 doi: 10.4182/amt.2011.D4

D4

CITRUS ROOTSTOCK: "Swingle" Citrumelo from *Citrus paradisi* Macf. "Duncan' grapefruit X *Poncirus trifoliata* (L.) Raf.

SOIL APPLIED INSECTICIDAL CONTROL OF ASIAN CITRUS PSYLLID, 2009

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

ACP adults and nymphs feed on and damage new growth and can acquire and transmit the bacterium *Candidatus* Liberibacter asiaticus causal agent of citrus greening or huanglongbing disease. Thus, ACP is a serious pest in Florida citrus and must be controlled to reduce disease spread. The trial was conducted at the University of Florida Southwest Research and Education Center in Immokalee, Florida, on 2-yr-old 'Swingle citromelo" planted at 151 trees/acre. A single row was used for a CRB design with five treatments replicated four times. Each plot consisted of five trees that were trimmed approximately every two weeks throughout the trial to encourage new growth (flushes) and provide suitable habitat for psyllid nymphs. Trees were completely enclosed on 10 Sep with Trimaco 5 gal Elastic Top Paint Strainers (nylon mesh) into which 30 adult lab-reared ACP adults were released. The cage was closed around the trunk with a plastic twist tie and removed three weeks later. Weeds, debris and leaf litter were removed from beneath each tree prior to soil drenches made 24 Sep in 8 oz of suspension to bare soil within 12 inches of the trunk of the tree using an EZ-Dose® sprayer with a pressure of 45 psi and a flow rate of 3.7 gpm. A 14x Coddington hand lens was used to determine presence of eggs or nymphs when sufficient young shoots were available on 20 and 29 Oct, 5, 12 and 20 Nov, 3 Dec 2009 and 4 Mar, 8 and 22 Apr, and 7 May 2010. One shoot from each tree was removed and taken back to the laboratory where the number of psyllid eggs and nymphs were counted under a stereoscopic microscope.

No psyllid eggs or nymphs were observed on any treated tree in 2010 in contrast to untreated trees (Tables 1-3). Thus all treatments provided at least two months of protection from ACP with no differences among treatments.

Table 1.

Treatment/ formulation	Rate amt form/acre (oz)	% ACP infested flush					
		20 Oct	29 Oct	5 Nov	12 Nov	20 Nov	3 Dec
Untreated check	-	50.0a	36.6a	49.4a	52.4a	34.2a	4.00a
Admire Pro 4.6 SC	8.00	0.0b	0.0b	0.0b	0.0b	0.0b	0.0b
Platinum 75 SG	3.66	0.0b	0.0b	0.0b	0.0b	0.0b	0.0b
Platinum 75 SG	5.33	0.0b	0.0b	0.0b	0.0b	0.0b	0.0b
HGW 86 20 SE	20.25	0.0b	0.0b	0.0b	0.0b	0.0b	0.0b

Means followed within a column by the same letter are not significantly different (LSD P >0.05)

Table 2.

Treatment/ Formulation	Rate amt form/acre (oz)	No. ACP eggs/flush				
		20 Oct	29 Oct	5 Nov	12 Nov	20 Nov
Untreated		13.5a	6.8a	12.9a	0.8a	11.3a
Admire Pro 4.6 SC	8.00	0.0b	0.0b	0.0b	0.0a	0.0b
Platinum 75 SG	3.66	0.0b	0.0b	0.0b	0.0a	0.0b
Platinum 75 SG	5.33	0.0b	0.0b	0.0b	0.0a	0.0b
HGW 86 20 SE	20.25	0.0b	0.0b	0.0b	0.0a	0.0b

Means followed within a column by the same letter are not significantly different (LSD P >0.05)

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Table 3.

Treatment/ formulation	Rate amt form/acre (oz)	No. ACP nymphs/ flush					
		20 Oct	29 Oct	5 Nov	12 Nov	20 Nov	3 Dec
Untreated		2.2a	0.0a	2.1a	10.0a	1.6a	0.4a
Admire Pro 4.6 SC	8.00	0.0b	0.0a	0.0b	0.0b	0.0b	0.0b
Platinum 75 SG	3.66	0.0b	0.0a	0.0b	0.0b	0.0b	0.0b
Platinum 75 SG	5.33	0.0b	0.0a	0.0b	0.0b	0.0b	0.0b
HGW 86 20 SE	20.25	0.0b	0.0a	0.0b	0.0b	0.0b	0.0b

Means followed within a column by the same letter are not significantly different (LSD P>0.05)