

Certainty or Velocity to control seedling *Poa trivialis* in seedling creeping bentgrass: Fall applications

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Background/Objective: To evaluate various rates and application timings of Velocity and Certainty on control of seedling *Poa trivialis* and safety on seedling creeping bentgrass.

Rationale: *Poa trivialis* is a difficult to control perennial grassy weed throughout the eastern Midwest in lawns, athletic fields and golf course fairways. Control of *Poa trivialis* using Velocity or Certainty has proven highly variable and may be dependant on many factors including temperature, mowing height, cultivar, as well as rate and frequency of herbicide application. Controlling *Poa trivialis* at the seedling stage using these products may reduce and/or eliminate many of these contributing factors to variable control while also allowing for the use of lower rates and fewer applications thus reducing creeping bentgrass injury and cost.

Site Information

Location:	William H. Daniel Research and Diagnostic Center
Soil Type:	Starks-Fincastle silt loam
Soil pH:	7.2
Turfgrass Species:	Creeping bentgrass and Rough bluegrass
Turf Condition:	seedling
Turf Management:	Mowing Height cm (in): 1.25 (.5) approximately
	Fertilization: 0.5 lb N (starter fertilizer, 2 apps)
	Irrigation: To prevent moisture stress
Testing on Site Previous Year:	none
Target Pest:	Rough bluegrass
Growth Stage:	Seedling

Application Information

Application Date:	16 Aug (07)	23 Aug	29 Aug	5 Sep
Application Time:	8:30 a.m.	7:00 a.m.	3:00 p.m.	2:00 p.m.
Air Temperature C^o(F^o):	22 (71)	23 (73)	36 (96)	34 (92)
Relative Humidity(%):	94	88	74	24
Wind Speed m s⁻¹ (mph):	0.44 (1.0)	.88 (2.0)	.88 (2.0)	2.2 (5.0)
Soil Temperature(7.6 cm depth) C^o(F^o):	23 (74)	23 (74)	33 (92)	30 (86)
Soil Moisture:	moist	moist	dry	dry
Spray Volume L ha⁻¹ (gal 1000 ft⁻²):	407 (1)			
Spray Pressure:	30psi			
Spray Nozzle:	8001			
Spray Equipment:	CO ₂ backpack			
Irrigation After Application:	None			
Experimental Design:	Randomized complete block			
Replications:	3			
Plot Size m (ft):	1.0 X 1.0 (3.3 X 3.3)			

This study was designed as a 2 X 5 X 4 factorials with two herbicides (Certainty and Velocity) applied at five rates each, on 4 dates after emergence (1, 2, 3 and 4 weeks after emergence – WAE). Separate but adjacent studies were used for 'Laser' *Poa trivialis* and 'L93' creeping bentgrass. This study will be repeated in 2008, thus full statistical analysis has not been completed and simple means are presented.

Results:

- Velocity applied one WAE provided excellent control of *Poa trivialis* (especially at the higher rates) while producing minimal to no damage to creeping bentgrass (Figure 1).
- Though Certainty provided excellent control of *Poa trivialis* when applied one WAE, it damaged creeping bentgrass significantly. Certainty applied at four WAE was much safer on creeping bentgrass while still providing acceptable control of *Poa trivialis*.
- Though multiple applications were not examined in this study, our previous work suggests that multiple applications of Velocity or Certainty improve control over single applications and might be considered to improve control.
- Both herbicides show tremendous promise in reducing or eliminating seedling *Poa trivialis* in seedling creeping bentgrass, thereby reducing long-term maintenance inputs from *Poa trivialis* contamination.

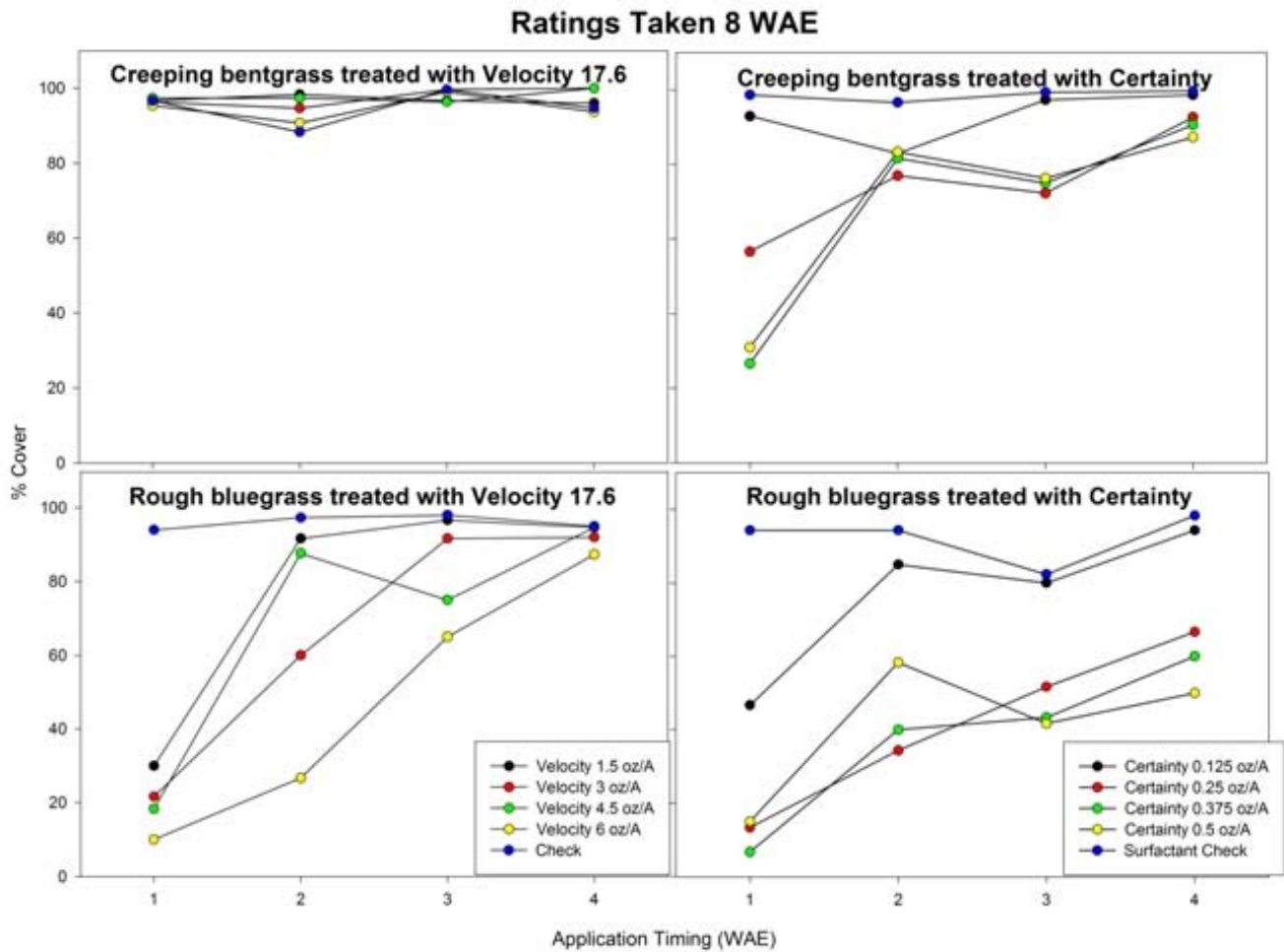


Figure 1. Effect of Velocity 17.6 or Certainty when applied to stands of seedling *Poa trivialis* or creeping bentgrass at various times after emergence. Data presented were taken 8 weeks after emergence.