

## **Velocity and Certainty Combined With Overseeding Creeping Bentgrass for Conversion on Fairways**

**Debbie Morton and Zac Reicher**

### **Objective:**

Determine the most effective strategy for conversion of *Poa trivialis* infested areas to creeping bentgrass.

### **Rationale:**

*Poa trivialis* is now a problematic weed on golf courses, home lawns and athletic fields from the Midwest to the Mid-Atlantic states. *Poa trivialis* has poor drought and heat tolerance, thus turf areas with substantial roughstalk bluegrass populations thin in late summer, decreasing aesthetic and functional quality. Herbicide control is important since management of *Poa trivialis* does not seem practical to date. Two promising selective herbicides for *Poa trivialis* control are Certainty and Velocity. Both herbicides are labeled for selective postemergence control of *Poa trivialis*. Once *Poa trivialis* is removed from an area through herbicide use, reseeding of the desired turf species is necessary. Control of *Poa trivialis* must be combined with overseeding creeping bentgrass for long term success.

### **Materials and Methods:**

Treatments were initiated in June 2006 at the W.H. Daniel Turfgrass Research and Diagnostic Center, West Lafayette, IN, on a stand of 'Laser' *Poa trivialis* with a minor (<5%) contamination of creeping bentgrass.. Treatments were arranged in a split plot design with herbicide applications as main plots and overseeding as subplots. Initial applications for each treatment were based on the reseeding date, August 10, 2006 and the final application for each treatment was two weeks before reseeding. Four Certainty treatments, three Velocity treatments and an untreated check were included (Table 1). All Certainty treatments included MON 0818 surfactant at 0.25% v/v. Treatments were applied at 2 gal/water/1000 ft<sup>2</sup>. Eight weeks after initial treatment (WAIT), each main plot was split into two sub-plots. One sub-plot received creeping bentgrass seed at 1 lb/1000 ft<sup>2</sup> and the other received no seed. *Poa trivialis* and creeping bentgrass cover was rated visually as a percentage of cover in each plot. Phytotoxicity was also rated every week on a scale of 9 to 1 where 9=no phytotoxicity, 7=acceptable, and 1=brown. Herbicide treatments were repeated on L93 creeping bentgrass to monitor potential phytotoxicity.

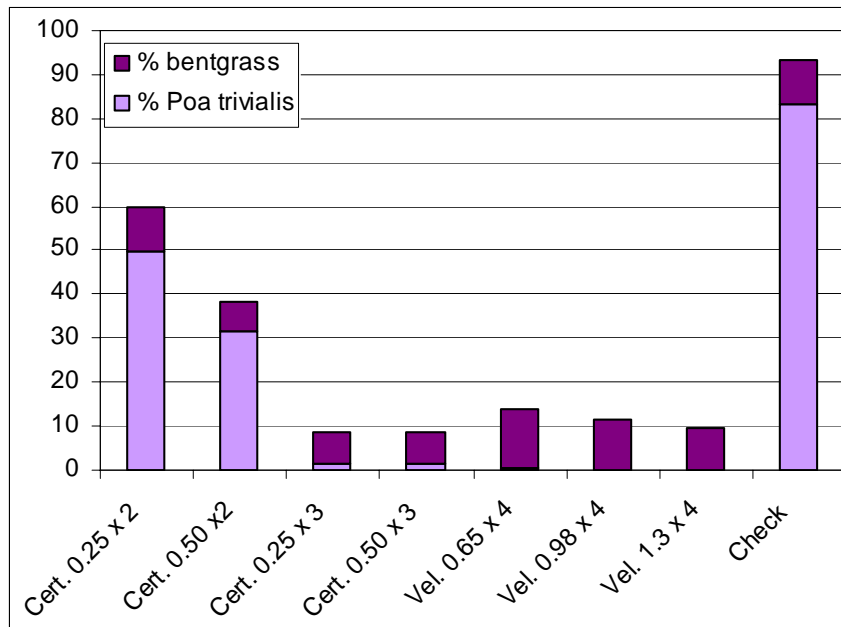
### **What we know so far:**

- 8 WAIT, Certainty at 0.25 and 0.50 oz/A applied three times and all Velocity treatments reduced the *Poa trivialis* populations to less than 2% (Figure 1).
- By 16 WAIT (8 weeks after seeding), plots that received Certainty at 0.50 oz/A applied three times or Velocity at all three rates had less than 7% *Poa trivialis* cover. Plots that had received 0.25 oz/A applied three times had recovered and had about 60% cover in the seeded and unseeded sub-plots (Figure 2).
- 22 WAIT (14 weeks after seeding), plots that had received creeping bentgrass seed and the highest rate of Certainty applied three times or the two highest rates of Velocity, suppressed the *Poa trivialis* to less than 12% cover while increasing the creeping bentgrass cover to greater than 75% (Figure 3).

