

Applied Research Report

Insecticidal Control of Cotton Fleahoppers

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Summary

A trial was conducted with the purpose of comparing cotton fleahopper control of Intruder and Centric insecticides. At 2 days after treatment (DAT) both insecticides achieved control of cotton fleahopper nymphs, however, variability in the adult population resulted in no differences being detected in adult and total fleahopper counts. By 7 DAT, no differences were detected for counts of nymph, adult or total cotton fleahoppers.

Materials and Methods

A trial was initiated on 10 June 2008 with the objective of comparing the efficacy of Intruder and Centric with regard to cotton fleahopper control.

Plots were four rows wide, 35 feet long. Row spacing was 38 inches. The cotton variety was Phytogen 485 WRF and crop maturity was 1/3-grown square.

Applications were made with a CO₂ backpack sprayer with a 4-row boom. The 4-row boom is operated at 38 PSI using tx-4 nozzles on 20-inch nozzle spacing. Treatments were applied at a speed of 3 MPH and a spray volume of 7.12 GPA.

Data evaluated included nymph and adult cotton fleahoppers at 2 and 7 days after treatment (DAT). Analysis of the data was done using ARM.

Treatments were as follows:

1. Untreated
2. Intruder (0.6 oz/A)
3. Intruder (0.8 oz/A)
4. Intruder (1.1 oz/A)
5. Centric (1.25 oz/A)

Results and Discussion

At 2 days after treatment (DAT), all insecticide treatments reduced the number of cotton fleahopper nymphs (Table 1). Variability within the adult population resulted in no statistical separation in both adult and total cotton fleahopper counts. By 7 DAT, the untreated population declined and no treatment differences were observed (Table 2).

While the total numbers of cotton fleahoppers at 2 DAT appear to show a rate response with the Intruder insecticide, no statistical differences occurred between the Intruder treatments.

Table 1. Cotton fleahoppers per 10 plants 2 days after insecticide applications (Calhoun County, Texas, 13 June 2008).

	Nymphs	Adults	Total
Untreated	3.0 a	2.5 a	5.5 a
Intruder 0.6 OZ WT/A	0.3 b	1.0 a	1.3 a
Intruder 0.8 OZ WT/A	0.0 b	0.8 a	0.8 a
Intruder 1.1 OZ WT/A	0.3 b	0.0 a	0.3 a
Centric 1.25 OZ WT/A	0.0 b	0.8 a	0.8 a
LSD (P=.10)	1.69	2.10	3.51
CV	192.11	166.58	163.76
Replicate F	1.069	0.625	0.903
Replicate Prob(F)	0.3987	0.6127	0.4681
Treatment F	3.691	1.216	2.394
Treatment Prob(F)	0.0350	0.3544	0.1085

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

Table 2. Cotton fleahoppers per 10 plants 7 days after insecticide applications (Calhoun County, Texas, 17 June 2008).

	Nymphs	Adults	Total
Untreated	1.0 a	2.0 a	3.0 a
Intruder 0.6 OZ WT/A	1.3 a	1.3 a	2.5 a
Intruder 0.8 OZ WT/A	0.5 a	3.8 a	4.3 a
Intruder 1.1 OZ WT/A	0.5 a	1.0 a	1.5 a
Centric 1.25 OZ WT/A	0.8 a	1.8 a	2.5 a
LSD (P=.10)	1.28	2.30	2.83
CV	126.55	93.74	81.58
Replicate F	1.691	1.212	0.752
Replicate Prob(F)	0.2217	0.3475	0.5422
Treatment F	0.415	1.399	0.795
Treatment Prob(F)	0.7950	0.2926	0.5509

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

Trade names of commercial products used in this report are included only for better understanding and clarity. Reference to commercial products or trade names is made with the understanding that no discrimination is intended and no endorsement by the Texas A&M University System is implied. Readers should realize that results from one experiment do not represent conclusive evidence that the same response would occur where conditions vary.