

## EVALUATION OF NOVEL INSECTICIDES FOR THE RATIONAL CONTROL OF ROOT WEEVILS IN STRAWBERRIES

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**Trial 1:** Two formulations of Gowan Cryolite bait were tested for the control of black vine weevil (BVW) *Otiorhynchus sulcatus* (F.) and strawberry root weevil (SRW) *Otiorhynchus ovatus* (L.) on a 2 year-old field of 'Totem' and 'Benton' strawberries in Vancouver, WA. The plots were 12 rows (42 feet) wide by 100 feet long and replicated 3 times. The bait was broadcast over the top of the rows by hand in a 16 inch wide band. Counts were made 6 days after treatment. Three people using flashlights, starting at 10:00 P.M., counted exposed weevils for 6 minutes per plot.

Both formulations of the bait significantly reduced BVW and SRW as compared to the control. The apple grape formulation was significantly better than the older apple pumice formulation for BVW control (Table 1).

**Table 1**

Chemical/form	Rate AI/acre	Mean weevils/plot 6 DAT	
		BVW	SRW
Apple pumice 20%	8	65.7b	1.7b
Grape + apple pumice 20%	8	7.7c	0.7b
Untreated check	NA	150.7a	13.0a

Means within columns followed by the same letter are not significantly different (P < 0.05; LSD).

**Trial 2:** Five chemicals were evaluated for the control of black vine weevil (BVW) *Otiorhynchus sulcatus* (F.) in Vancouver, WA on a 5 year-old field of 'Totem' strawberries. Treatments were replicated 4 times on 12 x 50 ft plots arranged in a RCB design. Sprays were applied on 6/9/98 with a tractor-mounted (PTO) plot sprayer equipped with 6, 6.5 gallon stainless steel tanks individually valved to a 3 row boom. It was equipped with 3, D3-45 nozzles spaced 10" apart over each row and operating at 150 psi at 3 mph to deliver 65 gpa. Two people using flashlights, starting at 10:00 P.M., counted exposed weevils for 5 minutes per plot 3 days after treatment (DAT).

Alert, fipronil and Brigade had significantly better knockdown than control, Admire and Cryolite Bait 3 DAT. Knockdown for Admire and Cryolite Bait were not significantly different than the control (Table 2).

**Table 2**

Chemical/form	Rate AI/acre	Mean weevils/plot 3 DAT
Admire 2F	0.05	43.25a
Alert 2SC	0.32	00.25c
Brigade 10WP	0.10	00.00c
Cryolite Bait	8.00	21.00b
Fipronil 1.6F	0.02	00.25c
Untreated check	NA	36.50ab

Means within columns followed by the same letter are not significantly different (P < 0.05; LSD).