

2006-01-A7-09: Poa trivialis control in Kentucky bluegrass with Certainty herbicide
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Background/Objective: *Poa trivialis* infests Kentucky bluegrass fairways and roughs, including athletic fields, landscapes, sod production, and home lawns. Previous Monsanto and university trials showed excellent postemergent suppression and/or control of *Poa trivialis* with Certainty herbicide. The objective of this study is to demonstrate *Poa trivialis* control and safety to Kentucky bluegrass from single and/or sequential applications of Certainty herbicide.

Site Information

Location:	William H. Daniel Research and Diagnostic Center
Soil Type:	Starks-Fincastle silt loam
Soil pH:	7.2
Turfgrass Species:	Kentucky bluegrass blend
Turf Condition:	good
Turf Management: Mowing Height cm (in):	6.4 (2.5)
Fertilization:	1 lb N/M/YR
Irrigation:	To prevent moisture stress
Testing on Site Previous Year:	none
Target Pest:	'Sabre II' <i>Poa trivialis</i> (<i>Poa trivialis</i>)
Growth Stage:	mature

Application Information

Application Date:	6 June	28 June
Application Time:	10:00 am	9:30 am
Air Temperature C⁰(F⁰):	25.6 (78)	22 (72)
Relative Humidity(%):	42	66
Wind Speed m s⁻¹ (mph):	1.3 (3)	1.8 (4)
Soil Temperature(7.6 cm depth) C⁰(F⁰):	22 (72)	21.1 (70)
Soil Moisture:	moist	moist
Spray Volume L ha⁻¹ (gal 1000 ft⁻²):	814 (2)	
Spray Pressure:	30psi	
Spray Nozzle:	8001.5	
Spray Equipment:	CO ₂ backpack	
Irrigation After Application:	None	
Experimental Design:	Randomized complete block	
Replications:	3	
Plot Size m (ft):	1.5 X 1.5 (5 X 5)	

Results:

- This study was applied to two separate turf stands of 100% Kentucky bluegrass or 100% Sabre II poa trivialis, both mowed at 2.5 inches.
- The sequential application of Certainty increased injury on Poa trivialis compared to the check on 30 June (Table 1).
- The sequential application of Certainty increased injury on Poa trivialis compared to the check and the single application of Certainty on 7 Aug.
- The Poa trivialis succumbed to summer stress by the 2nd of August and even though the Certainty treatments numerically increased injury and decreased cover, the changes were not statistically significant.
- Both Certainty applications caused slight and short-lasting injury to Kentucky bluegrass on 20 June (Table 2).

Table 1. Injury to and percent cover of Sabre II Poa trivialis after applications of Certainty.

Treatment	Rate of application	Injury ^a			Cover ^b	
		30 June	7 July	2 Aug	2 Aug	18 Sept
	a.i./A				%	
Certainty ^c	0.0234	8.3	8.0	3.7	0.7	11.7
Certainty	0.0234	7.3	4.3	3.7	0.3	3.3
Certainty ^d	0.0234					
Check		9.0	9.0	9.0	16.0	20.0
LSD (0.05)		1.2	2.2	NS	NS	NS

^a Injury was rated on a scale of 1 to 9 with 1 = totally brown turf, 7 = acceptable injury, and 9 = no injury.

^b Percent of the plot area covered by Poa trivialis.

^c Certainty applications included NIS at 0.25% v/v.

^d Indicates a split application with the second application being 3 weeks later.

Table 2. Injury to and percent cover of Kentucky bluegrass after applications of Certainty.

Treatment	Rate of application	Injury ^a		Cover ^b
		20 June	7 July	2 Aug
	a.i./A			% ^b
Certainty ^c	0.0234	7.7	8.3	97.7
Certainty	0.0234	8.0	7.3	96.3
Certainty ^d	0.0234			
Check		9.0	9.0	98.7
LSD (0.05)		0.8	NS	NS

^a Injury was rated on a scale of 1 to 9 with 1 = totally brown turf, 7 = acceptable injury, and 9 = no injury.

^b Percent of the plot area covered by Kentucky bluegrass.

^c Certainty applications included NIS at 0.25% v/v.

^d Indicates a split application with the second application being 3 weeks later.