



**EVALUATION OF THRIPS CONTROL OPTIONS  
IN SOUTHEAST ARKANSAS COTTON**

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**RESEARCH PROBLEM**

New insecticides continue to be developed to help control thrips (*Frankliniella* spp.) infestations in cotton. Some of the new products are foliar insecticides, but the newest materials are seed treatments. Many farmers in southeast Arkansas continue to use Temik because it controls thrips and also helps suppress nematode populations. We continued to evaluate these control options for thrips in 2001.



**BACKGROUND INFORMATION**



Thrips continue to be an economic pest in cotton by causing delayed maturity and stunted growth resulting in lower yields. Heavy infestations of thrips can severely injure the terminals of cotton plants causing the plant to die or abort the terminal and grow as “crazy cotton.” Temik typically has been the standard thrips treatment in southeast Arkansas because of its effectiveness against thrips, but also in its effectiveness at suppressing nematodes in cotton. Continued yield losses due to thrips injury and nematode activity sustains the need for further research in both thrips and nematode control.

**RESEARCH DESCRIPTION**

NuCotn 33B was planted on 11 June 2001 on the Southeast Branch Experiment Station near Rohwer, Arkansas. The row spacing was 38 in., and plots were 8 rows by 40 feet and replicated four times. Standard fertilization and herbicide practices were followed according to current University of Arkansas Extension recommendations. Foliar treatments of Novaluron and Orthene were applied 3 times on 19 and 26 June and

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on 3 July with a John Deere 6500 High-cycle at 2.8 mph with a 13 treatment plot boom at 10 GPA with a spray pressure of 42 psi. Spray nozzles were TX-6 hollow cones with 2 nozzles per row. The other treatments, such as Temik (in-furrow) and Gaucho and Adage (seed treatments), were applied at time of planting. Thrips were collected on 18 June (pre-treatment for foliar applications), 22, 25, and 29 June and 3 and 6 July by randomly pulling plants from rows 3 and 6 of each plot (total of ten plants per plot) and washing them off in 1-quart jars of alcohol. Nymphs and adults were counted and separated by species using filtration procedures in the laboratory.

## RESULTS

On the first sample date, all in-furrow or seed treatments except Adage provided significant control of thrips compared with the untreated check (UTC). There were no significant differences in any of the treatments on the second sample date. On the third and fifth sample date, only the Novaluron treatments did not provide significant control of thrips. Novaluron at 0.092 lb ai/acre, all rates of Temik, Orthene, and Adage provided significant control of thrips on the fourth sample date. All treatments provided significant thrips control when compared with the UTC on the last sample date. It should be noted that 100% of the thrips sampled were tobacco thrips.

## PRACTICAL APPLICATION

Across all dates, Temik (all 3 rates), Orthene, Gaucho (except 29 June), and Adage provided adequate control of thrips when compared with the UTC. Novaluron (all 3 rates) provided significant suppression on the last sample date.

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**Table 1. Effect of foliar and seed treatments on thrips (nymphs and adults) control.**

Treatment rate (lb ai/acre)	18 June	22 June	25 June	29 June	3 July	6 July
	----- (# thrips/10 plants)-----					
UTC	1.75 a <sup>z</sup>	0.00 a	12.25 a	19.50 a	40.00 a	63.75 a
Novaluron 0.023	1.00 ab	0.00 a	11.75 ab	13.50 ab	45.25 a	20.50 b
Novaluron 0.046	1.00 ab	0.50 a	14.75 a	20.00 a	41.75 a	16.50 b
Novaluron 0.092	0.25 b	0.25 a	9.50 abc	9.50 bc	50.50 a	21.25 b
Temik 0.525	0.00 b	0.25 a	3.00 cd	3.25 c	13.00 b	4.50 b
Temik 0.6	0.25 b	0.00 a	0.75 d	7.75 bc	14.75 b	9.75 b
Temik 0.75	0.00 b	0.00 a	1.25 d	3.75 c	11.75 b	7.00 b
Orthene 0.2	0.50 ab	0.00 a	0.50 d	5.75 bc	3.25 b	0.50 b
Gaucho (seed trt)	0.25 b	0.75 a	3.75 bcd	11.00 abc	16.00 b	9.75 b
Adage (seed trt)	1.25 ab	0.00a	0.25 d	2.50 c	19.00 b	7.50 b

<sup>z</sup> Treatment means within a column followed by same letter do not differ significantly (P>0.05, LSD).