

**Evaluation of MON 44951 75WDG and other Potential *Poa trivialis* Herbicides  
Applied Spring to Summer for Safety to Creeping Bentgrass**  
Zac Reicher and Dan Weisenberger

**Background/Objective**

Determine the safety of MON 44951 75WDG and other potential *Poa trivialis* controls to creeping bentgrass from single and/or sequential applications.

**Site Information**

<b>Location:</b>	William H. Daniel Research and Diagnostic Center, W. Lafayette, IN.
<b>Soil Type:</b>	Starks-Fincastle silt loam
<b>Soil pH:</b>	7.0
<b>Soil Organic Matter (%):</b>	6.8
<b>Turfgrass Species:</b>	L93 creeping bentgrass
<b>Turf Condition:</b>	Good
<b>Turf Management: Mowing Height cm (in):</b>	1.25 (0.5)
<b>Fertilization:</b>	4 lbs N/M/YR
<b>Irrigation:</b>	To prevent moisture stress
<b>Testing on Site Previous Year:</b>	None
<b>Target Pest:</b>	Phytotoxicity
<b>Growth Stage:</b>	Mature

**Application Information**

<b>Application Date:</b>	18 Apr 3 May 10 May 15 May 31 May 21 June
<b>Spray Volume L ha<sup>-1</sup> (gal 1000 ft<sup>-2</sup>):</b>	407 (1.0)
<b>Spray Pressure:</b>	35psi
<b>Spray Nozzle:</b>	8001
<b>Spray Equipment:</b>	CO <sub>2</sub> backpack
<b>Irrigation After Application:</b>	None
<b>Experimental Design:</b>	Randomized complete block
<b>Replications:</b>	3
<b>Plot Size m (ft):</b>	1.5 X 1.5 (5 X 5)

**Results**

Though many of the treatments caused detectable phytotoxicity, most of the phytotoxicity was still above commercially acceptable levels (rating of 7). Among the single applications, MON 44951 at 0.03 lbs ai/A caused noticeably more phytotoxicity than the other rates of MON 44951, but it was short-lived. Among the repeat applications of MON 44951, two-week intervals produced more phytotoxicity than the three-week applications. All treatments of TranXit caused unacceptable phytotoxicity. By the 29 June, none of the treatments caused noticeable phytotoxicity.

**Table 1.** Phytotoxicity of potential *Poa trivialis* controls to L93 creeping bentgrass.

Treatment	Rate of application	Application <sup>c</sup> timing	Apr 22	Apr 26	May 3	May 7	May 13	May 19	May 23	June 1	June 4	June 12	June 25	June 29
	lbs ai/A													
Check			9.0	9.0	9.0	9.0	8.7	9.0	9.0	9.0	9.0	9.0	9.0	9.0
MON 44951 75WDG + MON 0818	0.01 0.5 <sup>a</sup>	0	9.0	9.0	8.3	8.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0
MON 44951 75WDG + MON 0818	0.02 0.5 <sup>a</sup>	0	9.0	9.0	9.0	7.7	8.3	9.0	8.7	9.0	9.0	9.0	9.0	9.0
MON 44951 75WDG + MON 0818	0.03 0.5 <sup>a</sup>	0	9.0	9.0	8.0	7.3	8.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0
MON 44951 75WDG + MON 0818	0.01 0.5 <sup>a</sup>	0, 2	9.0	9.0	9.0	7.3	7.3	8.0	8.3	9.0	9.0	9.0	9.0	9.0
MON 44951 75WDG + MON 0818	0.01 0.5 <sup>a</sup>	0, 2, 4	9.0	9.0	9.0	6.7	7.3	7.0	5.7	7.0	8.7	8.7	9.0	9.0
MON 44951 75WDG + MON 0818	0.01 0.5 <sup>a</sup>	0, 2, 4, 6	9.0	9.0	8.7	6.7	7.3	7.3	6.3	7.3	7.3	8.0	9.0	9.0
MON 44951 75WDG + MON 0818	0.01 0.5 <sup>a</sup>	0, 3	9.0	9.0	8.7	8.0	8.0	8.3	8.0	9.0	9.0	9.0	9.0	9.0
MON 44951 75WDG + MON 0818	0.01 0.5 <sup>a</sup>	0, 3, 6	9.0	9.0	9.0	8.0	8.0	8.0	8.0	9.0	9.0	8.7	9.0	9.0
MON 44951 75WDG + MON 0818	0.01 0.5 <sup>a</sup>	0, 3, 6, 9	9.0	9.0	8.7	8.0	8.0	8.7	8.3	8.7	8.7	8.7	8.0	9.0
TranXit 25DF + NIS	1/16 <sup>b</sup> 0.25 <sup>a</sup>	0, 3, 6	9.0	9.0	8.0	6.0	6.0	5.0	5.3	8.0	8.0	7.7	9.0	9.0
TranXit 25DF + NIS	1/8 <sup>b</sup> 0.25 <sup>a</sup>	0, 3, 6	9.0	9.0	7.7	6.0	5.7	4.7	4.0	6.3	6.0	7.0	9.0	9.0
TranXit 25DF + NIS	1/4 <sup>b</sup> 0.25 <sup>a</sup>	0, 6	9.0	9.0	8.0	5.7	6.7	7.7	8.3	9.0	8.3	5.3	9.0	9.0
Prograss	0.75	0	9.0	9.0	8.7	8.7	8.3	8.7	8.7	9.0	9.0	9.0	9.0	9.0
LSD (0.05)			NS	NS	0.9	1.2	0.9	0.7	1.0	0.7	0.8	0.7	0.7	NS

<sup>a</sup> Application rate is percent volume per volume.

<sup>b</sup> Application rate is ounces of product per acre.

<sup>c</sup> Application timing is weeks after initial application and initial application was 18 Apr.

<sup>d</sup> Phytotoxicity was rated on a scale of 1 – 9 where 1 = completely brown, 7 = acceptable damage, and 9 = no phytotoxicity.