

Section VIII

Mites & Sap-Sucking Insects

APHID CONTROL WITH SOIL & FOLIAR APPLIED INSECTICIDES-2001

Melon Aphid - *Aphis gossypii*

C.F. Fouche, & D.A. Brunmeier

University of California Cooperative Extension-San Joaquin County

420 S Wilson Way, Stockton, CA 95205-6243

Twelve treatments were replicated four times in a randomized, complete block design. Plots were 5' wide by 30' long. The test crop was vegetable spaghetti squash. The in-furrow soil treatments of Platinum and Admire were diluted in water and applied at a rate of 100 gallons per acre. Soil treatments were applied using a B & G termite injector penetrating 6" deep and 6" to the side of each plant. The Fulfill, Actara, Aza-Direct, DR-A-034, PyGanic and Lannate were applied using a Solo 5 hp backpack blower at 100 gallons per acre, treating the bed from two directions. Soil applications were made on July 2, and foliar applications were made on August 9, 16 & 23. Cabrio was applied late in the season for control of powdery mildew.

Plots were evaluated on 8/09, 8/15, 8/21 and 8/28. Twenty leaves per plot were sampled and the number of aphids present per leaf was estimated. Inoculations using leaves infested with melon aphids were made on 8/2 to insure even distribution of aphids in test plots.

All soil treatments controlled melon aphids in this trial for 7 weeks following the application. Fulfill, Actara and Lannate provided the best control of the foliar treatments. The Aza-Direct did not provide acceptable control of aphids; it was probably more toxic to the beneficials present than to the pests.

Mean Number of Melon Aphids Per 20 Leaves

Timing	7/2	8/9	8/16	8/23	Chemical	Rate of Product	8/9	8/15	8/21	8/28
					Untreated		111.0 b	156.0 d	415.6 d	343.2 b
Foliar		X			Fulfill	77 g/ac	107.1 b	1.9 a	1.8 a	1.3 a
Foliar		X			Actara	43 g/ac	195.9 c	1.4 a	1.6 a	6.2 a
Foliar		X			Actara	86 g/ac	140.0 bc	0.3 a	1.1 a	4.0 a
Soil	X				Admire	113 g/ac	8.7 a	7.6 a	23.1 a	25.0 a
Soil	X				Admire	170 g/ac	13.2 a	7.8 a	16.3 ab	5.1 a
Soil	X				Platinum	50 g/ac	6.8 a	7.1 a	30.4 ab	30.8 a
Soil	X				Platinum	78 g/ac	5.9 a	6.2 a	33.9 ab	13.9 a
Foliar		X	X	X	Aza-Direct	24 fl oz/ac	79.2 b	108.1 c	302.1 c	452.8 b
Foliar		X	X	X	DR-A-034	64 fl oz/ac	194.7 c	56.6 b	78.6 ab	34.6 a
Foliar		X		X	PyGanic	32 fl oz/ac	84.7 b	62.0 b	92.0 b	114.4 a
Foliar		X			Lannate	454 g/ac	137.3 b	0.8 a	3.8 a	11.3 a

Means followed by the same letter in a column were not significantly different at the 5% level (Fishers LSD).

Mean Number of Melon Aphids Per 20 Leaves on Aug 21, 2001

