

Melon Aphid and Cucumber Beetle Management in Watermelons, 2008: ‘Jamboree’ watermelons transplants were planted on May 28 at the University of Delaware’s Research and Education Center located near Georgetown, DE. Plots consisted of two 20 ft-long rows on 8ft centers. Each treatment was replicated four times and arranged in a RCB design. Foliar treatments were applied on June 5 and June 14 for cucumber beetle control and on July 31 for melon aphid control with a CO₂ back pack sprayer delivering 20 gpa at 40 psi. Cucumber beetle population levels were evaluated by counting the number of cucumber beetle infested plants per 2 row plot. Aphid population levels were assessed on 10 plants per plot to determine the percent infested plants and the number of aphids per 50 leaves. Data were analyzed using Proc GLM and means were separated by Tukey’s mean separation test (P=0.05).

The Assail and Warrior treatments provided the best cucumber beetle control seven days after the first application. All treatments provided better melon aphid control except the Movento treatments. No phytotoxicity was observed.

Table 1. Cucumber Beetle Data

Treatment	Rate/Acre	Treatment Dates	Mean Percent Cucumber Beetle Infested Plants				
			Pretrt June 5	4 DAT June 9	7 DAT June 12	4 DAT June 18	11 DAT June 25
Untreated Check	--	---	50.00a	77.50a	77.50a	47.50a	12.50a
Assail 30 SG	4 oz	June 5	75.00a	27.50a	22.50c	35.00ab	10.00a
Voliam Flexi + MSO	5.98 oz	June 5 ;14	39.29a	30.00a	85.00a	17.50ab	12.50a
Voliam Flexi+ MSO	6.98 oz	June 5 ; 14	42.86a	47.50a	72.50ab	17.50ab	10.00a
Baythroid XL	2.6 oz	June 5 ; 14	25.00a	50.00a	70.00ab	12.50b	12.50a
Warrior	3.2 oz	June 5	44.64a	30.00a	35.00bc	25.00ab	12.50a

Means in a column followed by the same letter are not significantly different (P= 0.05; Tukey’s Test).

Table 2. . Percent Melon Aphid Infested Plants

Treatment	Rate/A	Mean Percent Aphid Infested Plants			
		Pretrt July 28	4 DAT Aug 4	11 DAT Aug 11	15 DAT Aug 14
Untreated Check	--	15.00a	30.00a	92.50a	32.50a
Assail 30 SG	4 oz	15.00a	0.00c	2.50c	0.00c
A15645 + MSO	5.98 oz	2.50a	0.00c	5.00c	0.00c
A15645 + MSO	6.98 oz	2.50a	0.00c	10.00bc	0.00c
Movento 240 SC + NIS*	3 oz + 0.25% NIS V/V	17.50a	17.50ab	35.00b	25.00ab
Movento 240 SC + NIS*	5 oz + 0.25% NIS V/V	12.50a	7.50bc	32.50b	12.50bc

Means in a column followed by the same letter are not significantly different (P= 0.05; Tukey's Test).

* NIS used was LI-700

Table 3. Melon Aphid Counts

Treatment	Rate/A	Mean Number Aphids per 50 Plants			
		Pretrt July 28	4 DAT Aug 4	11 DAT Aug 11	15 DAT Aug 14
Untreated Check	--	14.00a	18.75a	57.50a	13.50a
Assail 30 SG	4 oz	23.50a	0.00b	2.75b	0.00b
A15645 + MSO	5.98 oz	0.50a	0.00b	1.50b	0.00b
A15645 + MSO	6.98 oz	0.50a	0.00b	3.50b	0.00b
Movento 240 SC + NIS*	3 oz + 0.25% NIS V/V	9.00a	2.50b	31.75ab	10.00ab
Movento 240 SC + NIS*	5 oz + 0.25% NIS V/V	13.75a	6.50ab	12.5b	5.25ab

Means in a column followed by the same letter are not significantly different (P= 0.05; Tukey's Test).

* NIS used was LI-700