

Two Spotted Spider Mite Management in Watermelons - 2004: 'Jamboree' watermelon transplants were planted on May 25 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 8 and 15. 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 2 through July 27 by looking at 5 plants per plot to determine the percent infested plants and by collecting 20 leaves per plot and using a mite brushing machine to determine the number of mites per leaf. 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 2 times in an effort to flair mites. Spider population pressure was moderate. After the second application, all treatments provided significantly better spider mite control compared to the untreated check. No phytotoxicity was observed.

Table 1. Spider Mite Counts on Leaves

Treatment	Yield Total Pounds per plot	Rate/A	Mean Number Spider Mites per Leaf			
			July 6 Pre-Trt	Post-Treatment July 13 (5DAT) Mean # Mites/Leaf	Post-Treatment July 21(6DAT) Mean # Mites/Leaf	Post-Treatment July 27(12DAT) Mean # Mites/Leaf
Capture 2EC	285.25a	6.4 oz	5.85a	4.20b	0.83b	0.50b
Danitol 2.4EC	480.30a	16 oz	4.30a	4.35b	1.65b	0.40b
Zeal WDG	352.20a	1 oz	4.60a	5.80ab	0.38b	0.15b
Zeal WDG	362.40a	2 oz	4.50a	1.35b	0.38b	0.25b
Agri-Mek 0.15EC	278.35a	8 oz	5.50a	5.75ab	0.23b	0.20b
MK936 018EC-AB	342.85a	8 oz	4.90a	4.75b	0.90b	0.10b
MK936 018EC-AD	416.75a	8 oz	7.00a	6.95ab	0.30b	0.20b
Acramite 50WS + Silwet	381.45a	1 lb + 3 oz/100 gal	1.90a	4.15b	0.83b	0.25b
Acramite 50WS +Silwet	324.95a	0 .75 lb+ 3 oz/100 gal	6.80a	6.53ab	0.53b	0.30b
Untreated	382.93a	-----	4.40a	13.75a	3.75a	3.40a

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