SOYBEAN: Glycine max (L.) Merrill, 'Hutcheson'

EVALUATION OF INSECTICIDES AGAINST THE THREECORNERED ALFALFA HOPPER AND SOUTHERN GREEN STINK BUG, 2001

B. J. Fitzpatrick, M. E. Baur, and D. J. Boethel
LSU Agricultural Center
Department of Entomology
404 Life Sciences Building
Baton Rouge, LA 70803-1710
Phone: (225) 578-1634
Fax: (225) 578-1643
E-mail: bfitzpatrick@agctr.lsu.edu

Threecornered alfalfa hopper (TCAH): Spissistilus festinus (Say)
Southern green stink bug (SGSB): Nezara viridula (L.)

Standard and experimental insecticides were evaluated for control of the threecornered alfalfa hopper (TCAH) and southern green stink bug (SGSB) in a small-plot trial conducted near Alexandria, LA (Rapides Parish). Treatments were applied on 17 Aug with a hand-held CO₂ sprayer calibrated to deliver 15 gpa through TeeJet 8002 flat fan nozzles (two/row) at 35 psi. Plots were 50 ft × 8 rows (38-inches centered) and arranged in a RCB design with four replications. Samples (25 sweeps/plot) for TCAH adults and SGSB were taken with a standard 15-inch diam sweep net at 3, 6, and 16 DAT. Samples for TCAH nymphs were taken with a 1 m² drop cloth from two rows/plot. The test received 0.08 and 0.27 of an inch of rainfall on 19 and 20 Aug, respectively. Data were analyzed with ANOVA and means separated using DMRT.

All insecticide treatments significantly reduced densities of TCAH adults at 3, 6, and 16 DAT compared with the untreated. Differences among insecticide treatments were not observed 3 DAT. Bidrin had significantly higher densities of TCAH adults than the other insecticide treatments at 6 and 16 DAT. At 6 DAT, Asana XL plots had significantly lower SGSB adult densities than F0570, Orthene, or Bidrin plots. Asana XL and GF-231 had significantly fewer TCAH adults than F0570 or Bidrin, 16 DAT. All insecticide treatments (except Orthene and Bidrin 6 DAT) significantly reduced TCAH nymph populations compared with the untreated at 6 and 16 DAT. Asana XL, Karate Z, GF-231, and F0570 had significantly lower TCAH nymph densities compared with Orthene or Bidrin. All insecticide treatments significantly reduced SGSB densities compared with the untreated at 6 and 16 DAT. Except for Bidrin having significantly lower densities compared with Asana XL 6 DAT, differences among insecticide treatments were not observed for SGSB.
<table>
<thead>
<tr>
<th>Treatment/formulation</th>
<th>Rate lb(AI)/acre</th>
<th>3 DAT</th>
<th>6 DAT</th>
<th>16 DAT</th>
<th>6 DAT</th>
<th>16 DAT</th>
<th>3 DAT</th>
<th>6 DAT</th>
<th>16 DAT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asana XL</td>
<td>0.04</td>
<td>5.0 b</td>
<td>2.5 d</td>
<td>1.8 d</td>
<td>1.3 c</td>
<td>1.5 c</td>
<td>5.0 a</td>
<td>1.5 b</td>
<td>3.0 b</td>
</tr>
<tr>
<td>Karate Z 2.08 CS</td>
<td>0.035</td>
<td>7.0 b</td>
<td>4.8 cd</td>
<td>2.3 cd</td>
<td>1.5 c</td>
<td>1.8 c</td>
<td>1.8 a</td>
<td>0.5 bc</td>
<td>2.3 b</td>
</tr>
<tr>
<td>GF-231 1.25 CS</td>
<td>0.0224</td>
<td>7.0 b</td>
<td>4.5 cd</td>
<td>2.0 d</td>
<td>2.5 c</td>
<td>3.0 c</td>
<td>2.8 a</td>
<td>0.3 bc</td>
<td>1.8 b</td>
</tr>
<tr>
<td>F0570 0.8 EC</td>
<td>0.016</td>
<td>5.8 b</td>
<td>8.0 c</td>
<td>4.0 c</td>
<td>3.0 c</td>
<td>3.5 c</td>
<td>0.8 a</td>
<td>0.8 bc</td>
<td>2.5 b</td>
</tr>
<tr>
<td>Centric 40 WG</td>
<td>0.0625</td>
<td>9.8 b</td>
<td>5.8 cd</td>
<td>3.3 cd</td>
<td>8.5 bc</td>
<td>7.0 bc</td>
<td>1.5 a</td>
<td>0.5 bc</td>
<td>1.3 b</td>
</tr>
<tr>
<td>Orthene 90 SP</td>
<td>0.75</td>
<td>10.0 b</td>
<td>8.5 c</td>
<td>3.5 cd</td>
<td>20.0 a</td>
<td>12.5 b</td>
<td>1.0 a</td>
<td>0.5 bc</td>
<td>0.5 b</td>
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<tr>
<td>Bidrin 8 M</td>
<td>0.375</td>
<td>11.8 b</td>
<td>13.5 b</td>
<td>8.0 b</td>
<td>14.8 ab</td>
<td>12.8 b</td>
<td>2.0 a</td>
<td>0.0 c</td>
<td>2.8 b</td>
</tr>
<tr>
<td>Untreated check</td>
<td>23.0 a</td>
<td>22.5 a</td>
<td>12.0 a</td>
<td>12.0 a</td>
<td>22.8 a</td>
<td>20.3 a</td>
<td>5.0 a</td>
<td>8.5 a</td>
<td>12.0 a</td>
</tr>
</tbody>
</table>

$P > F$ (ANOVA) $< 0.01 < 0.01 < 0.01 < 0.01 < 0.01$ 0.06 $< 0.01 < 0.01$

Means in a column followed by the same letter do not differ significantly (DMRT, $P = 0.05$).

*No./25 sweeps.

*No./1 m² drop cloth (two rows).