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Abstract

The objective of this study was to assess the safety of several sedge-controlling herbicides on buffalograss (*Buchloe dactyloides*).

Keywords

RFR A1005, Horticulture, Turfgrass

Disciplines

Agricultural Science | Agriculture | Horticulture

Buffalograss Phytotoxicity Trial

RFR-A1005

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Introduction

The objective of this study was to assess the safety of several sedge-controlling herbicides on buffalograss (*Buchloe dactyloides*).

Materials and Methods

The study was conducted at the Iowa State University Horticulture Research Station, Ames, IA, in a non-irrigated buffalograss site. The treatments are listed in Table 1. Plots measured 2 ft × 2 ft for a total of 4 ft², and the study was replicated three times.

SedgeHammer (halosulfuron-methyl) is a commercially-available sulfonyleurea product from the Gowan Company. The GWN materials are experimental products that are

being compared with SedgeHammer.

Treatments were applied in the equivalent of three gallons water/1,000 ft² on June 11 when the sedge plants were well developed and actively growing. The second application at the same rate was made on July 12. The soil on the site is a disturbed Nicollet clay loam with a pH of 8.05, 3 ppm P, 85 ppm K, and 4.3 percent organic matter. The summer of 2010 was extremely wet, with nearly double the normal precipitation during the study period.

Results and Discussion

Phytotoxicity ratings were made on a scale of 100 percent = dead buffalograss and 0 percent = no damage (Table 2). The study area was adjacent to the turfgrass research site and it was observed for phytotoxicity nearly every day during the season. At no time during the study was any damage observed on the treated buffalograss plots.

Table 1. Treatments in the 2010 buffalograss phytotoxicity study

Treatment	Product	Rate	Surfactant
1	Sedgehammer	1.33 oz product/acre	0.25% V/V
2	Sedgehammer	2.66 oz product/acre	0.25% V/V
3	GWN-9843	9.92 oz product/acre	0.25% V/V
4	GWN-9843	19.84 oz product/acre	0.25% V/V
5	GWN-9861	19.84 oz product/acre	None
6	GWN-9861	39.68 oz product/acre	None
7	Untreated Control		

Table 2. Buffalograss phytotoxicity ratings; 100 percent = dead grass and 0 percent = no damage.

Treatment	6/25	6/30	7/5	7/13	7/18	7/20	7/28	8/5	8/12
1	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0
LSD _{0.05}	NS	NS	NS	NS	NS	NS	NS	NS	NS