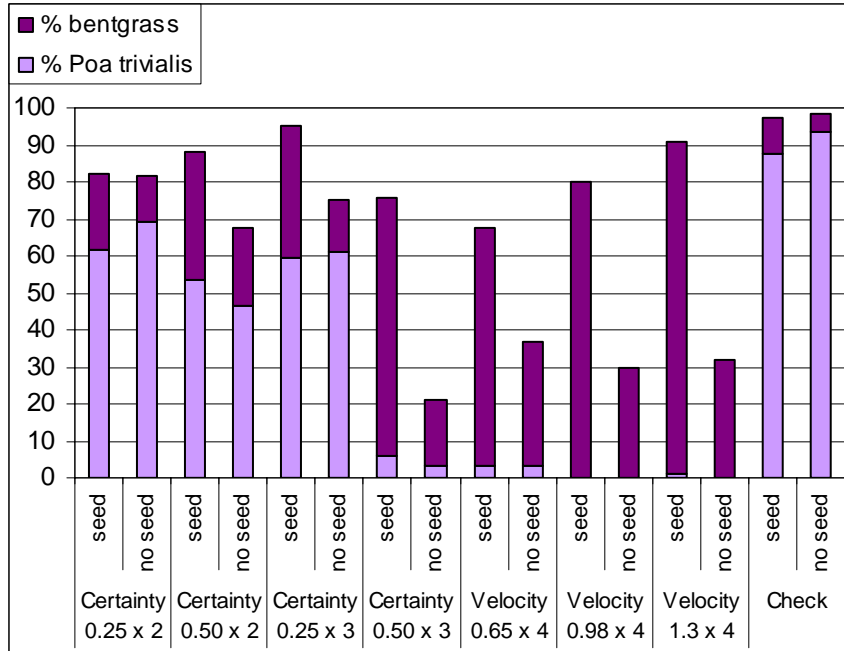
- Certainty and Velocity both caused minor phytotoxicity on 'L93' creeping bentgrass, but it was within acceptable levels. There was no reduction in the percent cover of the creeping bentgrass.

**Table 1.** Treatment list

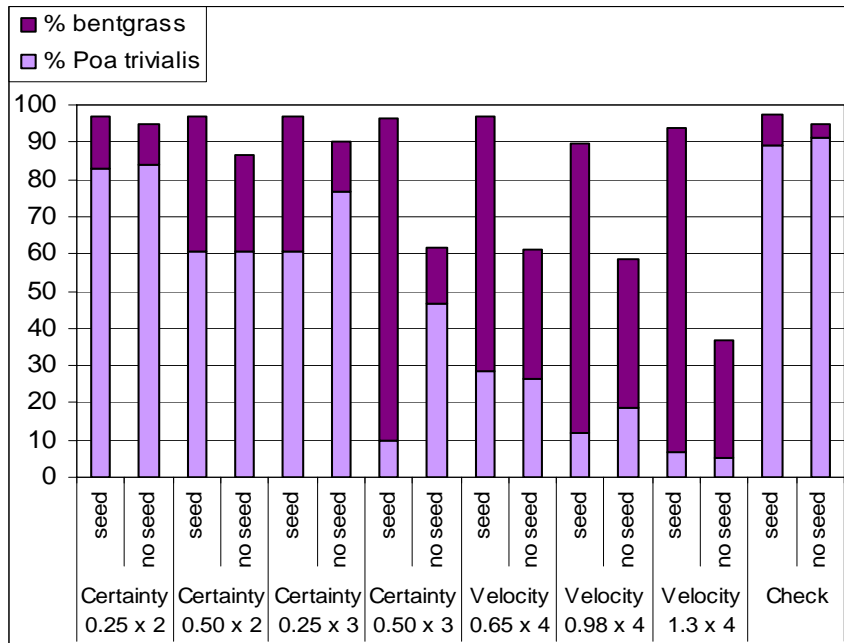
Herbicide	Rate and Interval	Application Dates
Certainty	0.25 + 0.25 oz/A on 2 week interval	7/13, 7/27
Certainty	0.50 + 0.50 oz/A on 2 week interval	7/13, 7/27
Certainty	0.25 + 0.25 + 0.25 oz/A on 2 week interval	6/29, 7/13, 7/27
Certainty	0.50 + 0.50 + 0.50 oz/A on 2 week interval	6/29, 7/13, 7/27
Velocity	0.65 + 0.65 + 0.65 + 0.65 oz/A on 2 week interval	6/15, 6/29, 7/13, 7/27
Velocity	0.98 + 0.98 + 0.98 + 0.98 oz/A on 2 week interval	6/15, 6/29, 7/13, 7/27
Velocity	1.3 + 1.3 + 1.3 + 1.3 oz/A on 2 week interval	6/15, 6/29, 7/13, 7/27
Check	--	--



**Figure 1.** Percent cover of creeping bentgrass and *Poa trivialis* as affected by Certainty and Velocity 8/11/06 (8 WAIT)



**Figure 2.** Percent cover of creeping bentgrass and *Poa trivialis* after seeding creeping bentgrass, as affected by Certainty and Velocity 10/5/06 (8 weeks after seeding).



**Figure 3.** Percent cover of creeping bentgrass and *Poa trivialis* after seeding creeping bentgrass, as affected by Certainty and Velocity 11/17/06 (14 weeks after seeding).