Effect of Formulation on Crabgrass Control Using Dimension Herbicide

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INTRODUCTION

The purpose of this study was to compare the pre-emergence activity of different Dimension formulations at different application rates to control crabgrass.

EXPERIMENTAL METHODS

The experimental design was a randomized complete block design with 4 replications. The turf was Kentucky bluegrass with a history of crabgrass infestation. The soil type of the test area was Miami silt loam. Each plot was 5 ft X 10 ft. The plot was scalped three times in the spring to simulate a homeowner mowing regime and to stimulate crabgrass emergence. The regular mowing schedule of the area was 2X weekly at 2.5 inches. Irrigation was set to run 2X weekly replacing 100% ET. Each test product formulation included Nutralene as a slow-release nitrogen source.

Treatment	Rate (lb ai/A)	Timing	(lb fert/M)
Vigoro Dimension FG (XF-00034)	0.18	pre-emergent	3.75
K-Gro Dimension FG (XF-00028)	0.18	pre-emergent	2.42
Sta-Green Dimension FG (XF-00063)	0.18	pre-emergent	2.42
Lesco FG (XF-00063)	0.18	pre-emergent	5.9
Halts FG (XF-00064)	0.18	pre-emergent	2.5
Untreated Control	--	--	0

The treatments were applied on 4/27/00. Ratings for crabgrass infestation were taken on 6/5/00, 7/5/00, and 9/5/00.

RESULTS

Weather conditions during 2000 were extremely favorable for cool-season turfgrass growth. Temperatures were relatively mild, and rainfall was usually abundant and frequent (Fig. 1 and 2). Crabgrass was not evident in the test area until late August. The favorable climatic

conditions appeared to favor turfgrass growth over crabgrass. Crabgrass pressure was generally much lower throughout the research facility in 2000 than in years past. Soil temperatures at a 2 inch depth were favorable for crabgrass germination by late April/May (Fig. 3). It is likely some crabgrass was in the untreated plots prior to September but remained unnoticeable due to the steady growth of the turf. By late summer/early autumn the crabgrass plants were large enough to be noticed.

K-Gro Dimension FG, Lesco FG, and Sta-Green Dimension FG all provided good control of crabgrass (Table 1). Although K-Gro and Lesco appeared to provide the best control, results were not statistically different compared to the Sta-Green formulation. Vigoro Dimension FG provided intermediate control: it was not statistically different than the untreated turf or the K-Gro, Lesco, and Sta-Green formulations. The Halts FG product failed to provide any noticeable crabgrass control.

Table 1. Mean averages for the number of crabgrass plants on September 5, 2000, Verona, WI.

Treatment	# crabgrass plants per plot 9/5/00
Vigoro Dimension FG (XF-00034)	13.5
K-Gro Dimension FG (XF-00028)	1.8
Sta-Green Dimension FG (XF-00063)	6.8
Lesco FG (XF-00063)	2.3
Halts FG (XF-00064)	22.0
Untreated Control	25.8
LSD (0.05)	13.3

Table 1. Raw data for Dimension study, Verona, WI, 2000.

crabgrass plants per plot

Treatment	Rep	6/6/2000	7/5/2000	9/5/2000
1	1	0	0	32
1	2	0	0	5
1	3	0	0	0
1	4	0	0	17
2	1	0	0	0
2	2	0	0	3
2	3	0	0	0
2	4	0	0	4
3	1	0	0	12
3	2	0	0	0
3	3	0	0	9
3	4	0	0	6
4	1	0	0	4
4	2	0	0	0
4	3	0	0	2
4	4	0	0	3
5	1	0	0	41
5	2	0	0	19
5	3	0	0	17
5	4	0	0	11
6	1	0	0	18
6	2	0	0	33
6	3	0	0	16
6	4	0	0	36