

## Two applications of Certainty or Velocity to control seedling *Poa trivialis* in seedling creeping bentgrass

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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.

### Site Information

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

### Application Information

<b>Application Date:</b>	29 May (08)	5 June	12 June	19 June
<b>Application Time:</b>	8:00 a.m.	9:00 a.m.	8:00 a.m.	8:30 a.m.
<b>Air Temperature (F°):</b>	72	75	73	65
<b>Relative Humidity(%):</b>	33	60	70	62
<b>Wind Speed (mph):</b>	0.5	1.0	1.0	1.0
<b>Soil Temperature(3.0 in depth) (F°):</b>	65	69	70	66
<b>Soil Moisture:</b>	dry	moist	moist	dry
	26 Aug	2 Sep	16 Sep	29 Sep
	3:30 p.m.	1:30 p.m.	12:30 p.m.	8:00 a.m.
	76	87	69	50
	48	68	66	99
	6.0	2.0	5.0	1.0
	82	85	70	60
	moist	moist	moist	moist
<b>Spray Volume (gal 1000 ft<sup>-2</sup>):</b>	1			
<b>Spray Pressure:</b>	30psi			
<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 (ft):</b>	3.3 X 3.3			

This study was designed to answer questions that arose from two other studies entitled “Certainty or Velocity to control seedling *Poa trivialis* in seedling creeping bentgrass (Spring 2008 and Fall 2008)”. The two previous studies determined how soon single applications of Certainty or Velocity may safely be applied to seedling creeping bentgrass. This study addresses that complete control may not be achieved after only one application and therefore, the effect of multiple applications of Certainty and Velocity on seedling creeping bentgrass and *Poa trivialis* was evaluated. The study consisted of six treatments made up of different combinations of application timings and rates of Velocity and Certainty. Treatments were developed based on the most effective treatments from the two previous studies.

