

Two Spotted Spider Mite Management in Watermelons - 2003: 'Jamboree' watermelon transplants were planted on June 11 at the University of Delaware Research and Education Center located near Georgetown, DE. Plots consisted of two 35 ft-long rows on 8 ft centers. Each treatment was replicated four times and arranged in a RCB design. Treatments were applied as a broadcast spray on July 21. All foliar treatments were applied with a CO₂ pressurized ATV 4-wheeled sprayer delivering 22 gpa at 60 psi. Mite populations were evaluated on a weekly basis from June 16 through Aug 6 by looking at 5 plants per plot to determine the percent infested plants and by collecting 10 leaves per plot and using a mite brushing machine to determine the number of mites per 10 leaves. Data were analyzed using ANOVA and means were separated by Ryan's q-test (P=0.05).

Plots were inoculated with spider mite infested leaves and Sevin was sprayed 3 times in an effort to flair mites. However, spider population pressure remained extremely low throughout the season. Capture, Zeal and the high rate of Acramite provided significantly better spider mite control at 3 DAT compared to the untreated check. No phytotoxicity was observed.

Table 1. Spider Mite Counts on Leaves

Treatment	Rate/A	Mean Number Spider Mites per 10 Leaves			
		July 21 Pre-Trt	July 24 3DAT	July 31 10 DAT	Aug 6 16 DAT
Capture	5.12 oz	4.50a	3.00b	0.00a	0.00a
Danitol	10.66 oz	8.25a	9.00ab	0.00a	0.00a
Danitol	16 oz	21.75a	6.00ab	0.00a	0.00a
Zeal	3 oz	20.25a	4.50b	0.00a	0.00a
Agri-Mek	8 oz	39.00a	9.00ab	1.50a	1.50a
Acramite 50WS Choice+ Silwet	1 lb 1 qt/100 gal 3 oz/100	23.00a	19.50ab	0.75a	0.00a
Acramite 50WS Choice+ Silwet	.5 lb 1 qt/100 gal 3 oz/100	23.25a	3.00b	0.75a	0.75a
Acramite 50WS Choice+ Silwet	0.375 LB 1 qt/100 gal 3 oz/100	51.75a	10.50ab	6.75a	1.50a
Untreated	-----	5.25a	37.50a	11.25a	4.50a

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

Table 2. Percent Plants Infested with Spider Mites

Treatment	Rate/A	% Infested Plants	
		July 21 – PreTrt	July 24 – 3 DAT
Capture	5.12 oz	55.00a	10.00a
Danitol	10.66 oz	45.00a	30.00a
Danitol	16 oz	40.00a	30.00a
Zeal	3 oz	40.00a	30.00a
Agri-Mek	8 oz	55.00a	25.00a
Acramite 50WS Choice+ Silwet	1 lb 1 qt/100 gal 3 oz/100	60.00a	25.00a
Acramite 50WS Choice+ Silwet	.5 lb 1 qt/100 gal 3 oz/100	45.00a	10.00a
Acramite 50WS Choice+ Silwet	0.375 LB 1 qt/100 gal 3 oz/100	25.00a	15.00a
Untreated	-----	55.00a	10.00a

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