Insecticide and Acaricide Tests

<table>
<thead>
<tr>
<th>Treatment and lb (AI)/acre</th>
<th>Mean no. grubs/ft² (%) Control at 28 DAT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Triumph 1G</td>
<td>1.3h (92.9)</td>
</tr>
<tr>
<td>Oftanol 2I</td>
<td>2.1gh (88.6)</td>
</tr>
<tr>
<td>Oftanol 1.5G</td>
<td>3.6gh (80.4)</td>
</tr>
<tr>
<td>Triumph 1E</td>
<td>4.2efg (77.2)</td>
</tr>
<tr>
<td>UC27BF32 3.3F</td>
<td>4.3efg (76.6)</td>
</tr>
<tr>
<td>Oftanol 0.8G plus</td>
<td>4.8ef (73.9)</td>
</tr>
<tr>
<td>Betasan 3.6G</td>
<td></td>
</tr>
<tr>
<td>Mocap 10G</td>
<td>5.6ef (69.9)</td>
</tr>
<tr>
<td>UC27BF33 3G</td>
<td>6.3de (65.8)</td>
</tr>
<tr>
<td>Cytroline 2G</td>
<td>6.4de (65.2)</td>
</tr>
<tr>
<td>Proxol 80SP</td>
<td>8.9cd (51.6)</td>
</tr>
<tr>
<td>UCSF 45</td>
<td>9.8c (46.7)</td>
</tr>
<tr>
<td>Pestroy SE and</td>
<td>13.5b (26.6)</td>
</tr>
<tr>
<td>Aqua Gro**</td>
<td></td>
</tr>
<tr>
<td>UCSF 51</td>
<td>14.7b (20.1)</td>
</tr>
<tr>
<td>UCSF 3EC</td>
<td>14.9b (19.0)</td>
</tr>
<tr>
<td>Control</td>
<td>15.4a</td>
</tr>
</tbody>
</table>

* Means followed by the same letter are not significantly different (P = 0.05); Waller-Duncan K-Ratio T Test.

** Aqua-Gro L applied at rate of 0.8 oz/1,000 ft² with insecticide.

---

Bluegrass (Annual): *Poa annua* L.

Bluegrass (Kentucky): *Poa pratensis* L.

Japanese Beetle; *Popillia japonica* Newman

Department of Entomology
The Pennsylvania State University
106 Patterson Building
University Park, PA 16802

CONTROL OF JAPANESE BEETLE GRUBS ON A GOLF COURSE DRIVING RANGE IN JOHNSTOWN, PA, 1985: Fifteen insecticide treatments were applied 26 Aug for control of Japanese beetle grubs. The driving range consisted of annual bluegrass (25%) and Kentucky bluegrass (75%). Treatment plots were 6 x 9 ft, arranged in a RCB design and replicated 3 times. Liquid formulations were applied with a CO₂ sprayer with four 8504 Tee Jet nozzles mounted on a 6-ft boom, operating at 35 psi with a 4 gal/1,000 ft² spray rate. Granular formulations were mixed with sand top-dressing to facilitate product distribution. Then they were applied with a hand held shaker. At treatment time, the following soil and environmental conditions existed: air temp, 76°F; soil temp at 1-inch depth, 75°F; soil type, loam; soil pH, 4.8; % organic matter, 4.7; soil condition, dry; % soil moisture, 20.7; amt thatch, 0.25-0.75 inches; water pH, slightly acidic; % RH, 55; and clear sunny skies. A total of 0.8 inches of rain was recorded over the posttreatment period. Immediately after treatment, the entire plot was irrigated with 0.1 inch of water. Posttreatment counts were made 35 days later (30 Sep). Three ft² soil samples were randomly taken from each replicate and the total number of surviving Japanese beetle grubs per ft² was recorded 30 Sep. An average of 18.2 Japanese beetle grubs per ft² was recorded 26 Aug before treatment.

Posttreatment results showed that all formulations provided significant control. No phytotoxicity was noted.

<table>
<thead>
<tr>
<th>Treatment and lb (AI)/acre</th>
<th>Mean no. grubs/ft² (%) Control at 35 DAT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proxol 80SP</td>
<td>4.0j (92.1)</td>
</tr>
<tr>
<td>Bendiocarb 3G</td>
<td>4.7ij (90.7)</td>
</tr>
<tr>
<td>PSM-1 3G</td>
<td>4.8ij (90.5)</td>
</tr>
<tr>
<td>UCSF 45</td>
<td>8.0ij (84.3)</td>
</tr>
<tr>
<td>Triumph 1G</td>
<td>9.3ghi (81.6)</td>
</tr>
<tr>
<td>PSM-1 3G</td>
<td>10.7fgh (78.8)</td>
</tr>
<tr>
<td>Mocap 10G</td>
<td>10.7fgh (78.8)</td>
</tr>
<tr>
<td>Bendiocarb 3G</td>
<td>11.9fgh (78.5)</td>
</tr>
<tr>
<td>UCSF 51</td>
<td>12.7fgh (74.9)</td>
</tr>
<tr>
<td>UCSF 45</td>
<td>13.3cdefg (73.7)</td>
</tr>
<tr>
<td>Oftanol 5G</td>
<td>14.9cdef (70.5)</td>
</tr>
<tr>
<td>SC0135 10G</td>
<td>16.5cde (67.4)</td>
</tr>
<tr>
<td>Diazinon AG500</td>
<td>17.4bcd (65.6)</td>
</tr>
<tr>
<td>Oftanol 0.8G plus</td>
<td>18.1bc (64.2)</td>
</tr>
<tr>
<td>Betasan 3.6G</td>
<td></td>
</tr>
<tr>
<td>UCSF 51</td>
<td>22.1bc (56.3)</td>
</tr>
<tr>
<td>Control</td>
<td>50.6a</td>
</tr>
</tbody>
</table>

* Means followed by the same letter are not significantly different (P = 0.05); Waller-Duncan K-Ratio T Test.