

Preemergence Crabgrass Control - 1998

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Objective

Our objective was to determine the effectiveness of commercially available and experimental preemergence herbicides to control crabgrass.

Rationale

Crabgrass is one of the most common weeds invading turfgrass stands in Indiana. Turfgrass managers frequently use preemergence herbicides to control crabgrass. New preemergence herbicides for crabgrass control are being developed and refinements are continually being made to currently used preemergence herbicides. It is important that new herbicides and improved herbicides are evaluated under Indiana growing conditions so we can determine how effectively they control crabgrass.

How It Was Done

A stand of Kentucky bluegrass turf at the William H. Daniel Turfgrass Research and Diagnostic Center was overseeded with crabgrass in Oct 1997 and selected as the site for this experiment. The turf was mowed twice each week at 2 inches with clippings returned. No fertilizer was applied during the course of the experiment unless fertilizer was the carrier for a granular preemergence herbicide. Turf was irrigated to prevent any sign of drought stress. The initial date of herbicide application was 22 Apr 1998 for all treatments and for those treatments with a split (sequential) application, the split application was made on 17 June 1998. Sprayable formulations were applied using a three nozzle hand held boom in 4 gals of water per 1000 sq ft. Granular products were applied using a hand shaker jar. Data collected were phytotoxicity to the Kentucky bluegrass turf and a visual rating of percent of the plot covered by crabgrass on 1 Aug and 4 Sep 1998.

Results

- None of the herbicide treatments caused any phytotoxicity damage to the Kentucky bluegrass turf.
- The untreated check had 3.7% crabgrass cover on 4 Sep 1998 (Table 1).
- Due to the low crabgrass population there were no difference in percent crabgrass cover among herbicide treatments.

Table 1. Crabgrass cover following the application of commercially available and experimental preemergence herbicides.

Treatment	Application rate lbs ai/A	Crabgrass cover ^a	
		1 Aug	4 Sep
Check	---	4.0	3.7
Team Pro on fert 0.86G	1.5	0.3	0.7
Team Pro on fert 0.86G ^b	1.5		
Team Pro on fert 0.86G	2.0	0.3	1.0
Pendimethalin on fert 0.86G	1.5	0.3	0.7
Pendimethalin on fert 0.86G ^b	1.5		
Pendimethalin on fert 0.86G	2.0	2.0	2.3
Dimension on fert 0.1G	0.38	2.3	0.7
Barricade on fert 0.22G	0.5	3.0	3.0
Dimension 1EC	0.25	1.0	1.7
AND 444 0.072G	0.125	1.7	1.7
AND 445 0.164G	0.25	2.3	1.7
Pendimethalin 60WDG	3.0	1.3	1.3
Barricade 65WG	0.5	0.0	0.0
Dimension 1EC	0.5	0.7	0.7
Ronstar 2G	3.0	1.7	0.7
Team 2G	3.0	2.3	2.7
Barricade 65WG	0.65	0.7	1.0
Pendulum 2G	2.0	3.7	1.3
Pendulum 2G	3.0	0.7	0.7
Pendulum 2G	1.5	1.7	0.3
Pendulum 2G ^b	1.5		
Pendulum 60DG	2.0	1.0	1.3
Pendulum 60DG	3.0	1.7	1.0
Pendulum 60DG	1.5	1.0	0.3
Pendulum 60DG ^b	1.5		
LSD (0.05)		NS	NS

^a Visual rating of percent of plot covered by crabgrass.

^b Denotes treatments with a split application with the first application made on 22 Apr and the second application on 17 June.