BLUEGRASS (ANNUAL): Poa annua L
RYEGRASS (PERENNIAL): Lolium perenne L.

PREVENTIVE APPLICATION OF FORMULATIONS TO SUPPRESS FIRST GENERATION ANNUAL BLUEGRASS WEEVIL, 2008

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Annual bluegrass weevil: Listronotus maculicollis (Dietz)

This study was undertaken to determine the product effectiveness of one registered and four experimental insecticides to suppress first generation annual bluegrass weevil (ABW) on a public golf course fairway adjacent to the rough in Lewisburg. The turfgrass area consisted of annual bluegrass (80%) and perennial ryegrass (20%). Treatment plots were 7 × 4 ft, arranged in a RCB design and replicated three times with a 1 ft barrier around all replicates. Liquid formulations were applied by using a CO₂ sprayer with four 8002VS TeeJet nozzles mounted on a 6 ft boom, operating at 32 psi, and applied in 212 ml of water/24 ft² or delivering 2.0 gal/1000 ft². At treatment time one (29 Apr) the following soil and environmental conditions existed: air temp, 48 °F; soil temp at 1 inch depth, 48 °F; soil temp at 2 inch depth, 46 °F; RH, %; amt of thatch, 0.5 inch; water pH, 7.0; application time, mid-morning; soil, wet; thatch, wet; and cloudy skies. The first rainfall after application was recorded on 4 May and measured 0.4 inch. At time of treatment forsythia was in full bloom. Granular treatments only were hand watered in immediately after application with 0.1 inch of water. Two, 4 inch cup cutter sod samples were removed from each replicate on 9 Jun. The total no. of ABW life stages (larvae, pupae, teneral adults located in the soil) were recorded and converted to ft². Data were analyzed with ANOVA and the mean separation test used was WD.

The area selected for the experiment had been infested with a natural population of ABW during 2007 and 2008. Four treatments provided significant suppression of ABW. No phytotoxicity was noted.

<table>
<thead>
<tr>
<th>Treatment formulation</th>
<th>Rate product/acre</th>
<th>Avg no. life stages/ft² ABW a ( % Reduction )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aloft SC 14.0 fl oz</td>
<td>14.0 fl oz</td>
<td>8.8b (95.6)</td>
</tr>
<tr>
<td>ARY-0444-023 G 200.0 lb</td>
<td>200.0 lb</td>
<td>1.9b (98.2)</td>
</tr>
<tr>
<td>ARY-0444-017 SC 100.0 lb</td>
<td>200.0 lb</td>
<td>1.9b (98.2)</td>
</tr>
<tr>
<td>ARY-0504-013 G 23.0 fl oz</td>
<td>23.0 fl oz</td>
<td>1.9b (98.2)</td>
</tr>
<tr>
<td>ARY-0486-02 SC 23.0 fl oz</td>
<td>23.0 fl oz</td>
<td>1.9b (98.2)</td>
</tr>
<tr>
<td>Untreated check ---</td>
<td>---</td>
<td>105.4a ---</td>
</tr>
</tbody>
</table>

Means followed by the same letter are not significantly different (P = 0.05; WD).

* Data transformed to log transformation prior to ANOVA/WD.
Untransformed means are presented in the table.