

(D9)

**ORANGE:** *Citrus sinensis* (L.), 'Hamlin' and 'Valencia'

## **CONTROL OF CITRUS LEAFMINER IN ORANGE, 2001**

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Citrus leafminer (CLM): *Phyllocnistis citrella* (Stainton)

This trial examined the efficacy of various insecticides in controlling CLM in young trees. The trees used were 2-yr-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 four replications, two per row, and the treatments with an RCB design. New flush was induced by trimming the trees 40 days before the spray application. A precount on 2 May showed that all 40 randomly selected terminals were infested with CLM. Treatments were applied on the next day using a Black and Decker battery-powered hand sprayer at a rate of 145 gpa. All test materials were tank-mixed with petroleum oil FC435-66 at 3% vol/vol. Evaluations were made by collecting 10 pieces of expanded flush from each plot 20 DAT. Number of leaves and CLM mines for each piece of flush was recorded.

The mean number of leaves per flush was fairly uniform ranging between a high of 16.5 leaves in the untreated to a 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 was found in Agri-Mek-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 FC435-66 oil, 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.

TABLE 1.

Treatment/ formulation <sup>a</sup>	Rate lb (AI)/acre	No. leaves/ flush	No. CLM mines/leaf
Acetamiprid 70 WP	0.075	15.2 ab	0.22 c
Actara 25 WG	0.086	15.0 b	0.40 c
Avaunt 30 WP <sup>b</sup>	0.110	15.4 ab	0.94 b
SpinTor 2 SC	0.094	15.5 ab	0.77 b
Provado 1.6 F	0.044	15.6 ab	0.38 c
Confirm 2F	0.125	16.3 a	0.30 c
MicroMite 80 WDG	0.320	16.2 ab	0.29 c
HMO	3% vol/vol	15.4 ab	0.90 b
Agri-Mek 0.15 EC	0.060	15.8 ab	0.04 d
Untreated check		16.5 a	1.28 a

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

<sup>a</sup>Horticultural mineral oil (HMO, 470°F mean boiling point)

FC435-66 was mixed at 3% vol/vol with all treatments.

<sup>b</sup>Kinetic a 99% silicone nonionic surfactant blend tank mixed at 0.06% vol/vol.