Key question(s): Is Quali-Pro Prodiamine equal to Barricade as a preemergence herbicide in cool season turf.

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 in: 1
Fertilization: 1 lb N/M/YR
Irrigation: To prevent moisture stress
Testing on Site Previous Year: none
Target Pest: Crabgrass (*Digitaria sp.*)
Growth Stage: preemergence

Application Information

Application Date: 29 Apr 4 Jun
Application Time: 10:00 am 9:30 am
Air Temperature (F₀): 52 58
Relative Humidity(%): 79 68
Wind Speed (mph): 4 2
Soil Temperature(3 in depth) (F₀): 56 62
Soil Moisture: wet moist
Spray Volume (gal 1000 ft⁻²): 2
Spray Pressure: 30psi
Spray Nozzle: 8001.5
Spray Equipment: CO₂ backpack
Irrigation After Application: None
Experimental Design: Randomized complete block
Replications: 3
Plot Size (ft): 5 X 5

Results:

- There were no differences in crabgrass cover among the herbicide treatments on either rating date (Table 1).
- The only differences in crabgrass cover were between the check and herbicides treatments.
- Therefore, Quali-Pro’s prodiamine performed similarly to Barricade, dithiopyr 2EW, and pendimethalin for crabgrass control in this study.
Table 1. Percent crabgrass cover\textsuperscript{a} after preemergence herbicides applied in spring.

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Rate of application</th>
<th>2 Jul</th>
<th>31 Jul</th>
</tr>
</thead>
<tbody>
<tr>
<td>Untreated</td>
<td>0.75</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Quali-Pro prodiamine\textsuperscript{b}</td>
<td>0.75</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Quali-Pro prodiamine\textsuperscript{b}</td>
<td>1.5</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Barricade</td>
<td>0.75</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Barricade\textsuperscript{a}</td>
<td>0.75</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Barricade</td>
<td>1.5</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Pendiimethalin 3.8</td>
<td>1.5\textsuperscript{c}</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Pendiimethalin 3.8\textsuperscript{a}</td>
<td>1.5\textsuperscript{c}</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Pendiimethalin 3.8\textsuperscript{c}</td>
<td>3\textsuperscript{c}</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Dithiopyr 2EW</td>
<td>0.25\textsuperscript{c}</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Dithiopyr 2EW\textsuperscript{a}</td>
<td>0.25\textsuperscript{c}</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Dithiopyr 2EW</td>
<td>0.5\textsuperscript{c}</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>LSD (0.05)</td>
<td>7</td>
<td>8</td>
<td></td>
</tr>
</tbody>
</table>

\textsuperscript{a} Percent of the plot area covered by crabgrass.
\textsuperscript{b} Treatment applied as a split application with second application on 4 June.
\textsuperscript{c} Rate of application was pounds active ingredient per acre.