#### Treatments:

##### 2007:

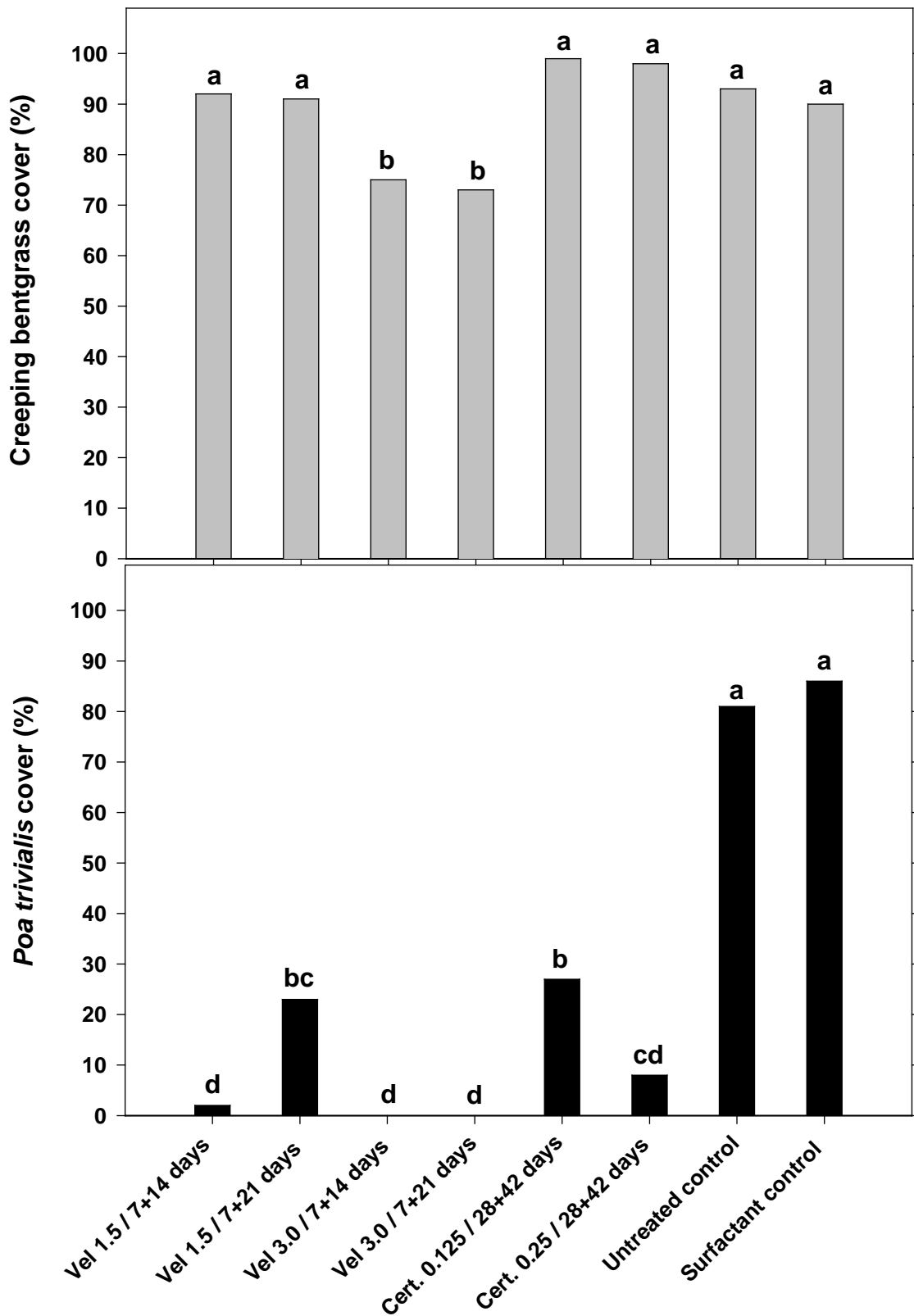
- Velocity 17.6 SG at 1.5 oz/A applied 7 + 14 days after emergence (DAE)
- Velocity 17.6 SG at 1.5 oz/A applied 7 + 21 DAE
- Velocity 17.6 SG at 3.0 oz/A applied 7 + 14 DAE
- Velocity 17.6 SG at 3.0 oz/A applied 7 + 21 DAE
- Certainty at 0.125 oz/A applied 28 + 42 DAE + 0.25% NIS
- Certainty at 0.25 oz/A applied 28 + 42 DAE + 0.25% NIS
- Untreated control
- Surfactant control (0.25% NIS)

