**2006-01-A7-10: Poa trivialis control in creeping bentgrass with Certainty herbicide**
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**Background/Objective:** Poa trivialis infestations have been reported in bentgrass fairways, tees, and greens in various golf course in the cool season turf states of the US. The infestations have been alleged to come from contamination of seed sources used in overseeding or renovation of golf course turf. Previous Monsanto and university trials showed excellent postemergent suppression and/or control of Poa trivialis with Certainty herbicide. Rate of 0.25 – 0.75 oz product/A provided commercial control of Poa trivialis with acceptable overall early injury to creeping bentgrass which was outgrown by the turf. 2003 strip trials confirmed these results. In 2004, Certainty herbicide was evaluated in commercial trials at 0.25 oz product/A/application, with successful and commercial reduction or control of Poa trivialis. The objective is to demonstrate Poa trivialis control and safety to creeping bentgrass 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:** | | 'Penncross' creeping bentgrass |
| **Turf Condition:** | | good |
| **Turf Management:** | **Mowing Height cm (in):** | 1.3 (0.5) |
| | **Fertilization:** | |
| | **Irrigation:** | To prevent moisture stress |
| **Testing on Site Previous Year:** | | none |
| **Target Pest:** | | 'Laser' Poa trivialis (*Poa trivialis*) |
| **Growth Stage:** | | mature |

**Application Information**

| | | |
|---|---|---|
| **Application Date:** | 6 June | 28 June |
| **Application Time:** | 10:00 am | 9:30 am |
| **Air Temperature $C^o(F^o)$:** | 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) $C^o(F^o)$:** | 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% Penncross creeping bentgrass or 100% Lazer Poa trivialis, both mowed at 0.5 inches.
- Certainty had no effect on Lazer Poa trivialis (Table 1), which was expected because our current and previous data show good tolerance of Lazer to Certainty.
- The sequential application of Certainty increased minor injury to Penncross creeping bentgrass on 7 July (Table 2).

**Table 1.** Injury to and percent cover of Lazer Poa trivialis after applications of Certainty.

| | | Injury[a] | | Cover[b] |
|---|---|---|---|---|
| Treatment | Rate of application | 20 June | 7 July | 2 Aug |
| | a.i./A | | | % |
| Certainty[c] | 0.0117 | 9.0 | 9.0 | 94.0 |
| Certainty | 0.0117 | 9.0 | 9.0 | 85.0 |
| Certainty[d] | 0.0117 | | | |
| Certainty | 0.0234 | 9.0 | 9.0 | 95.0 |
| Check | | 9.0 | 9.0 | 91.7 |
| LSD (0.05) | | 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] Applications of Certainty included NIS at 0.25% v/v.
[d] Indicates a split application with the second application being 3 weeks later.

**Table 2.** Injury[a] to Penncross creeping bentgrass after applications of Certainty.

| Treatment | Rate of application | 30 June | 7 July |
|---|---|---|---|
| | a.i./A | | |
| Certainty[b] | 0.0117 | 9.0 | 9.0 |
| Certainty | 0.0117 | 8.0 | 7.3 |
| Certainty[c] | 0.0117 | | |
| Certainty | 0.0234 | 8.7 | 9.0 |
| Check | | 9.0 | 9.0 |
| LSD (0.05) | | 0.6 | 0.6 |

[a] Injury was rated on a scale of 1 to 9 with 1 = totally brown turf, 7 = acceptable injury, and 9 = no injury.
[b] Applications of Certainty included NIS at 0.25% v/v.
[c] Indicates a split application with the second application being 3 weeks later.