



## Applied Research Report

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### **Insecticide Screening for Cotton Fleahopper Control**

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#### **Summary**

A trial was conducted with the purpose of evaluating insecticides for control of cotton fleahopper. All treatments provided control of cotton fleahoppers at 3 DAT but the fleahopper population was reduced in the untreated control by 7 DAT.

#### **Objectives**

The objective of this project was to evaluate insecticide efficacy for control of the cotton fleahopper.

#### **Materials and Methods**

A trial was initiated on 8 June 2007. Plots were six rows wide, 35 feet long. Row spacing was 38 inches. The cotton variety was PhytoGen 485 WRF and crop maturity was early bloom.

Applications were made with a CO<sub>2</sub> backpack sprayer with a 6-row boom. The 6-row boom is operated at 38 PSI using tx-4 nozzles on 20-inch nozzle spacing. Treatments were applied at 3 a speed of MPH and a spray volume of 7.12 GPA.

Data evaluated included nymph and adult cotton fleahoppers at 3 and 7 days after treatment (DAT). Analysis of the data was done using ARM.

The rest of the field was treated with Bidrin at 5 DAT resulting in a population crash within the trial.

#### **Results Discussion**

While there were some variations in the data for adult and nymph counts resulting in several treatments being not different from the untreated control, at 3 DAT, all treatments significantly reduced total cotton fleahopper numbers when compared to

the control. No differences were detected between any of the insecticide treatments for adult, nymph or total cotton fleahopper populations.

## Discussion

The insecticides used in this trial provided control of the cotton fleahopper population when compared to the untreated control. The cotton fleahopper population crashed before 7 DAT and no differences were found between treatments at 7 DAT.

**Table 1.** Number of adult, nymph and total cotton fleahoppers per 10 plants on 11 June 2007, 3 DAT (Calhoun County, 2007).

				Adults	Nymphs (#/10 plants)	Total
1	Untreated			4.5 a	4.3 a	8.8 a
2	Trimax Pro	1.8	OZ/A	1.3 ab	1.0 b	2.3 b
	Agridex	0.5	% V/V			
3	Bidrin	8	OZ/A	0.3 b	0.3 b	0.5 b
	Agridex	0.5	% V/V			
4	Intruder	0.6	OZ WT/A	1.0 ab	1.3 ab	2.3 b
	Agridex	0.5	% V/V			
5	CENTRIC	1.25	OZ WT/A	0.8 b	0.0 b	0.8 b
	Agridex	0.5	% V/V			
6	Vydate C-LV	10.7	OZ/A	0.0 b	0.3 b	0.3 b
	Agridex	0.5	% V/V			
7	Carbine	1.6	OZ WT/A	0.5 b	1.0 b	1.5 b
	Agridex	0.5	% V/V			
8	Diamond	4	OZ/A	1.3 ab	1.5 ab	2.8 b
	Agridex	0.5	% V/V			
9	CENTRIC	1.25	OZ WT/A	1.0 ab	0.8 b	1.8 b
10	CENTRIC	2	OZ WT/A	0.8 b	0.5 b	1.3 b
	Agridex	0.5	% V/V			
Tukey's HSD (P=.05)				3.51	3.17	4.83
Standard Deviation				1.44	1.30	1.99
CV				128.1	121.25	90.23
Replicate F				0.911	0.760	0.643
Replicate Prob(F)				0.4488	0.5262	0.5941
Treatment F				3.029	3.468	6.045
Treatment Prob(F)				0.0123	0.0058	0.0001

Means followed by same letter do not significantly differ (P=.05, Tukey's HSD)

**Table 2.** Number of adult, nymph and total cotton fleahoppers per 10 plants on 15 June 2007, 7 DAT (Calhoun County, 2007).

			Adults	Nymphs (#/10 plants)	Total
1	Untreated		0.8 a	0.0 a	0.8 a
2	Trimax Pro	1.8 OZ/A	0.3 a	0.0 a	0.3 a
	Agridex	0.5 % V/V			
3	Bidrin	8 OZ/A	0.0 a	0.0 a	0.0 a
	Agridex	0.5 % V/V			
4	Intruder	0.6 OZ WT/A	0.0 a	0.3 a	0.3 a
	Agridex	0.5 % V/V			
5	CENTRIC	1.25 OZ WT/A	0.0 a	0.0 a	0.0 a
	Agridex	0.5 % V/V			
6	Vydate C-LV	10.7 OZ/A	0.0 a	0.0 a	0.0 a
	Agridex	0.5 % V/V			
7	Carbine	1.6 OZ WT/A	0.3 a	0.5 a	0.8 a
	Agridex	0.5 % V/V			
8	Diamond	4 OZ/A	0.3 a	0.0 a	0.3 a
	Agridex	0.5 % V/V			
9	CENTRIC	1.25 OZ WT/A	0.5 a	0.3 a	0.8 a
10	CENTRIC	2 OZ WT/A	0.0 a	0.0 a	0.0 a
	Agridex	0.5 % V/V			
Tukey's HSD (P=.05)			1.07	0.71	1.18
Standard Deviation			0.44	0.29	0.48
CV			219.43	291.87	161.02
Replicate F			1.385	0.783	0.286
Replicate Prob(F)			0.2688	0.5140	0.8353
Treatment F			1.385	1.435	1.857
Treatment Prob(F)			0.2435	0.2227	0.1032

Means followed by same letter do not significantly differ (P=.05, Tukey's HSD)

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