

Spider Mite Management in Watermelons - 2001: 'Royal Majesty' watermelon transplants were planted on May 31 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 June 28 and July 19. All foliar treatments were applied with a CO₂ pressurized ATV 4-wheeled sprayer delivering 23 gpa at 60 psi. Mite populations were evaluated on a weekly basis from June 26 through July 31 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 20 leaves. On Aug 7, all fruit was harvested and weighed. Data were analyzed using ANOVA and means were separated by Ryan's q-test (P=0.05).

All treatments provided significantly better spider mite control compared to the untreated check on July 10 and 25 except for Metasystox-R. No phytotoxicity was observed.

Treatment	Rate/A	Mean Percent Infested Plants					
		Pre-count June 26	5 DAT July 3	12 DAT July 10	Pre-count July 17	6 DAT July 25	12DAT July 31
Agri-Mek	4 oz	90a	20.00c	5.00b	5.00bc	10.00b	15.00b
Agri-Mek	8 oz	75a	0.00c	0.00b	30.00bc	10.00b	20.00b
Agri-Mek	16 oz	90a	0.00c	0.00b	0.00c	5.00b	10.00b
Capture	6.4 oz	85a	15.00c	15.00b	60.00ab	20.00b	30.00b
MESA	24 oz	80a	20.00c	20.00b	30.00bc	5.00b	25.00b
Metasystox-R	2 pts	85a	85.00a	85.00a	100.00a	90.00a	85.00b
Savey	4 oz	80a	40.00bc	10.00b	40.00bc	15.00b	15.00b
Acramite 50 WP	1 lb	85a	15.00c	10.00b	10.00bc	20.00b	20.00b
Acramite 50WP	0.75 lb	80a	60.00ab	20.00b	35.00bc	15.00b	10.00b
Untreated	-----	75a	95.00a	75.00a	95.00a	85.00a	40.00b

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

Treatment	Mean Number Mites per 20 Leaves					
	Pre-count June 26	July 3	July 10	Pre-count July 17	July 25	July 31
Agri-Mek	80.00a	0.00b	0.00b	4.50b	4.50c	12.00b
Agri-Mek	49.25a	0.00b	0.00b	1.50b	1.50c	2.00b
Agri-Mek	63.75a	0.00b	0.00b	3.00b	3.00c	1.50b
Capture	75.00a	0.00b	5.25b	36.00b	6.00c	6.00b
MESA	130.25a	1.50b	8.25b	1.50b	0.00c	13.50b
Metasystox-R	159.25a	12.00b	56.25a	208.50a	145.50a	112.50a
Savey	31.25a	10.50b	0.00b	1.50b	1.50c	4.50b
Acramite 50 WP	83.50a	4.50b	2.25b	0.00b	1.50c	0.00b
Acramite 50WP	86.75a	6.00b	6.00b	30.00b	9.00c	3.00b
Untreated	55.10a	60.00a	56.25a	94.50b	66.00b	42.00b

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