BENTGRASS (CREEPING): Agrostis palustris Huds

BLACK CUTWORM LARVAL SUPPRESSION WITH CONSERVE SC AND M-PEDE, 2002

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Black cutworm (BCW): Agrotis ipsilon (Huds)

This experiment was completed on a golf course green maintained at the Penn State Valentine Turfgrass Research Center at University Park to determine the effectiveness of treatments against second and early third instar cutworm larvae. Treatment plots were 6 x 6 ft, arranged in a RCB design and replicated three times. A 1 ft barrier was established between each replicate and block. Liquid formulations were applied by using a CO₂ sprayer with four 8002VS TeeJet nozzles mounted on a 60-ft boom operating at 28 psi, and applied in 272 ml/36 ft² water or delivering 2.0 gal/1,000 ft². At treatment time (26 Aug), the following soil and environmental conditions existed: air temp, 61°F; soil temp at 1 inch depth, 59°F; soil temp at 2 inch depth, 60°F; RH, 90%; amt of thatch, 0.125 inch; soil textural class, sandy loam; soil particle size analysis: 52.3% sand, 40.3% silt, 7.3% clay; percent water content (percent by wt), 21.3; organic matter, 3.1%; water pH, 7.0; soil pH, 6.7; CEC, 9.4; time of application, early morning; thatch and soil, wet; and overcast skies. One eight inch diameter by 6 inch long white PVC cylinder was placed in each replicate and secured in place on 27 Aug. Each cylinder was covered with white meshed shade cloth and ten late second to early third instar black cutworm (BCW) larvae were added to each cylinder. Efficacy data was recorded on 2 Sep by counting the no. of cutworm larvae flushed to the surface within one eight inch PVC cylinder per replicate by using a soap irritant drench. Data were analyzed by using WD and an Abbott’s transformation.

Two treatments, respectively conserve SC and M-pede 2%, provided significant reduction of BCW on 2 Sep. No phytoxotoxicity was noted.

<table>
<thead>
<tr>
<th>Treatment/formulation</th>
<th>Rate lb (Al) / acre</th>
<th>No. cutworm larvae flushed to surface/8-inch cylinder</th>
</tr>
</thead>
<tbody>
<tr>
<td>Untreated check</td>
<td>---</td>
<td>9.0a (0.0)</td>
</tr>
<tr>
<td>M-Pede</td>
<td>1% v/v</td>
<td>5.3ab (39.9)</td>
</tr>
<tr>
<td>M-Pede</td>
<td>2% v/v</td>
<td>3.7b (60.9)</td>
</tr>
<tr>
<td>Conserve SC</td>
<td>0.40665</td>
<td>3.7b (57.7)</td>
</tr>
</tbody>
</table>

Means followed by the same letter are not significantly different (P = 0.05, WD).  
° () represents an Abbott’s transformation.