

CHINCH BUG TEST: A grid of 4' x 4' plots separated by 1' wide buffer strips was set-up in a home lawn with a heavy infestation of chinch bugs in Okemos, Michigan. After precounts, five replications of each treatment were applied on July 24, 1990 between 11:00 am and 4:00 pm. Temperature at application was 75°F and conditions were still. All products were applied with a single nozzle, hand-held CO₂ sprayer from R&D Sprayers. The application was made at 50 psi through an 8003 nozzle. Insecticides were mixed with water and applied at a rate of 242.2 ml/16ft² (4 gal/1000ft²). Postcounts were made eight days later on 1 Aug. For the precounts and postcounts, each plot was divided in two and each 2' x 4' half was counted for two minutes. The two counts from each replication were then totaled. The test was conducted at a home lawn with a mixture of Kentucky bluegrass and fine fescue, a 0-1/8" thatch layer, and sandy soil. The area was damp from rain at the time of application; it had rained several times the previous week. Many chinch bugs infected with Beauveria bassiana were sporulating during the postcounts. Chinch bug populations rapidly declined in all plots during the 8 days between treatment and evaluation, presumably due to an epizootic of Beauveria bassiana. In the final counts all insecticide treatments had less chinch bugs per plot than the control (DMRT, P = 0.05). However, the analysis of variance for all treatments was not significant (P = 0.215, Table 4).

JAPANESE BEETLE TEST: A grid of 3' x 3' plots separated by 2' wide buffer strips was established in irrigated rough adjacent to a fairway at Rochester Golf Club in Rochester. Six replications of each treatment were applied on 31 Aug. Temperature at application was 81°F with sunny weather conditions. Liquid products were applied with an R&D sprayer at 50 psi with an 8003 nozzle. Insecticides were mixed in water and applied at a rate of 4 gal/1000 ft². Granular insecticides were applied with custom-made hand-held shakers. The experiment was evaluated on 28 Sep by digging a 294 inch² (six 7" x 7" squares) section from the center of each plot and examining thatch, roots, and soil for live grubs. This test was on Kentucky bluegrass with 1/4"-thick thatch layer and sandy loam soil. Irrigation was run for 30 min prior to application. The pH of the irrigation water was 7.2. All liquid and nematode treatments were irrigated with 1/4" water applied through a watering can immediately after application.

Fonophos MS, Sevimol 4 SC, Triumph, and Crusade 5G, were the most effective treatments (0.7, 2.2, 2.8, 4.2, and 4.3 grubs per 294 inch², respectively) when compared with the control (14.2 grubs per 294 inch²). The other treatments did not provide adequate control of Japanese beetle larvae (Table 5).

Table 3.

FAIRWAY ANT TEST - 1990
Ionia Country Club

Treatment	Rate (lb AI/acre)	Mean number of ant mounds per 144 ft ² plot*					
		15 Aug	23 Aug	30 Aug	6 Sep	13 Sep	26 Sep
019537	2.5 lb/1000 ft ²	20.7 a	18.0 ab	6.8 bc	8.0 bc	8.5 ab	7.5 ab
Pageant DF	1.0	24.3 a	21.3 a	10.0 ab	19.7 a	18.0 a	13.2 a
XRM-5184	1.0	24.3 a	10.2 bc	4.7 bc	4.2 bc	8.5 ab	7.0 ab
Dursban ME 20	1.0	26.7 a	11.8 b	7.7 bc	6.8 bc	8.8 ab	6.2 ab
Triumph 4E	1.5 oz/1000 ft ²	24.2 a	4.7 c	3.3 c	1.7 c	2.7 b	3.7 b
Control	----	21.8 a	27.3 a	15.2 a	14.5 ab	19.5 a	8.7 ab

*Means within a column followed by the same letter are not significantly different (P= 0.05; DMRT)

Table 4.

HAIRY CHINCH BUG TEST - 1990

Treatment	Rate (lb AI/acre)	Chinch bugs per plot	
		24 Jul	1 Aug
Sevimol 4SC	6.0	65.0	3.0
Sevimol 4SC	8.0	63.0	0.8
Mocap 5G	5.0	78.6	6.8
Pageant DF	1.0	45.0	3.8
XRM-5184	1.0	35.6	0.8
Dursban 4E	1.0	83.8	1.4
Tempo 2	0.14	38.4	1.2
Triumph 4E	1.0	39.0	3.4
Control	--	62.6	25.8

Table 5.

JAPANESE BEETLE TEST
Rochester Golf Club

Treatment	Rate (lb AI/acre)	Larvae per plot
		28 Sep*
Sevimol 4SC	8.0	2.2 b
Mocap 5G	5.0	5.2 ab
Crusade 5G	4.0	4.2 b
019299	4.0	4.3 ab
019312	4.0	5.7 ab
Fonophos MS	4.0	0.7 b
ICI 08882	1.0	10.3 a
ICI 08882	2.0	6.3 ab
Triumph	0.5	2.8 b
Nematodes	1.0 billion/acre	10.8 a
Control		14.2 a

*Means followed by the same letter are not significantly different (P = 0.05; DMRT).