BLUEGRASS (KENTUCKY): Poa pratensis L.

PREVENTIVE MANAGEMENT OF BLUEGRASS BILLBUG WITH EXPERIMENTAL INSECTICIDE FORMULATIONS, 2002

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Bluegrass billbug (BGB): Sphenophorus parvulus Gyllenhal

This study was undertaken to determine suppression of BGB on turfgrass maintained at Penn State's Valentine Turfgrass Research Center at University Park. The turfgrass area consisted primarily of Kentucky bluegrass (100%). Treatment plots were 5 x 6 ft, arranged in a RCB design and replicated three times with a one ft barrier between treatments and replicates. At treatment time (15 May) the following environmental conditions existed: air temp, 47°F; soil temp at 1 inch depth, 43°F; soil temp at 2 inch, 43 F; RH, 70%; amt of thatch, 1.0 inch; water pH, 7.0; application time, early morning; thatch, moist; soil, wet; and partly clear skies. All treatments were irrigated in with 0.1 inch of water immediately after treatment. The experimental area was irrigated on a regular basis until samples were removed on 2 Jul. General soil conditions were as follows: textural class, silt loam; soil particle analysis, 18.6% sand, 56.1% silt, 25.3% clay; water content (% by wt), 22.4; soil organic matter, 3.7%; CEC (dS/m), 12.5; and soil pH, 7.3. Adult billbugs were actively recovered from pitfall traps positioned at the experimental site prior to treatment on 15 May. Post treatment counts were made on 2 Jul. Two 4 inch cup cutter sod samples were randomly taken from each replicate. The total no. of BGB larvae recovered from two four inch cup cutter sod samples were recorded and converted to a ft$^2$ count. Data was analyzed by using WD ($P \leq 0.05$).

All experimental treatments provided significant reduction of BGB when compared to the untreated check. No phytotoxicity was noted.

<table>
<thead>
<tr>
<th>Treatment/formulation</th>
<th>Rate a lb (Al)/acre</th>
<th>Avg No. BGB larvae/ft$^2$ 2 Jul</th>
<th>% reduction</th>
</tr>
</thead>
<tbody>
<tr>
<td>S10479</td>
<td>–</td>
<td>15.3b (53.1)</td>
<td></td>
</tr>
<tr>
<td>S10480</td>
<td>–</td>
<td>3.8bc (88.3)</td>
<td></td>
</tr>
<tr>
<td>S09892</td>
<td>–</td>
<td>11.5bc (64.7)</td>
<td></td>
</tr>
<tr>
<td>S10455</td>
<td>–</td>
<td>0.0c (100.0)</td>
<td></td>
</tr>
<tr>
<td>S10368</td>
<td>–</td>
<td>7.7bc (76.4)</td>
<td></td>
</tr>
<tr>
<td>Untreated check</td>
<td>–</td>
<td>32.6a</td>
<td></td>
</tr>
</tbody>
</table>

Means followed by the same letter are not significantly different ($P > 0.05$; WD).  
aExperimental formulations and rates.