

Pome Fruits—Chemical Control

Prebloom Evaluations of Fenoxycarb and Danitol for Pear Psylla Control

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*Keywords:* pear psylla, Danitol, Asana, fenoxycarb, pear

Mature pear trees were sprayed with airblast equipment set to deliver 200 gal/acre of finished spray. Treatments were made to three 0.3 to 0.5 acre replicates of mixed pear cultivars. The pyrethroid insecticides, Asana and Danitol (two formulations), were applied at the delayed dormant timing (Mar 13) in combination with Orhex 796 spray oil. Three treatments of the insect growth regulator (IGR) fenoxycarb were made: delayed dormant, pink (April 5) and both delayed dormant and pink. Adult PP densities were evaluated biweekly by counting the numbers falling onto a catching frame following tapping of 5 limbs/rep/date. Depending on bud development PP immatures were recorded from fruit spurs (10/rep), fruit clusters (5/rep) or from fruit cluster leaves (30/rep).

Delayed dormant treatments with the pyrethroid chemicals Danitol and Asana resulted in a rapid reduction in PP adults averaging about 98% compared to pretreatment densities (Table 1). Subsequent levels of immature PP were also low with nymphal densities on May 4, averaging 0.4/leaf compared to 4.5/leaf in the untreated check. There was no significant difference between the two formulations of Danitol tested (Table 1). Fenoxycarb treatments produced no direct reduction in PP adult densities and, while most eggs appeared normal, they did not hatch. In two of the fenoxycarb treatments, the delayed dormant and the delayed dormant-pink timings, there were significantly more PP eggs on May 4 than in either the check or the pink fenoxycarb timing. Conversely, the levels of PP nymphs on May 4 were significantly lower in the delayed dormant and delayed dormant-pink fenoxycarb timings than in the check and pink fenoxycarb timing (Table 1). There was no significant difference in eventual nymphal densities as recorded on May 4 between fenoxycarb treatments applied solely at delayed dormant and those applied at this timing and at pink bud. Also there was no significant difference in PP densities between the untreated check and fenoxycarb applied just at the pink period (Table 1).

*Proceedings of the 68<sup>th</sup> Annual Western Orchard Pest & Disease Management Conference*

**Table 1.** Prebloom control of pear psylla with experimental insecticides; mixed pear cultivars; treated delayed dormant (DD), March 12; pink bud (P), April 5, 1993, Medford, OR.

Treatment	Rate AI/acre	Spray timing	Average no. pear psylla adults/5 trays (A/5T), nymphs or eggs/cluster (E or N/Cl) or eggs or nymphs/5 leaves (E or N/5L)							
			Mar 10		Mar 19	Apr 1	April 20		May 4	
			A/5T	E/Cl	A/5T	A/5T	E/5L	N/Cl	E/5L	N/5L
Danitol 2.4EC + Oil	0.4 lb 4 gal	DD	17.7a	18.5bc	0.3a	0.3a	0.3a	1.2a	1.0a	2.0ab
Danitol 10W + oil	0.4 lb 4 gal	DD	15.0a	22.8c	0.0a	1.3a	0.0a	1.0a	0.5a	3.5ab
Asana 0.67EC + oil	0.075 lb 4 gal	DD	49.0c	20.5bc	1.7a	2.7a	3.0b	6.1b	2.0a	1.5a
Fenoxycarb 25W	2 oz	DD	30.3abc	11.3a	30.7b	29.7b	15.0c	3.5ab	59.0c	6.0b
Fenoxycarb 25W	2 oz	DD+P	34.0bc	17.4abc	30.3b	33.3b	13.0c	2.9ab	63.0c	4.0ab
Fenoxycarb 25W	2 oz	P	26.7ab	11.8a	31.7b	29.0b	11.3c	36.0c	47.5bc	14.0c
Untreated			25.3ab	14.1ab	43.3b	30.7b	12.7c	30.1c	32.0b	22.5c

Means within a column followed by the same letter are not significantly different ( $P=0.05$  Fisher's Protected LSD). Data were subjected to  $\sqrt{x+0.5}$  transformation for statistical analysis. Nontransformed means are presented for comparison.