(D14)
ORANGE: Citrus sinensis (L.) Osbeck 'Hamlin'

Citrus rust mite (CRM); Phyllocoptruta oleivora (Ashmead)

P. A. Stansly, J. M. Conner, and M. A. Pomerinke

University of Florida/IFAS
Southwest Florida Res. And Ed. Center
2686 State Road 29 North
Immokalee, Florida 34142-9515
Phone: (941) 658-3427

CONTROL OF CITRUS RUST MITE WITH MITAC, 1998: Citrus rust mite (CRM) continues to be the major arthropod pest of citrus in Florida. The objective of this trial was to test an alternative miticide against the present standard, Agri-Mek. The trial was conducted at the Southwest Florida Research and Education Center in Immokalee, Florida, on 9-year old 'Hamlin' orange trees planted at 15 x 22 ft. spacing. A RCB design was used with four replications and six treatments including an untreated check. Each plot consisted of 4 treated trees with sampling limited to the middle two. A pre-count made 5 Aug on 8 trees per replication produced an average of 12.9 CRM per standard 10x lens field. Treatments were applied on 5 Aug using a FMC JD 1050 air blast speed sprayer with seven ceramic FMC nozzles, an array of 3, 4, and 5 per side, at a pressure of 300 psi which delivered 100 gpa. One treatment, Mitac 1.67 EC at 1 lb (AI)/acre, was evaluated only for phytotoxicity. The other 5 treatments were evaluated for CRM incidence 7 times at approximately weekly intervals starting 13 Aug. Two fruit were sampled from each cardinal direction, 8 per tree for a total of 16 fruit. All mobile CRM were counted in two, 1.5-cm diameter fields using a 10x Bauch and Lomb® Triplex lens on each partially shaded side of each fruit. On 3 Nov, 60 fruit, 15 from each cardinal direction were harvested from each of the 2 middle trees of each plot and percent russeting estimated visually. Data on CRM counts were analyzed without transformation using a GLM and LSD. Percent data from damage ratings were statistically analyzed after arc-sine transformation and analyzed using ANOVA and LSD.

No phtotoxicity was observed from Mitac at 1 lb (AI)/acre. Mite populations decreased over the course of the trial in all plots including the untreated check. There were no significant differences between treatments and all treatments were significantly different from the check in terms of CRM counts through 25 Aug. On 1 Sep (26 DAT), only fruit from trees treated with Mitac at either rate had fewer CRM than the check. The same was true for Mitac at 1.81 lb (AI)/acre and Agri-Mek plus Sunspray 7E oil at 49 DAT. Fewest russetted fruit were observed from trees treated with Agri-Mek and oil. Other treatments did not produce less russetted fruit than the untreated check. Thus, although CRM counts indicated control was obtained with Mitac, the damage evaluation did not support this conclusion.

		No. mites/16 lens field							Harvest
Treatment/ Formulation	Rate amt (AI)/acre	8 DAT	13 DAT	20 DAT	26 DAT	35 DAT	41 DAT	49 DAT	Percent fruit russetted/480 fruit/treatment
Mitac 1.67EC	0.75 lb	1.81b	1.52b	0.45b	0.18b	0.18b	0.43b	0.32b	44.4bc
Mitac 1.67EC & Sunspray 7E oil	0.75 lb 5% v/v	2.03b	1.42b	0.17b	0.14b	0.12b	0.34b	0.46ab	57.7a
Argi-Mek 0.15EC & Sunspray 7E oil	5 oz 5% v/v	2.57b	1.41b	0.24b	0.64ab	0.86a	0.51ab	0.39ab	45.2c
Sunspray 7E oil	5% v/v	3.56b	1.35b	0.71b	0.54ab	0.57ab	0.62ab	0.74ab	69.7a
Untreated check		11.53a	4.14a	2.15a	1.07a	1.03a	1.16a	0.84a	57.3b

Means in columns followed by the same letter(s) are not significantly different (LSD, $P < 0.05$).