

(D19)

ORANGE: *Citrus sinensis* (L. Osbeck.) 'Valencia'

SOIL APPLIED INSECTICIDAL CONTROL OF ASIAN CITRUS PSYLLID AND CITRUS LEAFMINER, 2005

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

Citrus leafminer (CLM): *Phyllocnistis citrella* Stainton

The trial was conducted at the University of Florida Southwest Florida Research and Education Center in Immokalee, FL, on 3-yr-old 'Valencia' orange trees planted at 15 × 22-ft spacing in double-row beds separated by a swale and running north-south. The block had been previously used for a weed management experiment and there was considerable variation in tree size among plots. Four adjoining rows were used for a completely randomized block design with three treatments replicated four times. Each plot consisted of six to eight trees. A suspension of the desired amount of Platinum 2SC and Admire Pro in 8 fl-oz of water was poured in a circular band around about one foot from the base of each tree on 17 Aug 2005. Evaluations were made by examining the youngest new terminal growth, (flush) available at 28, 37, 43, and 59 DAT for a total of six flushes per plot. The numbers of adult ACP and CLM per flush terminal were counted, except on the first evaluation in which the ACP population was rated on a 0 to 3 scale (0=none and 3=high). The trees were trimmed on 10 Oct in an attempt to encourage growth of new and more uniform flush; however, a hurricane on 24 Oct damaged the new flush and no more evaluations could be made. Data were subjected to ANOVA and means were separated using LSD ($P \leq 0.05$).

Trees were especially small in one of the plots that happened to be selected for treatment with Platinum, and responses were atypical of the remaining four plots, probably because the application was made beyond the root zone. However, this variation did not change the overall results and the analyses represented by the tables include all plots, although reference will be made in the text to the analysis without the atypical plot. Fewer immature ACP were observed at 28 and 37 DAT on trees treated with Platinum compared to Admire-treated trees which themselves had fewer ACP than the control (Table 1). At 43 DAT, there were no differences between Platinum and Admire, and at 50 DAT, no significant treatment effect except when the atypical plot was removed from the analysis which effectively removed all infested trees from the Platinum treatment. Fewer adult ACP were seen on trees treated with Platinum compared to untreated trees through 43 DAT, but this was true for Admire-treated trees only at 37 DAT (Table 2). Both treatments resulted in fewer CLM except for Platinum at 37 DAT, although this difference was significant if the atypical plot was removed from the analysis (data not shown). Thus we observed 43-50 d suppression of both ACP and CLM from both Admire Pro and Platinum, with somewhat better activity on ACP exhibited by Platinum.

Table 1.

Treatment/ formulation	Rate lb (AI)/acre	Immature ACP: mean rating per flush terminal ^a			
		28 DAT	37 DAT	43 DAT	50 DAT
Platinum 2SC	0.16	0.63c	0.29c	0.21b	0.17a
Admire Pro 4.6FL	0.17	1.25b	1.13b	0.50b	0.58a
Untreated check	--	2.29a	2.17a	1.42a	0.54a

Means followed by the same letter in each column are not significantly different ($P > 0.05$, LSD).

^a0 to 3 rating scale (0=none, 3=high).s

Table 2.

Treatment/ formulation	Rate lb (AI)/acre	Adult ACP: mean rating and count per flush terminal			
		28 DAT Rating ^a	37 DAT Count	43 DAT Count	50 DAT Count
Platinum 2SC	0.16	0.13b	0.21b	0.63b	1.00a
Admire Pro 4.6FL	0.17	0.54ab	1.63b	1.42ab	1.79a
Untreated check	--	0.79a	5.00a	2.79a	1.88a

Means followed by the same letter in each column are not significantly different ($P > 0.05$, LSD).

^a0 to 3 rating scale (0=none, 3=high).

Table 3.

Treatment/ formulation	Rate lb (AI)/acre	CLM: mean no./flush terminal		
		37 DAT	43 DAT	50 DAT
Platinum 2SC	0.16	0.67ab	0.50b	2.25b
Admire Pro 4.6FL	0.17	0.08b	0.67b	3.00b
Untreated check	--	1.13a	2.00a	6.71a

Means followed by the same letter in each column are not significantly different ($P > 0.05$, LSD).