

(D)

**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 year old ‘Swingle citromelo’ planted at 151 trees per acre. A single row was used for a CRB design with 5 treatments replicated 4 times. Each plot consisted of 5 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 gallon 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 3 weeks later. Weeds, debris and leaf litter were removed from beneath each tree prior to soil drenches made 24- Sep in 8 ounces 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 04 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. Thus all treatments provided at least 2 months protection from ACP with no differences among them.

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

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

Treatment/ formulation	Rate amount/ acre (oz)	ACP eggs per flush				
		20-Oct	29-Oct	5-Nov	12-Nov	20-Nov
Untreated		13.5 a	6.8 a	12.9a	0.8	11.3 a
Admire Pro 4.6 SC	8.00	0.0 b	0.0 b	0.0 b	0.0	0.0 b
Platinum 75 SG	3.66	0.0 b	0.0 b	0.0 b	0.0	0.0 b
Platinum 75 SG	5.33	0.0 b	0.0 b	0.0 b	0.0	0.0 b
HGW 86 20 SE	20.25	0.0 b	0.0 b	0.0 b	0.0	0.0 b

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

Treatment/ formulation	Rate amount/ acre (oz)	ACP nymphs per flush					
		20-Oct	29-Oct	5-Nov	12-Nov	20-Nov	3-Dec
Untreated		2.2 a	0.0	2.1 a	10.0 a	1.6 a	0.4 a
Admire Pro 4.6 SC	8.00	0.0 b	0.0	0.0 b	0.0 b	0.0 b	0.0 b
Platinum 75 SG	3.66	0.0 b	0.0	0.0 b	0.0 b	0.0 b	0.0 b
Platinum 75 SG	5.33	0.0 b	0.0	0.0 b	0.0 b	0.0 b	0.0 b
HGW 86 20 SE	20.25	0.0 b	0.0	0.0 b	0.0 b	0.0 b	0.0 b

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

**Part II: Materials Tested for Arthropod Management**

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Brand	Formulation	Common name	Composition	Manufacture/source
Admire Pro	4.6 SC	imidacloprid	1_((6-Chloro-3-pyridinyl)methyl)-N-nitro-2-imidazolidinimine	Bayer CropScience LP P.O. Box 12014 1 T.W. Alexander Drive Research Triangle Park, North Carolina 27709
Platinum	75 SG	thiamethoxam	4H-1,3,5-Oxadiazin-4-imine,3-((2-chloro-5-thiazolyl)methyl)tetrahydro-5-methyl-N-nitro-	Syngenta Crop Protection P.O. Box 18300 Greensboro, NC 27419
HGW 86	2 0 SE	Cyantraniliprole	3-bromo-1-(3-chloro-2-pyridinyl)-N-[4-cyano-2-methyl-6-[(methylamino)carbonyl]phenyl]-1H-pyrazole-5-carboxamide	