

# **Soluble Concentrate Formulations of Bifenthrin (Talstar) and Spinosad (Conserve) for Curative Control of Sod Webworm Larvae in Creeping Bentgrass Turf, 2005**

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## **Objective**

The primary objective of this study was to describe and compare the activity of Talstar and Conserve on sod webworm larvae by: 1) Describing knockdown and residual activity against the targeted pest  
2) Describing any problems with application

## **Rationale**

Although sod webworms are common pests of short-cut bentgrass in the Midwest, there are no recent insecticide efficacy data available for Indiana golf courses. Therefore we evaluated two products representing two different insecticide classes in an effort to describe their efficacy and residual activity against this pest complex. Bifenthrin (Talstar SC) is a synthetic pyrethroid insecticide with relatively long residual activity. Spinosad (Conserve SC) is a biorational compound derived from the fermentation of naturally occurring bacteria.

## **How it was done**

The experiment was located at the W.H. Daniel Turfgrass Research and Diagnostic Center (West Lafayette, IN) on a sand based green consisting of creeping bentgrass (var. G6) maintained at 3/16". Plots measuring 1 x 1 meters were arranged in a randomized complete-block design with 0.5 meter alleys between plots. Each treatment was replicated 4 times. Treatments were applied using a hand-held CO<sub>2</sub>

boom sprayer configured with four 8010 nozzles operating at 30 psi and calibrated to deliver a spray volume of 2 gal/1000ft<sup>2</sup>. Treatments were applied 15 July. Field conditions on the 15 July treatment date were:

Soil: moist, 23.8 °C at 10 cm depth

Air Temp: 25.3 °C

Weather: sunny, clear, wind 3-5 mph

Thatch: 1”

Sod webworms: 80% 3<sup>rd</sup> – 5<sup>th</sup> instar, mixed species

Efficacy data were obtained 18 July (3 DAT), 22 July (7 DAT) and 29 July (14 DAT) by soap flushing a 0.25 m<sup>2</sup> area inside each plot and counting the number of sod webworm larvae coming to the surface after 15 minutes. A different area within each plot was sampled on each sampling date. Analysis of variance was performed using the total number of live larvae per sample and treatment means were compared using the Fisher's LSD test ( $\alpha=0.05$ ).

## Results

Table 1. Efficacy of liquid formulations of bifenthrin (Talstar SC) and spinosad (Conserve SC) for curative control of sod webworm larvae in creeping bentgrass turf, West Lafayette, IN., 2005.

		Sod Webworms					
		0/m <sup>2</sup>			% Control		
TR#	Treatment	3 DAT	7 DAT	14 DAT	3 DAT	7 DAT	14 DAT
1	Talstar 0.67SC @ 0.05 lb AI/A	0.8bc	0.0c	0.0b	93.2	100	100
2	Conserve 1SC @ 0.273 lb AI/A	0.5bc	0.5c	0.0b	95.5	92.0	100
3	Untreated Control	11.0a	6.3a	4.0a	---	---	---

Numbers followed by same letters are not significantly different, LSD(0.05).

0/m<sup>2</sup>=number of larvae per square meter

DAT=days after treatment