

***Poa trivialis* Control with Several Herbicide Application Programs**

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Objective

Our objective was to determine the efficacy of two herbicides and several application timings for control of *Poa trivialis*.

Rationale

Poa trivialis has become a wide spread weed in creeping bentgrass fairways across Indiana and the Midwest. Currently, there are no selective pesticidal controls of *Poa trivialis* available. Cultural control techniques alone have not provided satisfactory results. This research was undertaken in an attempt to identify commercially available herbicides that may have the potential to control *Poa trivialis*.

How It Was Done

Poa trivialis variety Sabre was seeded on 3 Sep 1997 in a silt loam soil at the W.H. Daniel Turfgrass Research and Diagnostic Center at the rate of 2 lbs seed per 1000 sq. ft. A starter fertilizer was applied immediately prior to seeding at the rate of 0.5 lbs N, 1.5 lbs P₂O₅, and 1.0 lbs K₂O per 1000 sq. ft. Mowing height was gradually reduced until the experimental site was mowed at 0.75 inches three times per week. Turf was irrigated to prevent any sign of drought stress. No pesticides were applied except as experimental treatments. The initial date of treatment application was 20 Apr 1999 and some treatments were reapplied every three weeks until 15 Sep. All treatments were applied using a CO₂ powered hand-held spray boom in 2 gal water per 1000 sq. ft. Data collected were percent of plot area covered by *Poa trivialis*.

Results

- Hot weather in July caused the *Poa trivialis* stand to decline to the point where the untreated check had only 38.8% cover by *Poa trivialis* (Table 1).
- *Poa trivialis* recovered very well with the return of cooler weather in fall.
- Prograss applied at 1.5 lbs ai/A with or without the addition of iron and nitrogen reduced the percent cover by *Poa trivialis* on 25 Aug and 15 Sep.
- After the last Prograss application on 15 Sep the *Poa trivialis* recovered rapidly in the treated plots.
- It appears that for Prograss to be effective in controlling *Poa trivialis*, it would need to be applied later into the fall and early winter than was done in this experiment.

Table 1. Percent cover of *Poa trivialis* following postemergence herbicide applications.

Treatment	Rate of application	Application timing ^b	<i>Poa trivialis</i> cover ^a									
			11 May 1999	3 Jun 1999	21 Jun 1999	13 Jul 1999	3 Aug 1999	25 Aug 1999	15 Sep 1999	12 Oct 1999	2 Dec 1999	19 Apr 2000
	lbs ai/A	weeks	percent									
Check	---		96.8	98.3	97.8	93.0	38.8	68.8	92.5	93.8	97.5	99.5
Prograss 1.5EC	0.75	0, 3, 6, 9, 12, 15, 18, 21	97.8	99.5	97.8	79.8	18.3	42.5	83.8	90.8	95.8	99.3
Prograss 1.5EC + Urea	0.75 4.356	0, 3, 6, 9, 12, 15, 18, 21	97.5	99.8	97.8	86.5	27.5	52.5	82.5	92.5	96.5	99.3
+ Sprint 330 10WP	1.0											
Prograss 1.5EC	1.5	0, 3, 6, 9, 12, 15, 18, 21	97.8	99.5	98.3	89.0	21.3	28.8	56.3	70.0	81.8	93.3
Prograss 1.5EC + Urea	1.5 4.356	0, 3, 6, 9, 12, 15, 18, 21	97.8	99.9	97.8	79.0	19.3	27.0	47.5	65.0	77.5	86.3
+ Sprint 330 10WP	1.0											
Drive 75DF	0.75	0	95.5	98.3	97.5	93.0	28.8	56.3	82.5	90.8	97.0	99.5
+ methylated seed oil	1.0 ^c											
Drive 75DF + BAS 090 02 S	0.75 1.0 ^d	0	95.5	98.3	98.5	94.5	33.8	65.0	87.5	93.0	97.3	99.0
LSD (0.05)			1.2	0.8	NS	NS	NS	29.8	26.2	NS	NS	NS

^a Percent of plot area covered by *Poa trivialis*.

^b Denotes weeks when applications were made.

^c Denotes application rate of volume per volume.

^d Denotes application rate of quarts per acre.