

## Control of Root Weevil Larvae in Oregon Strawberries

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A field trial was conducted in a three-year-old field of 'Totem' strawberries to evaluate efficacy of soil-applied insecticides in controlling root weevil larvae. The three most common weevils found in this field were the black vine weevil (*Otiorhynchus sulcatus*), the strawberry root weevil (*Otiorhynchus ovatus*), and the rough strawberry root weevil (*Otiorhynchus rugosostriatus*).

Single row plots were 25' long. The experimental design was a randomized complete block with four replications. Strawberries were renovated (mowed, cultivated and fertilized) on August 16, 1999. Treatments were applied to pre-irrigated plots on August 19, 1999 and followed immediately with approximately 1.5 inches of irrigation. Treatments were applied with a CO<sub>2</sub> backpack sprayer, equipped with a single nozzle boom with a spray width of 15 to 18 inches, and directed in a band over the plant row. Water carrier was at a rate of 50 GPA; Enzone, however, was applied at a rate 200 GPA. Meadowfoam meal was applied by hand in a 15-inch band in the plant row.

### Treatments:

Thiamethoxam (Platinum) @ 0.2 lb. a.i./Ac

*Beauveria bassiana* (Naturalis-L) @ 43 fl. oz. product/Ac

Sodium tetrathiocarbonate (Enzone) @ 500 ppm a.i./Ac

Carbofuran (Furadan 4F) @ 2.0 lb. a.i./Ac

Meadowfoam meal (active ingredient is glucosinolate) applied as a surface mulch, ~ 1/3 inch thick, banded application (rate = 8.6 T/Ac in a 15-inch band)

Untreated check

Treatments were evaluated on April 5, 2000 by digging five strawberry plants per plot, screening soil through a series of sieves and counting number of live larvae per plot.

### Results and Discussion:

Thiamethoxam and carbofuran had significantly fewer root weevil larvae than the other treatments or the untreated check (Table). Meadowfoam plots could not be evaluated for effect on root weevil larvae because plants in those plots had died.

Treatments	Number live larvae	Control
<i>Beauveria bassiana</i> (Naturalis-L)	138.8 b*	0%
Carbofuran (Furadan 4F)	37.2 a	71.8%
Meadowfoam meal	----	----
Sodium tetrathiocarbonate (Enzone)	121.5 b	8.6%
Thiamethoxam (Platinum)	35.2 a	73.5%
Untreated check	133.0 b	----

\* Means followed by the same letter within a column do not differ significantly, based on Fisher's protected LSD ( $P \leq 0.05$ )