

D17**ORANGE:** *Citrus sinensis* (L.) Osbeck, 'Hamlin'**SOIL APPLIED INSECTICIDAL CONTROL OF CITRUS LEAFMINER , 2010****Philip A. Stansly**

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Citrus leafminer (CLM): *Phyllocnistis citrella* Stainton

CLM causes significant damage to young leaves which also exposes leaf cuticle to the bacterium *Xanthomonas citri* responsible for the citrus canker disease. The trial was conducted at the University of Florida Southwest Research and Education Center in Immokalee, Florida, on 2-yr-old 'Hamlin' trees planted at 140 trees per acre in double-row beds running north-south and separated by a swale. Three adjoining rows were used for a CRBD with 12 treatments replicated 4 times. Each plot consisted of 5 trees that were pruned approximately once a month throughout the trial to encourage new growth (flushes) and provide suitable habitat for CLM larvae. Liquid treatments were applied by soil drench or foliar spray and granular treatments by incorporation into soil once on 25 or 26 Feb or a second time on 19 or 20 May (Table 1). Weeds, debris and leaf litter were removed from beneath each tree prior to soil applications. Granular insecticides were applied in a 16 inch furrow on the bed top side of each tree approximately 6-12 inches from the base of the tree. Soil drench applications were made by spraying 8 oz of solution to bare soil within 12 inches of all sides of the tree trunk using an EZ-Dose® sprayer operating at 45 PSI and a flow rate of 3.7 gpm. The same sprayer was used for foliar applications with a T-Jet 8003 nozzle and 8 fl oz of solution per tree canopy applying Movento at a concentration of 20 oz/100 gal. CLM larvae were monitored at approximately two-wk intervals depending on availability of suitable flush (Table 2). Five young shoots were taken per plot and 3 mid-stem leaves on each examined under a stereoscopic microscope.

No CLM larvae were observed on 1 and 15 Apr in any of the plots. In general, the split applications of Admire and Platinum outperformed the single applications of these products and no difference in effect was observed between 20 oz and 10 oz rate of HGW 86. However, a single application of the slow release formulation of imidacloprid SuSCON at 0.5 lb ai/ac provided longer lasting control than two applications of AdmirePro with a total of 0.33 lb ai imidacloprid. Movento and Temik provided little to no CLM control regardless of the timing of the application.

Treatment/ formulation	Rate form/acre	Treatment method	Treatment date	CLM larvae per 3 leaves							
				29 Apr	14 May	4 Jun	18 Jun	16 Jul	30 Jul	20 Aug	3 Sep
Untreated check				4.00a	3.24a	4.58a	6.40a	2.35ab	4.09ab	5.95a	7.90ab
Platinum 75 SG	3.67 fl oz	Soil drench	25 Feb	2.35bcde	1.93bc	4.74a	5.33abc	2.15ab	2.00bcd	4.95abcd	8.50a
Platinum 75 SG	5.33 fl oz	Soil drench	25 Feb	1.93def	1.68bcd	5.31a	2.63cde	2.30ab	2.67abcd	5.30abc	4.85cd
Platinum 75 SG	1.83 fl oz	Soil drench	25 Feb	1.35ef	1.50bcd	0.40c	1.21de	0.80c	3.95abc	2.30de	6.30bc
HGW86 20 SE	10.00 fl oz	Soil drench	25 Feb	1.52def	0.67de	1.33c	2.67cde	0.55c	0.45d	3.00cde	6.00c
HGW86 20 SE	20.00 fl oz	Soil drench	25 Feb	0.38f	0.00e	1.12c	1.00de	0.85c	1.90cd	3.10cde	5.45c
SuSCon 5 G	10.0 lb	Incorporation	26 Feb	1.42def	1.62bcd	3.60ab	1.18de	0.40c	2.00bcd	2.84de	2.85e
Admire Pro 4.6 SC	4.60 fl oz	Soil drench	25 Feb	2.55bcde	1.50bcd	0.13c	0.70e	2.00b	2.20bcd	5.55a	6.35bc
Temik 15 g	17.5 lb	Incorporation	26 Feb	2.79abcd	1.10cde	0.25c	0.83e	2.70ab	2.89abc	5.05abcd	5.80c
Admire Pro 4.6 SC	4.60 fl oz	Soil drench	19 May								
Movento 2SC + Citrus 435 Oil	20.0 fl oz + 3% v/v	Foliar	26 Feb	3.10abc	3.23a	1.57bc	3.43bcde	2.10b	3.20abc	2.13e	3.75de
Admire Pro 4.6 SC	4.60 fl oz	Soil drench	19 May								
Movento 2SC + Citrus 435 Oil	20.0 fl oz + 3% v/v	Foliar	26 Feb								
Admire Pro 4.6 SC	4.6 fl oz	Soil drench	25 Feb								
Movento 2SC + Citrus 435 Oil	20.0 fl oz + 3% v/v	Foliar	20 May	3.70ab	2.43ab	3.62ab	5.68ab	1.85b	4.58a	3.35bcde	5.90c
Admire Pro 4.6 SC	4.6 fl oz	Soil drench	25 Feb								
Movento 2SC + Citrus 435 Oil	20.0 fl oz + 3% v/v	Foliar	20 May	3.70ab	2.43ab	3.62ab	5.68ab	1.85b	4.13ab	5.00abcd	8.15a

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