

Section VI  
Biological and Cultural Controls

EFFECT OF CULTIVATION ON EMERGENCE  
OF STRAWBERRY ROOT WEEVIL

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Field trials of spring cultivation to suppress strawberry root weevil, Otiorhynchus ovatus, were conducted in 1988 and 1989. A douglas fir nursery block which had been harvested in March was used for the 1988 test. Half of the block was vibra-shanked twice and rototilled once on 5/21/88, and the remainder was left uncultivated as a check plot. On 5/31, 13 aluminum cylinders (about 4 sq ft each) were placed in each treatment area, seated to a depth of 4 in. and ringed with Stickem around the top. From 6/15-22/88, soil to a depth of 2" within the cylinders was screened and adult root weevils counted. A harvested douglas fir Christmas tree field was used for the 1989 test. A 40 ft border strip was disced four times between 4/18 and 4/27/89, and disced again four times on a weekly schedule between 4/27 and 5/26/89. An adjacent harvested strip was left undisturbed. On 5/26/89, 12 emergence cages were seated to a depth of 2-4 in on each treatment area. The cages were made from 30 gal steel drums cut in half and encompassed about 2 sq ft. On 6/16/89, soil to a depth of 6 in within the cages was sifted and adult root weevils counted.

In both of these trials a significantly lower number of root weevil emerged from cultivated soil. Spring cultivation reduced emergence of strawberry root weevil by 80-90%.

NO. ADULT ROOT WEEVIL/EMERGENCE CAGE

A. Douglas Fir Nursery, 1988			B. Douglas Fir Xmas Trees, 1989		
		Not			Not
	<u>Cultivated</u>	<u>Cultivated</u>		<u>Cultivated</u>	<u>Cultivated</u>
1	1	37		0	5
2	4	20		1	4
3	5	49		0	6
4	1	10		1	0
5	1	17		2	24
6	3	64		0	35
7	6	15		1	10
8	2	35		1	13
9	18	70		1	1
10	4	22		1	7
11	4	20		4	11
12	13	17		<u>0</u>	<u>3</u>
13	<u>5</u>	<u>5</u>			
$\bar{X}$	5.2 $\pm$ 5.0	29.3 $\pm$ 20.5		1.0 $\pm$ 1.1	9.9 $\pm$ 10.2