##### 2008:

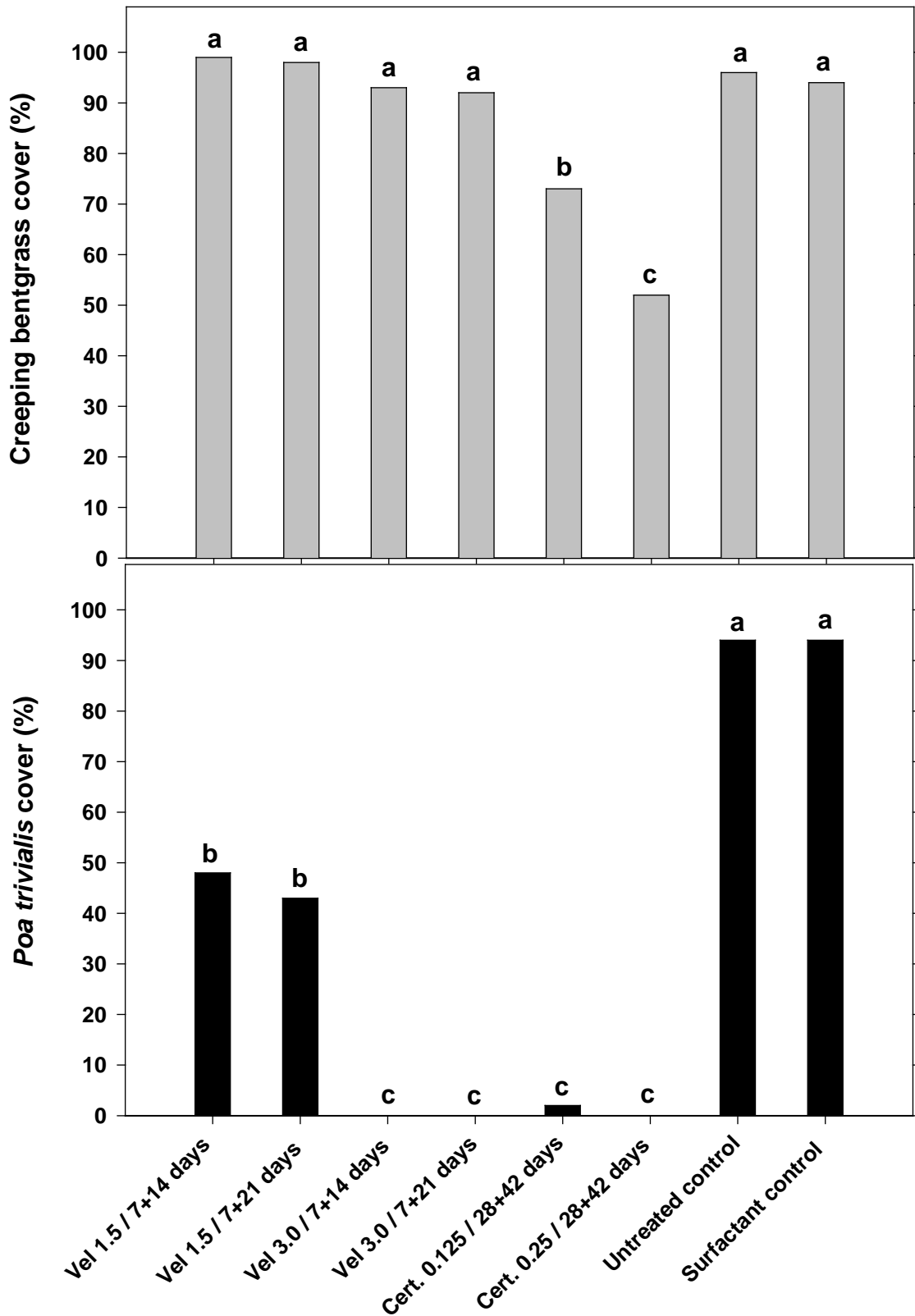
- Velocity 17.6 SG at 1.5 oz/A applied 7 + 14 DAE
- Velocity 17.6 SG at 1.5 oz/A applied 7 + 21 DAE
- Velocity 17.6 SG at 3.0 oz/A applied 7 + 14 DAE
- Velocity 17.6 SG at 3.0 oz/A applied 7 + 21 DAE
- Certainty at 0.125 oz/A applied 14 + 28 DAE + 0.25% NIS
- Certainty at 0.25 oz/A applied 14 + 28 DAE + 0.25% NIS
- Untreated control
- Surfactant control (0.25% NIS)

#### Results:

- In spring, Velocity applied at 3.0 oz/A at 7 + 14 DAE or 7 + 21 DAE reduced creeping bentgrass cover more than all other treatments, (Fig 1).
- Velocity applied in spring at 1.5 oz/A 7 + 14 DAE resulted in better *Poa trivialis* control than when applied at 1.5 oz/A 7 + 21 DAE and equal to Velocity at 3.0 oz/A or Certainty at 0.25 oz/A 28 & 42 DAE (Fig 1).
- Certainty treatments applied in fall resulted in creeping bentgrass cover reductions (Note: Certainty treatments applied in fall were applied on 14 + 28 day intervals instead of 28 + 42 day intervals as in spring) (Fig 1 and 2).
- Velocity applied at 3.0 oz/A in fall provided complete *Poa trivialis* control while not causing any reduction in creeping bentgrass cover (Fig 2).



**Figure 1.** Effect of two applications of Velocity 17.6 SG or Certainty applied to stands of seedling *Poa trivialis* or creeping bentgrass in spring 2008 at various days after emergence (DAE). Data presented were collected eight weeks after emergence.



**Figure 2.** Effect of two applications of Velocity 17.6 SG or Certainty applied to stands of seedling *Poa trivialis* or creeping bentgrass in fall 2008 at various days after emergence (DAE). Data presented were collected eight weeks after emergence.