

III. Stone Fruits (Vines)  
 d. Chemical control  
 1. Boxelder bug - kiwifruit

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The trial was conducted on 15-yr-old 'Hayward' kiwifruit in a commercial vineyard near Santa Cruz, Calif. Four treatments were replicated 4 times using a randomized complete block design. Each replicate consisted of an individual vine with a minimum of one buffer vine between experimental units. Treatments were applied with a CO<sub>2</sub>-charged backpack sprayer operating at 30 psi and delivering 400 gal/acre. Treatments were applied on 13 Jun. Control was evaluated by caging 20 field-collected adult boxelder bugs on the foliage for 1 d and 7 d beginning on the day of application and at 1-wk intervals for 4 wk.

Both rates of Asana caused significantly more boxelder bug mortality than was observed in either Imidan or the untreated check for the 4 wk of this trial. However, Asana did not show a consistent rate response. The low mortality from both rates of Asana on 14 Jun when the bugs were caged on the foliage for 1 d was possibly the result of cool and foggy conditions that existed during 13-14 Jun. All bugs at that time had stopped feeding and moving but complete mortality did not occur.

Treatment	Rate/acre (lb AI)	Mean % mortality of 20 boxelder bugs caged on treated foliage for 1 d at various dates post-treatment			
		14 Jun	21 Jun	28 Jun	5 Jul
Asana XL 0.66 EC	0.05	29a	54a	37a	27a
Asana XL 0.66 EC	0.025	23a	25b	37a	26a
Imidan 50 WP	2.0	0b	13c	8b	0b
Untreated		0b	0d	6b	0b

Means followed by the same letter in a column are not significantly different ( $P = 0.05$ ; DMRT). Data analyzed using an arcsin transformation.



Treatment	Rate/acre (lb AI)	Mean % mortality of 20 boxelder bugs caged on treated foliage for 7 d at various dates post-treatment			
		20 Jun	27 Jun	4 Jul	11 Jul
Asana XL 0.66 EC	0.05	80a	69a	49a	44a
Asana XL 0.66 EC	0.025	73a	48b	49a	41ab
Imidan 50 WP	2.0	29b	29c	27b	23c
Untreated		17b	21c	31b	31bc

Means followed by the same letter in a column are not significantly different ( $P = 0.05$ ; DMRT). Data analyzed using an arcsin transformation.

#### Materials Under Trial

Asana 1.9 EC; Esfenvalerate; [S]-Cyano(3-phenoxyphenyl)methyl[S]-4-chloro-alpha-(1-methyl ethyl) benzeneacetate; Dupont, E. I. de Nemours & Co., Agricultural Products Dept.

Imidan 50 WP; Phosmet; N-(Mercaptomethyl)phthalimide S-(O,O)-dimethyl phosphorodithioate; Rhone Poulenc Ag. Co.