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(D13)

ORANGE: *Citrus sinensis* (L.) Osbeck, ‘Valencia’

CONTROL OF ASIAN CITRUS PSYLLID WITH FOLIAR APPLICATIONS OF INSECTICIDE IN ORANGES DURING BLOOM, 2008

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Asian citrus psyllid (ACP): *Diaphorina citri* Kuwayama

ACP is a key pest of citrus in Florida, due primarily to its interaction with Huanglongbing or citrus greening disease. ACP vector’s the bacterium, *Candidatus* Liberibacter asiaticus responsible for greening or “Huanglongbing” disease of citrus. The experimental block at the Southwest Florida Research and Education Center, Immokalee, Florida consisted of 12-yr-old sweet orange ‘Valencia’ trees planted on double-row raised beds at a density of 132 trees/acre. Trees were irrigated by micro-sprinklers and subjected to conventional cultural practices. Bed sides of the trees were pruned manually to induce new flush and encourage ACP infestation. Seven treatments and an untreated check were randomly distributed across 4 replicates in 15 rows that included a buffer row after every treated row. Each replicate contained 2 treated rows of 20 trees divided into four 5-tree plots. Treatments were applied on 11 Mar 2008 using a Durand Wayland 3P-10C-32 air blast speed sprayer with an array of six # 5 T-Jet stainless steel cone nozzles per side operating at a pressure of 200 psi delivering 150 gpa at a tractor speed of 1.5 mph. The post treatment evaluations were made on 17, 24, and 31 Mar and 17 Apr. Three trees were sampled in each five tree plot. Adult ACP density was estimated by counting the insects falling on a clipboard covered with an 8 ½ × 11 inch white paper sheet placed under randomly chosen branches which were tapped 3 times with the hand to make a count for one tap sample. Four tap samples were conducted per tree. Ten randomly selected shoots were observed on each tree and the number infested with ACP eggs or nymphs recorded. Adult density and shoot infestation were recorded on the first three sampling dates. On 31 Mar, fourth and fifth instar nymphs on the flushes were also counted. On 17 Apr, two flushes were randomly selected on each tree and the number of leaves with ACP feeding damage was noted on five randomly selected fully opened soft leaves on each flush. Data were subjected to ANOVA to evaluate treatment effects on ACP and means were separated using LSD contingent on a significant treatment effect ($P = 0.05$). Numbers of ACP adult were transformed by log(x+1) prior to analysis but actual means are presented.

There were no statistically significant effects of treatments on any measured variable (% infested flushes, nymphs/flush, damaged leaves/flush or adults/4 tap samples) except adult densities on 31 March. On that date compared with untreated check significantly fewer adults were seen in all treatments except the high rate of Micromite 80 WGS applied with 435 Oil.

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Treatment/ formulation	Rate amt product/ acre or % v/v	% Infested flushes			Nymphs/ flush	% Damaged leaves/flush	Adults/4 tap samples			
		17 Mar	24 Mar	31 Mar	31 Mar	17 Apr	17 Mar	24 Mar	31 Mar	Total
Untreated check	---	93.33a	82.50a	47.50a	1.63a	99.17a	0.75a	1.08a	1.58a	3.42a
Sevin XLR	48 fl oz	70.00a	94.29a	33.47a	2.94a	95.83a	0.92a	1.67a	0.17b	2.75a
435 Oil	2%	74.58a	71.19a	37.22a	0.65a	95.00a	1.08a	1.00a	0.50b	2.58a
QRD416	128 fl oz	77.33a	60.67a	32.00a	1.93a	94.17a	0.92a	1.42a	0.75b	3.08a
QRD416 + 435 Oil	128 fl oz + 2 %	60.00a	65.00a	43.33a	0.45a	92.29a	0.50a	0.42a	0.50b	1.42a
Micromite 80 WGS + 435 Oil	6.25 oz + 2 %	71.67a	75.95a	43.57a	1.00a	96.25a	1.42a	1.17a	0.83ab	3.42a
Micromite 80 WGS + 435 Oil	3.13 oz + 2 %	65.71a	70.71a	52.53a	1.74a	88.13a	0.67a	0.50a	0.50b	1.67a
Micromite 80 WGS + Orocit	6.25 oz + 64 fl oz	65.00a	68.33a	38.33a	0.48a	88.96a	0.58a	0.92a	0.50b	2.00a

Means in a column followed by the same letter are not significantly different (*P* < 0.05, LSD).