

Insect Management in Cantaloupes with Chemigation - 2003: 'Gallicum' cantaloupe transplants were planted on May 27 at the University of Delaware Research and Education Center located near Georgetown, DE. Plots consisted of two 30 ft-long rows on 8 ft centers. Each treatment was replicated four times and arranged in a RCB design. Foliar treatments were applied as a broadcast spray on June 19 and 25 with a CO₂ pressurized backpack sprayer delivering 18.5 gpa at 40 psi. Chemigation treatments were applied on June 12, June 26, and July 10. Cucumber beetle, aphid and spider mite populations were evaluated on a weekly basis from June 4 through July 16 by looking at 5 plants per plot to determine the percent infested plants and the number of beetles and aphids per plant. Ten leaves per plot were collected and a mite brushing machine was used to determine the number of mites per leaf. On July 31 and Aug 14, the number of mature fruit was counted. Data were analyzed using ANOVA and means were separated by Ryan's q-test (P=0.05).

Cucumber beetle populations were moderate. Aphid and spider mite population pressure was extremely low. All treatments provided a significantly lower number of cucumber beetles per plant on July 2. No phytotoxicity was observed.

Table 1. Cucumber Beetles per 5 plants

Treatment	Rate/Acre	Chemi-Gation Dates	Foliar Dates	Cucumber Beetles per 5 plants				
				June 18	June 25	July 2	July 9	July 16
Untreated	-----	---		5.75a	11.50a	11.25a	0.50a	0.50a
Platinum 2SC	5 oz	June 12		1.50a	5.00a	1.00b	0.25a	0.25a
Platinum 2 SC	8 oz	June 12		1.75a	10.00a	3.50b	1.00a	0.25a
Platinum 2 SC Actara 25WDG	5 oz 3 oz	June 12	June 19,25	5.25a	5.50a	3.75b	0.00a	0.00a
Platinum 2 SC Actara 25WDG	8 oz 3 oz	June 12	June 19,25	5.00a	6.50a	2.00b	0.50a	0.25a
Platinum 2 SC Warrior 1CS	5 oz 3.76 oz	June 12	June 19,25	3.75a	5.00a	2.50b	0.00a	0.25a
Platinum 2 SC Warrior 1CS	8 oz 3.76 oz	June 12	June 19,25	1.25a	9.00a	3.50b	0.25a	0.25a
Platinum 2 SC	4 oz 4 oz	June 12 June 26		3.00a	13.00a	4.00b	0.75a	0.25a
Actara 25WDG	3 oz		June 19,25	1.25a	15.50a	3.25b	0.50a	1.00a
Warrior 1CS	3.76 oz		June 19,25	4.75a	15.25a	1.50b	0.00a	0.25a
Admire 2 SC	16 oz	June 12		3.00a	11.00a	4.75b	0.25a	0.25a
Admire 2SC	8 oz 8 oz	June 12 June 26		4.50a	5.50a	0.50b	0.00a	1.00a
Vydate	64 oz 32 oz 32 oz	June 12 June 26 July 10		6.25a	3.75a	3.00b	1.00	0.25a

Means within a column followed by the same letter are not significantly different (Ryan's q-test; P=0.05).

Table 2. Percent Cucumber Beetle Infested Plants

Treatment	Rate/Acre	Total Number Melons per plot (July 31+Aug14)	Percent Cucumber Beetle Infested Plants				
			June 18	June 25	July 2	July 9	July 16
Untreated	-----	91.00a	40.00a	85.00a	75.00a	10.00a	5.00a
Platinum 2SC	5 oz	89.00a	25.00a	55.00a	15.00a	5.00a	5.00a
Platinum 2 SC	8 oz	102.00a	25.00a	65.00a	40.00a	15.00a	5.00a
Platinum 2 SC Actara 25WDG	5 oz 3 oz	94.25a	50.00a	65.00a	40.00a	0.00a	0.00a
Platinum 2 SC Actara 25WDG	8 oz 3 oz	92.25a	45.00a	65.00a	35.00a	10.00a	5.00a
Platinum 2 SC Warrior 1CS	5 oz 3.76 oz	90.75a	35.00a	55.00a	30.00a	0.00a	5.00a
Platinum 2 SC Warrior 1CS	8 oz 3.76 oz	92.75a	25.00a	90.00a	45.00a	5.00a	5.00a
Platinum 2 SC	4 oz 4 oz	89.25a	50.00a	80.00a	40.0a	15.00a	5.00a
Actara 25WDG	3 oz	97.25a	30.00a	90.00a	40.00a	10.00a	15.00a
Warrior 1CS	3.76 oz	91.75a	30.00a	100.00a	25.00a	0.00a	5.00a
Admire 2 SC	16 oz	90.00a	30.00a	90.00a	50.00a	5.00a	5.00a
Admire 2SC	8 oz 8 oz	90.00a	45.00a	45.00a	10.00a	0.00a	10.00a
Vydate	64 oz 32 oz 32 oz	93.75	60.00a	50.00a	40.00a	20.00a	5.00a

Means within a column followed by the same letter are not significantly different (Ryan's q-test; P=0.05).