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GRAPEFRUIT: *Citrus paradisi* (Macfady.) 'Marsh'
Citrus rust mite (CRM): *Phyllocoptruta oleivora* (Ashmead)

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ACARICIDAL CONTROL OF CITRUS RUST MITE, 2003: The trial was conducted at the Duda Grove in Hendry County, Florida, on mature 'Marsh' grapefruit trees planted at 15 X 24 ft spacing. A RCB design was used to assign 4 replications of 3 treatments including an untreated check to 5-tree plots. Plot rows were separated by a single buffer row. Treatments were applied on 11 July 2003 using a Durand Wayland 3P100-32 air blast speed sprayer with an array of seven # 3 T-Jet stainless steel cone nozzles per side operating at a pressure of 400 psi delivering 100 GPA. Horticultural mineral oil (HMO) FC 435-66 was added to each treatment at 5% v/v. Evaluation of CRM incidence was made 2 days prior to application and at 7, 14, 24, 35, 42, 57, 66, 84, and 91 days after treatment (DAT). Two fruit, 1 per row side, were sampled from 5 trees for a total of 10 fruit per plot on each sample date. All mobile CRM were counted in a single 2.5 cm diameter lens field using a 12X hand lens on a partially shaded side of each fruit. Pre-application counts were at 0.58 CRM/cm^2. A population of 0.4 CRM/cm^2 is considered a treatment threshold and 0.8 CRM/cm^2 is considered as a re-treatment threshold.

Fewer CRM were observed on fruit from trees sprayed with NNI-850 compared to the control through 35 DAT whereas Agri-Mek held through 91 DAT. Actually, from 66 DAT onward there were more CRM where NNI-850 was sprayed compared to the control, indicating possible resurgence in response to the miticide. Fewer mites were seen on fruit sprayed with Agri-Mek compared to NNI-850 from 57 DAT through 91 DAT. Therefore, while NNI-850 provided control for 7 weeks, it was less persistent than the grower standard, Agri-Mek.

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		CRM per cm^2 leaf surface								
	Rate	7	14	24	35	42	57	66	84	91
Treatment/formulation	oz/acre	DAT	DAT	DAT	DAT	DAT	DAT	DAT	DAT	DAT
NNI-850 (5%) 0.417 EC	61.4	0.17b	0.26b	0.06a	0.04b	0.07ab	0.26a	0.60a	0.84a	0.71a
+ HMO 5% v/v										
AgriMek 0.15 EC	10	0.06b	0.04b	0.00b	0.00b	0.01b	0.02b	0.01c	0.01b	0.08c
+ HMO 5% v/v										
Untreated check	--------	0.56a	1.29a	0.07a	0.62a	0.20a	0.09ab	0.32b	0.44a	0.29b

Means followed by same letter do not significantly differ (P=0.10, Duncan's New MRT)