Background/Objective: Tall fescue is a weed problem infesting Kentucky bluegrass fairways and roughs, athletic fields, landscapes, sod production, and home lawns. Previous Monsanto and university trials showed excellent selective postemergent suppression and/or control of tall fescue with Certainty herbicide. The objective is to demonstrate tall fescue control and safety to Kentucky bluegrass from 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: Kentucky bluegrass blend
Turf Condition: good
Turf Management: Mowing Height cm (in): 6.4 (2.5)
Fertilization: 1 lb N/M/YR
Irrigation: To prevent moisture stress
Testing on Site Previous Year: none
Target Pest: ‘K31’ tall fescue (*Festuca arundinacea*)
Growth Stage: mature

Application Information

Application Date: 6 June 28 June
Application Time: 10:00 am 9:30 am
Air Temperature C°(F°): 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°(F°): 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)

Report:

- This study was applied to two separate turf stands of 100% Kentucky bluegrass or 100% K31 tall fescue, both mowed at 2.5 inches.
- Both Certainty treatments dramatically damaged tall fescue in terms of injury and percent cover (Table 1).
- Though both Certainty treatments caused short term injury to Kentucky bluegrass, neither treatments reduced cover of Kentucky bluegrass (Table 2).
Table 1. Injury to and percent cover of K31 tall fescue after applications of Certainty.

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Rate of application</th>
<th>Injury&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Cover&lt;sup&gt;b&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>a.i./A</td>
<td>30 June</td>
<td>7 July</td>
</tr>
<tr>
<td>Certainty&lt;sup&gt;c&lt;/sup&gt;</td>
<td>0.035</td>
<td>4.0</td>
<td>3.0</td>
</tr>
<tr>
<td>Certainty&lt;sup&gt;d&lt;/sup&gt;</td>
<td>0.035</td>
<td>3.0</td>
<td>2.3</td>
</tr>
<tr>
<td>Check</td>
<td>0.047</td>
<td>9.0</td>
<td>9.0</td>
</tr>
<tr>
<td>Check</td>
<td>0.047</td>
<td>9.0</td>
<td>9.0</td>
</tr>
</tbody>
</table>

LSD (0.05) 1.3 1.8 3.9 9.4

<sup>a</sup> Injury was rated on a scale of 1 to 9 with 1 = totally brown turf, 7 = acceptable injury, and 9 = no injury.
<sup>b</sup> Percent of the plot area covered by tall fescue.
<sup>c</sup> Applications of Certainty included NIS at 0.25% v/v.
<sup>d</sup> Indicates a split application with the second application being 3 weeks later.

Table 2. Injury to and percent cover of Kentucky bluegrass after applications of Certainty.

<table>
<thead>
<tr>
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</tr>
<tr>
<td>Certainty&lt;sup&gt;c&lt;/sup&gt;</td>
<td>0.035</td>
<td>7.7</td>
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<td>7.7</td>
<td>7.0</td>
</tr>
<tr>
<td>Check</td>
<td>0.047</td>
<td>9.0</td>
<td>9.0</td>
</tr>
<tr>
<td>Check</td>
<td>0.047</td>
<td>9.0</td>
<td>9.0</td>
</tr>
</tbody>
</table>

LSD (0.05) NS NS NS

<sup>a</sup> Injury was rated on a scale of 1 to 9 with 1 = totally brown turf, 7 = acceptable injury, and 9 = no injury.
<sup>b</sup> Percent of the plot area covered by Kentucky bluegrass.
<sup>c</sup> Applications of Certainty included NIS at 0.25% v/v.
<sup>d</sup> Indicates a split application with the second application being 3 weeks later.