

# **Sod Webworm Management System for Kentucky Bluegrass Seed Production in Central Oregon, 2009**

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## **Abstract**

Pheromone traps that emit a scent to attract male sod webworm moths (*Chrysoteuchia topiaria*) were placed in the 4 quadrants of 11 commercial Kentucky bluegrass (*Poa pratensis*) seed production fields on June 11, 2009. Moths were collected and counted weekly through August 3. The total sod webworm moths collected per field from June 19, 2009 through August 3, 2009 ranged from 71 to 928. The peak flight was July 6 through 20, with an average of 102 sod webworm moths collected per field per week. Compared to other grass seed growing regions, these numbers are considered relatively low. Peak numbers of cutworm moths (*Protagrotis obscura*), also attracted to the pheromone, occurred during the week of June 26 through July 6.

## **Introduction**

Surveys of insect pests in Kentucky bluegrass fields were conducted in central Oregon and the Grande Ronde Valley during 2003-2005. Results indicated the presence of sod webworm (*Chrysoteuchia topiaria*) and cutworms (*Protagrotis obscura*) in central Oregon. At that time sod webworms were considered an emerging pest that could have a financial impact on Kentucky bluegrass fields in central Oregon. As a result this project has focused on sod webworm populations and distribution during the 2005 through 2009 seasons. The strategy has been to use pheromone traps that emit a scent to attract males in order to track the number of the sod webworm moths. This has been followed by sod sampling to determine the correlation between moth and larval populations. The objective of this research is to determine whether pheromone traps can be used as an indicator of which fields will have high populations of larvae in the fall, when control measures are applicable. The number of cutworms collected in pheromone traps has been tracked as well.

## **Methods and Materials**

Four pheromone traps were placed in each of the 4 quadrants of 11 commercial Kentucky bluegrass seed production fields in mid-June. Fields with potential insect problems in the Madras and Culver areas were chosen for the project this season. Contents of the traps were collected weekly from June 19 to August 3, and numbers of sod webworm and cutworm moths were counted.

## **Results and Discussion**

The overall peak flight of the sod webworm moth was July 6 to July 20 (Table 1). During peak flight the average number of sod webworm moths collected per field per week from the 4 traps was 102. The total number of sod webworm moths collected per field varied from 71 to 928 over

the trapping period. These numbers are considered relatively low compared to the Willamette Valley.

Cutworm moths attracted to the traps were tracked as well (Table 2). Peak numbers were collected June 26 through July 6, and the average number collected per field per week during this time was 30. The total number of cutworms collected per field ranged from 19 to 188 during the trapping period. The number of cutworms collected is considered relatively low compared to other growing regions. The cutworm life cycle appears to be similar to that of the sod webworm.

It appears that a better strategy for control of sod webworm may be the control of adults at peak flight prior to egg-laying, rather than targeting larvae in the fall. Materials will be evaluated during the 2010 season to determine the effectiveness of this approach. If so, use of pheromone traps will have a direct influence on the need for treatment, rather than being an indicator of potential larvae populations in the fall. There has not been a strong correlation between adult populations in early summer and larval number in the fall.

Table 1. Sod webworm moths collected per Kentucky bluegrass field using pheromone traps from June 19 to August 3, 2009, near Madras, Oregon.

Field	Collection dates for sod webworm moths							Total
	June 19	June 26	July 6	July 13	July 20	July 27	Aug. 3	
1	77	48	83	15	39	19	7	288
2	70	31	26	9	14	6	9	165
3	1	2	11	20	7	6	4	51
4	55	47	127	12	134	66	7	448
5	93	46	79	47	12	1	0	278
6	---	33	42	34	20	3	2	134
7	---	35	30	6	177	61	6	315
8	88	145	66	124	160	61	3	647
9	---	39	117	228	438	51	55	928
10	---	19	85	218	212	181	117	832
11	---	105	90	172	158	68	1	594
Total	384	550	756	885	1371	523	211	

Table 2. Cutworm moths collected per Kentucky bluegrass field using pheromone traps from June 19 to August 3, 2009, near Madras, Oregon.

Field	Collection dates for cutworm moths							Total
	June 19	June 26	July 6	July 13	July 20	July 27	Aug. 3	
1	38	27	59	46	17	1	0	188
2	35	38	37	16	6	3	1	136
3	27	19	9	38	21	5	0	119
4	38	34	30	17	1	0	1	121
5	8	29	29	8	17	8	1	100
6	---	35	51	36	32	2	3	159
7	---	30	41	41	4	0	6	122
8	---	19	22	4	2	1	0	48
9	---	3	10	5	1	0	0	19
10	---	52	36	13	3	0	0	104
11	---	27	16	7	1	0	1	52
Total	146	313	340	231	105	20	13	