

Pome Fruits—Chemical Control

Agri-Mek Timing Study, Orondo

Everett Burts

Washington State University Tree Fruit Research and Extension Center, Wenatchee, WA

Keywords: pear psylla, Agri-Mek, Guthion, pear

Twenty-five-yr-old 'Bartlett' pear trees were sprayed with an air carrier sprayer to compare the effectiveness of petal fall and second-generation timing of Agri-Mek for control of pear psylla. Plots consisted of half-acre unreplicated rectangles. The earlier treatment was applied 10 May, the latter one 5 Jun. Additional sprays applied to the entire orchard during the growing season included Guthion 35% WP 2.5 lb/acre on 11 Jul and Guthion 35% WP 2 lb/acre plus Mitac 50% WP 3 lb/acre on 31 Jul. Treatments were evaluated for PP by counts made at 2-wk intervals. Adult samples consisted of two 25-beating-tray samples per plot on each date. PP nymphs were counted from two 50-leaf samples per replicate. Leaf samples consisted of the proximal leaf, distal leaf and 3 leaves from the middle of 10 terminal shoots. Leaves were brushed and resulting slides were examined under magnification. PP russet and other pest damage were rated according to US grade standards for fresh market 'Bartlett' pears on 100 mature fruits per plot. Factors of fruit quality including firmness, soluble solids and size were evaluated from four 100-fruit samples per replicate at normal harvest maturity. Fruit and foliage were examined for phytotoxicity after each spray.

Both spray timings provided good control of PP. The 10 May application produced a lower seasonal average nymph density because it controlled the first generation. There was no fruit damage from PP honeydew russet in the earlier treated block and only 2 percent of fruit in the later treated plot had enough damage to lower grade. There was 3 and 1.5 percent fruit damage from grape mealybug, respectively, in the early and late plots. No other pests reached damaging densities in the test orchard. There were no treatment-associated differences in fruit quality.

Treatment date	Mean ¹ PP nymphs per 25 leaves							Seasonal
	20 May	3 Jun	17 Jun	1 Jul	15 Jul	29 Jul	13 Aug	
10 May	4.0a	0.5a	0.0a	0.0a	0.0a	0.0a	0.0a	0.43a
5 June	50.5b	20.5b	0.0a	0.0a	0.5a	0.0a	0.0a	10.21b

¹Means within columns followed by the same letter are not significantly different (P=0.05, Fisher's Protected LSD).

Treatment date	Mean ¹ PP adults per limb tap							Seasonal
	13 May	28 May	10 Jun	25 Jun	8 Jul	22 Jul	5 Aug	
10 May	0.6a	0.1a	0.1a	0.0a	0.0a	0.0a	0.0a	0.40a
5 June	5.7b	11.6b	0.8a	0.1a	0.2a	0.1a	0.1a	0.12a

¹Means within columns followed by the same letter are not significantly different (P=0.05, Fisher's Protected LSD).