

**CURATIVE EFICACY OF DYLOX AND ARENA INSECTICIDES APPLIED AS  
RESCUE TREATMENTS AGAINST MASKED CHAFER LARVAE IN KENTUCKY  
BLUEGRASS TURF 2008**

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**OBJECTIVES**

The objective of this study was to evaluate the performance of Dylox and Arena insecticides applied at late curative timing for control of masked chafer larvae in turfgrass.

**METHODS AND MATERIALS**

The experiment was located at the Daniel Turfgrass Research and Diagnostic Center at Purdue University (West Lafayette, IN) on a plot of Kentucky bluegrass. Twenty 5 ft. by 5 ft. plots were arranged using a randomized complete block design with 1 ft. alleys between each plot. Each of 5 treatments (including an untreated control) was replicated 4 times. Treatments were applied on October 7, 2008 using a combination of broadcast spray and shaker jar applications. Spray applications were applied at a calibrated volume of 2 gal. /1000 ft.<sup>2</sup>. Plots were irrigated (2 cm) immediately following treatment application.

Field conditions during application were:

- (1) Soil: 17.0°C at 10 cm depth (10:30 am)
- (2) Air Temp.: 20°C (10:30 am)
- (3) Weather: Overcast, wind 5 mph
- (4) Thatch: 1.0 cm

Larval populations were assessed on October 21, 2008 by rolling up a 1 ft. by 3 ft. section of turf from each plot and counting the number of masked chafer grubs that were visible. Between-treatment variation in masked chafer abundance was determined using main effects ANOVA. Treatment means were compared using Fisher's LSD test ( $\alpha=0.1$ ).

## Results

**Table 1.** Masked chafer larval densities and percent control resulting from treatment with Dylox 80 SP or Arena 0.25 G. Applications were made on October 7, 2008 and larval populations were assessed on October 21, 2008. West Lafayette, IN.

TRT #	Treatment	Masked Chafer	
		MC/ft <sup>2</sup>	% Control
1	Dylox 80 SP @ 8.17 lbs ai/A	1.4 ± 0.64 b	82.9
2	Arena 0.25 G @ 0.25 lbs ai/A	2.8 ± 0.46 a	66.9
3	Untreated	8.3 ± 0.68 c	---

Numbers followed by same letters are not significantly different (Fisher LSD,  $\alpha=0.1$ )

\* There were no signs of phytotoxicity associated with any of the insecticide treatments.

Both treatments significantly reduced masked chafer larval populations compared to the untreated control, but only Dylox 80 SP provided an acceptable level (>70%) of control under the experimental conditions.

**Figure 1.** Location of experimental site. Daniel Turfgrass Research and Diagnostic Center, Purdue University, West Lafayette, IN.



**Figure 2.** Sampling technique: Turf was cut into 1 ft.-wide strips and rolled up in 3 ft. sections.

