APPLE: *Malus × domestica* Borkh. 'Delicious'
White apple leafhopper (WALH): *Typhlocyba pomaria* McAtee
European red mite (ERM): *Panonychus ulmi* (Koch)
Western predatory mite (WPM): *Galandromus* (*Typhlodromus*) *occidentalis* (Nesbitt)

**APPLE, FIRST GENERATION WHITE APPLE LEAFHOPPER CONTROL TEST, 1986:** An insect growth regulator compound was evaluated for control of first generation WALH nymphs. This test was conducted in a 4-year-old orchard with over-tree irrigation. A randomized complete block design was used, with 4 single-tree replicates per treatment. Materials were applied as a dilute spray to the point of drip with a handgun sprayer operating at 400-500 psi. Per acre rates were based on 400 g/acre. Treatment timings were selected to coincide with petal fall (10 May), 75 degree days after codling moth biofix (16 May), and first appearance of fourth instar WALH nymphs (15 May). WALH densities were determined by counting nymphs on 20 randomly selected leaves showing leafhopper feeding injury from each tree (80 leaves per treatment). Posttreatment mite populations were assessed by collecting 20 randomly selected leaves from each tree (100 leaves per treatment), brushing them in a mite brushing machine, and counting mites of each species recovered.

All compounds tested significantly reduced WALH nymphal populations. UC 84572 appeared to provide less population reduction at 7 d posttreatment than the other compounds, but there were no significant differences between the UC 84572 treatments and Sevin or Thiodan treatments. This was probably due to the slower-acting properties of a growth regulator compound. Cool periods in the spring resulted in very low mite populations; two week posttreatment counts showed that mite populations remained essentially nonexistent in all treatments during experiments.

### **APPLE, SECOND GENERATION WHITE APPLE LEAFHOPPER CONTROL TEST, 1986**
This test was conducted in a 4-year-old orchard with over-tree irrigation. A randomized complete block design with 4 single-tree replicates per treatment was used. Materials were applied as dilute sprays to the point of drip with a handgun sprayer operating at 400-500 psi. Per acre rates were based on 400 g/acre. Treatments were applied after the majority of the mites of each species recovered.

**Treatment** | **Timing** | **Rate** | **Pre-tmt WALH nymphs/leaf** | **7 d WALH nymphs/leaf**
--- | --- | --- | --- | ---
UC 84572 2.1EC + | 10 May | 0.2 lb | 3.48a | 0.41a
FA-10 | | 1 gal | 2.78a | 0.33a
UC 84572 2.1EC + | 16 May | 0.2 lb | 3.48a | 0.00a
FA-10 | | 1 gal | 4.65a | 0.00a
Sevin XLR Plus 4EC | 15 May | 1 lb | 3.48a | 4.04a
Thiodan 50WP | 15 May | 1.5 lb | 3.48a | 2.95b
Check (Untreated) | | | 3.40a | 2.95b

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### **TREATMENT**

**APPLE: Malus × domestica Borkh. ‘Delicious’**
White apple leafhopper (WALH): *Typhlocyba pomaria* McAtee
European red mite (ERM): *Panonychus ulmi* (Koch)
Western predatory mite (WPM): *Galandromus* (*Typhlodromus*) *occidentalis* (Nesbitt)

**Treatment** | **Timing** | **Rate** | **Pre-tmt WALH nymphs/leaf** | **7 d WALH nymphs/leaf**
--- | --- | --- | --- | ---
UC 84572 2.1EC + | 10 May | 0.2 lb | 3.48a | 0.41a
FA-10 | | 1 gal | 2.78a | 0.33a
Sevin XLR Plus 4EC | 15 May | 1 lb | 3.48a | 4.04a
Thiodan 50WP | 15 May | 1.5 lb | 3.48a | 2.95b
Check (Untreated) | | | 3.40a | 2.95b

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**Means within columns followed by the same letter(s) are not significantly different (P < 0.05 Tukey’s HSD). Data analyzed using a log(x + 1) transformation.**