Pome Fruits—Chemical Control

Grape Mealybug (*Pseudococcus maritimus*) on Table Grapes (*Vitis vinifera*)

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A series of insecticide trials was established in 1993 to evaluate insecticide, timing, and gallonage in managing grape mealybug in table grapes. Two of these trials are reported herein.

A series of treatments was applied to Superior Seedless table grapes (plots were 2 rows wide and 50 vines long) and Thompson Seedless table grapes (1 row and 100 vines long). Treatments were replicated 4 times.

Infestation was determined at harvest by sampling 25 bunches touching the vine trunk. Superior Seedless was harvested on July 12, 1993, and the Flame Seedless harvested on August 3, 1993.

The results of the Superior Seedless trial showed each of the treatments significantly reduced infestation over the untreated. The dormant oil application was not different from either the untreated or the organophosphate treatments.

The results of the Thompson Seedless trial showed each of the treatments with Lorsban was significantly better than Guthion WP treatments, the Volck oil treatments, and the untreated. The untreated was no different from Guthion treatments or the oil treatment.

Table 1. The effects of various insecticide treatments on infestation of grape mealybug (Superior Seedless, July 12, 1993).

Material	Rate/acre	Gallonage	Date	Average/25[1]
Lorsban® 4E	2 pt	300	3/3/93	2.00a
Lorsban® 4E	4 pt	300	3/3/93	2.50a
Lorsban® 4E	2 pt	200	5/7/93	1.50a
Untreated				7.00b
Lorsban® 4E + Supreme Oil	2 pt 2 gal	300	3/3/93	2.75a
Lorsban® 4E + Supreme Oil	4 pt 2 gal	300	3/3/93	1.50a
Guthion® 2L	6 pt	300	3/3/93	2.00a
Guthion® 2L + Supreme Oil	6 pt 2 gal	300	3/3/93	1.25a
Volck Supreme Oil	2 gal	300	3/3/93	4.25ab
Lorsban® 4E	4 pt	150	3/3/93	2.75a
Lorsban® 4E	8 pt	150	3/3/93	2.75a
Lorsban ® 4E + Supreme Oil	4 pt 2 gal	150	3/3/93	2.25a

25 bunches selected from 20 to 25 vines; bunches touching bark or near cordon.

[1]Treatments followed by the same letter not significantly different, $P<0.05$ using Fisher's Protected LSD.

Table 2. The effects of delayed dormant insecticide treatments on infestation of grape mealybug (Thompson Seedless, 8/3/93).

Material	Rate/acre (300 gal)	Average/25[1]
Lorsban® 4E	4 pt	1.5ab
Lorsban® 4E	8 pt	1.0a
Lorsban® 4E + Supreme Oil	4 pt 2 gal	4.0b
Lorsban® 4E + Supreme Oil	8 pt 2 gal	2.0ab
Guthion 50WP	3 lb	22.3cd
Guthion 50WP + Supreme Oil	3 lb 2 gal	21.0c
Supreme Oil	2 gal	23.8cd
Untreated	---	25.0d

25 bunches selected from 20 to 25 vines; bunches touching bark near cordon treatments replicated 3 times.

[1]Treatments followed by the same letter not significantly different, $P<0.05$ using Fisher's Protected LSD.