Selective Control of Creeping Bentgrass in Taller Mown Turf Stands

Clark Throssell and Dan Weisenberger

Objective

Our objective was to determine if commercially available herbicides could be used to selectively control creeping bentgrass in taller mown turf stands.

Rationale

Creeping bentgrass growing in taller mown turf stands used as home lawns, golf course rough, or athletic fields is a very invasive weed. Currently, no selective control for creeping bentgrass in taller mown stands is available. Our experiment was designed to determine the potential of some commercially available herbicide to selectively control creeping bentgrass.

How It Was Done

A mature stand of moderate quality 'Penncross' creeping bentgrass at the Agronomy Research Center was used for the experiment. The creeping bentgrass was mowed at 2 inches two times per week with clippings returned. The experimental site was fertilized in mid May with 1.0 lb nitrogen per 1000 sq. ft. and irrigated regularly to promote healthy growth. Six herbicides were used for the experiment that were felt may provide selective control of creeping bentgrass. All herbicide treatments were applied using a three nozzle hand held boom in 2 gals of water per 1000 sq. ft. The initial application was made on 3 June and additional applications of some treatments were made on 18 and 30 June and 15 July. Phytotoxicity to the creeping bentgrass was rated on seven dates throughout the summer.

Results

- Acclaim Extra 0.57 EW applied four times at 0.125 lbs ai/A and Turflon Ester 4L applied four times at 1.0 lbs ai/A caused the most phytoxicity damage to the creeping bentgrass.
- Turflon Ester 4L applied four times at 1.0 lbs ai/A caused the most thinning of the creeping bentgrass.
- Multiple application of Acclaim Extra and Turflon Ester did not control the creeping bentgrass. By late Sep, the creeping bentgrass recovered all density and there were no differences among herbicide treatments and the untreated check.
- At this time it appears that the herbicides used in this experiment will not selectively control creeping bentgrass.

Table 1. Phytotoxicity to creeping bentgrass turf following application of herbicide treatments.

Treatment	Rate of application	Application timing[b]	Phytotoxicity[a] 14 June	18 June	30 June	15 July	29 July	10 Aug	24 Aug
	lbs ai/A								
Barricade 65WG	0.65	0	9.0	9.0	9.0	8.7	9.0	9.0	9.0
Barricade 65WG	1.0	0	9.0	8.7	9.0	8.3	9.0	9.0	9.0
Acclaim Extra 0.57EW	0.125	0, 2, 4, 6	6.7	6.0	4.3	5.0	3.7	5.3	6.0
Daconate 6 6L	2.0	0, 2, 4, 6	7.7	8.0	8.7	7.0	6.0	8.0	8.7
Turflon Ester 4L	1.0	0, 2, 4, 6	6.3	6.3	4.0	2.3	2.0	2.7	3.0
2,4-D 3.8L	1.4	0, 2, 4, 6	9.0	8.7	9.0	8.3	9.0	8.3	8.7
Poast Plus 1L	0.094	0	6.3	6.0	8.0	9.0	9.0	9.0	9.0
Poast Plus 1L	0.19	0	5.0	5.0	7.7	8.3	9.0	9.0	9.0
Check	---		9.0	9.0	9.0	8.7	9.0	9.0	9.0
LSD (0.05)			0.7	1.0	0.5	1.1	0.3	0.5	1.2

[a] Phytotoxicity was rated on a scale of 1 - 9 where 1 = completely brown turf, 7 = acceptable damage, and 9 = no phytotoxicity.

[b] Denote number of weeks after initial application that subsequent applications were made.