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## **RED IMPORTED FIRE ANT CONTROL IN A BLUEBERRY FIELD**

Red imported fire ants inhabit blueberry plantings in east Texas, becoming a nuisance to workers or clientele in a "pick-your-own" operation. Insecticide products specifically registered for use in this site for this pest are virtually non-existent. Very little work has been undertaken to study fire ant management in blueberry plantings. Robinson (1983) compared root ball applications of acephate (Orthene<sup>R</sup> 75SP) and individual mound treatment rates on amidinohydrazone (Amdro<sup>R</sup>). However, Amdro can technically not be used "in agricultural land".

The result demonstration reported here was undertaken to determine if a broadcast application of Amdro in the turfgrass areas BETWEEN rows of blueberry bushes would reduce red imported fire ant mounds both in the rows and in the space between the rows. Treatment in this manner could be consistent with label instructions since actual rows of blueberries did not receive the application, but was effected by the product. A similar interpretation of the Amdro label is used when applications of this product are suggested AROUND home gardens, since technically Amdro can not be used IN gardens. Ants foraging around the garden would pick up the bait and bring it back to the colony wherever it was, resulting in a suppression of foraging activity inside and around the garden plot.

### **MATERIALS AND METHODS**

This result demonstration was conducted on Lamar Lynch's blueberry field. Amdro was first applied November 18, 1986 using a manual Cyclone<sup>R</sup> seeder at a rate of 1-1.5 lb per acre. The demonstration covered 1.63 square acres with a total of 267 red imported fire ant mounds (163 mounds per acre). Plots were established that were 98 by 60 feet in a paired block design. Untreated plots were alternated with Amdro treated plots, replicated three times. The number of active red imported fire ant mounds were counted prior to application (Nov. 18), and on December 2, 14 days after application. Plots were re-treated on April 10, 1987, and evaluated on that date, and on May 8,22 and June 12.

### **RESULTS AND DISCUSSION**

Table 1 lists the results of these demonstration efforts. The November treatment of Amdro was unsuccessful in impacting on existing fire ant mound densities after 2 weeks and up until the April 10, 1987 second treatment date. Control failure may have been due to a number of possible factors including use of stale bait-formulated product, cold temperatures preventing foraging activity at the time of application, etc. However, after the spring application mound numbers in the Amdro-treatment plots were significantly reduced 80.5 percent after 4 weeks, 88.9 percent after 6 weeks, and 86.6 percent after 9 weeks.

To ensure a maximum level of control and no possibility in contamination of produce in proximity to treated areas from the use of this product, treatment of turf areas around blueberry plantings would best be applied at least 5 weeks prior to expected harvest activities. This pesticide is currently not specifically labeled for use in orchards or other agricultural land. The USER of any pesticide product is always responsible for directly following the instructions on the product label.

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Robinson, J.V. 1983. Red imported fire ant control using Orthene<sup>R</sup> 75SP. in Red imported fire and control result demonstrations 1979-1986. B.M. Drees (ed). Texas Agricultural Extension Service. Texas A&M University, College Station, Texas.

**Table 1. Number of red imported fire ants per plot (60x98 ft) in a blueberry field, Hardin Co., Texas, 1986-1987.**

Treatment	<u>Mean (+S.D) no. red imported fire ant mounds/plot</u>					
	Nov. 18	Dec. 2	Apr. 10	May 8	May 22	June 12
amindinohydrazone (Amdro <sup>R</sup> ) <sup>1/</sup>	46.33 17.04	21.33 12.05	21.00 9.54	2.67 2.08	1.67 1.15	2.33 0.58
untreated	42.67 11.72	19.67 5.51	19.00 1.73	13.67 3.79	15.00 3.61	17.33 4.04
t value (D.F. = 4)	0.307	0.218	0.357	-4.410	-6.100	-6.364
Probability <sup>2/</sup>	0.387	0.419	0.370	0.006*	0.001*	0.002*

<sup>1/</sup> Amdro<sup>R</sup> was applied at 1-1.5 lbs per acre to the turfgrass areas between rows of blueberry bushes November 11, 1986 and April 10, 1987.

<sup>2/</sup> Probability levels of less than 5 percent (\*) are considered to be statistically significant according to the Student's t test.