

Orange: *Citrus sinensis* (L.) ‘Hamlin’ and ‘Valencia’
Citrus leafminer (CLM) *Phyllocnistis citrella* (Stainton)

P. A. Stansly and J. M. Conner
University of Florida/ IFAS
Southwest Florida Res. and Ed. Center
2686 State Road 29 North
Immokalee, FL 34142-9515
Phone: (941) 658-3427
Fax: (941) 658-3470
Email: pas@gnv.ifas.ufl.edu

CONTROL OF CITRUS LEAFMINER (CLM) IN ORANGE, 2001: CLM damage to the flush of young trees can become very high and in addition to the foliage damage there is a concern that it increases the entry sites for disease particularly citrus canker. This trial examined the efficacy of various insecticides in controlling this pest in young trees. The trees used were 2-year old nursery stock of sweet orange trees budded to ‘Smooth Flat Seville’ planted in the ground at 7 inch spacing in two rows 36 inches apart, one ‘Valencia’ and the other ‘Hamlin’. The rows were divided into 25-foot plots to make 4 replications, 2 per row and the treatments assigned in an RCB design. New flush was induced by trimming the trees 40 days prior to the spray application. A precount on 2 May showed that all of 40 randomly selected terminals were infested with CLM. Treatments were applied next day by using a Black and Decker battery powered hand sprayer at a rate of 145 GPA. Evaluations were made by collecting from each plot 10 pieces of expanded flush 20 days after treatment (DAT). Number of leaves and CLM, mines for each piece of flush was recorded. The mean number of leaves on per flush was fairly uniform ranging between a high of 16.5 leaves in the untreated to the low of 15.0 in the Actara plots which was significantly different from the high. All the other treatments ranged in between and were not significantly different from the high or low treatments and there was no difference in replications. The least number of CLM mines per leaf were found in AgriMek treated leaves which was significantly less than all the other treatments. The next best control was from MicroMite, Confirm, Provado, Actara and Acetamiprid. which were significantly better than HMO, SpinTor and Avaunt. All the treated plots were significantly better than the untreated which was hit hard with CLM and had a mean of 1.28 mines per leaf. AgriMek was clearly superior in this trial averaging only 1 out of every 25 leaves with a mine.

Florida Agricultural Experiment Station Journal Series No._____.

Treatment/ formulation ^a	Rate (lb AI /acre)	Mean number	
		leaves	per flush
Acetamiprid 70 WP	0.075	15.2ab	0.22c
Actara 25 WG	0.086	15.0b	0.40c
Avaunt 30 WP ^b	0.110	15.4ab	0.94b
SpinTor 2 SC	0.094	15.5ab	0.77b
Provado 1.6 F	0.044	15.6ab	0.38c
Confirm 2F	0.125	16.3a	0.30c
MicroMite 80WDG	0.320	16.2ab	0.29c
HMO	3 % v/v	15.4ab	0.90b
Agri-Mek 0.15 EC	0.060	15.8ab	0.04d
Untreated check	—	16.5a	1.28a

^aHorticultural mineral oil (HMO, 470° F mean boiling point) FL 435-66 was mixed at 3% v/v with all treatments.

^b Kinetic a 99 % silicone nonionic surfactant blend tank mixed at 0.06 % v/v

^c Means in columns followed by the same letter are not significantly different (LSD, $P < 0.05$)