8		13.8	
CV		38.26		189.74		36.35		83.57		172.86		85.68	
Replicate F		3.298		1.667		4.405		2.45		1.867		2.828	
Replicate Prob(F)		0.0794		0.2373		0.0425		0.1362		0.2046		0.1063	
Treatment F		5.404		2.333		6.643		1.128		1.253		1.254	
Treatment Prob(F)		0.0115		0.1191		0.0056		0.4059		0.355		0.3547	

Means followed by same letter do not significantly differ (P=.05, LSD)

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