Grapes: *Vitis vinifera* L. ‘Muscat caneli’

INSECTICIDE EFFICACY AGAINST LEAFHOPPERS IN WASHINGTON STATE

**Timothy D. Waters**
Washington State University
Irrigated Agriculture Research and Extension Center
24106 N. Bunn Rd.
Prosser, WA 99350
Phone: (509) 786-9353
Fax: (509) 786-9370
E-mail: twaters@wsu.edu

**Douglas B. Walsh**

**Ronald P. Wight**

Virginia creeper leafhopper, *Erythroneura ziczac* Walsh
Western grape leafhopper, *Erythroneura elegantula* Osborn

Insecticides were screened for their ability to control leafhopper nymphs in wine grapes. On 19 Aug, 2004, field plots were established near Horsethief Point, Washington State, USA. Plots were 10 ft wide and 40 ft long and were replicated four times in a RCB design. Insecticides were applied on 19 Aug, 2004 using a hand gun on an ATV mounted sprayer. Ten leaves per plot were collected weekly and transported to the laboratory where leafhopper nymphs were counted under a stereoscope. Data were analyzed using ANOVA and a pairwise *t*-test was used to determine difference from the untreated check (*P* ≤ 0.05).

The first week after insecticide applications all compounds tested reduced leafhopper nymph abundance better than the untreated check, with the exception of the Applaud treatment of 0.525 lb (AI)/acre. The second week after insecticide application all compounds tested provided better leafhopper nymph control compared to the untreated check, with the exception of the Avaunt treatment of 0.11 lb (AI)/acre.

<table>
<thead>
<tr>
<th>Treatment/ formulation</th>
<th>Rate lb (AI)/acre</th>
<th>19 Aug</th>
<th>23 Aug</th>
<th>31 Aug</th>
</tr>
</thead>
<tbody>
<tr>
<td>Untreated check</td>
<td>---</td>
<td>3.95a</td>
<td>16.85a</td>
<td>18.60a</td>
</tr>
<tr>
<td>Actara 25WG</td>
<td>0.043</td>
<td>5.35a</td>
<td>0.90b</td>
<td>1.20b</td>
</tr>
<tr>
<td>Applaud 70WP</td>
<td>0.394</td>
<td>1.65a</td>
<td>1.85b</td>
<td>2.80b</td>
</tr>
<tr>
<td>Applaud 70WP</td>
<td>0.525</td>
<td>2.00a</td>
<td>10.10a</td>
<td>2.53b</td>
</tr>
<tr>
<td>Assail 70WP</td>
<td>0.020</td>
<td>0.30a</td>
<td>0.73b</td>
<td>0.35b</td>
</tr>
<tr>
<td>Avaunt 30WG</td>
<td>0.090</td>
<td>2.90a</td>
<td>1.73b</td>
<td>1.79b</td>
</tr>
<tr>
<td>Avaunt 30WG</td>
<td>0.110</td>
<td>3.18a</td>
<td>5.48b</td>
<td>7.80a</td>
</tr>
<tr>
<td>Danitol 2.4EC</td>
<td>0.400</td>
<td>0.25a</td>
<td>4.30b</td>
<td>0.67b</td>
</tr>
<tr>
<td>Fujimite 5EC</td>
<td>1.250</td>
<td>1.60a</td>
<td>4.15b</td>
<td>2.37b</td>
</tr>
<tr>
<td>NNI-750C</td>
<td>0.500</td>
<td>1.33a</td>
<td>2.35b</td>
<td>5.95b</td>
</tr>
<tr>
<td>Provado 1.6F</td>
<td>0.033</td>
<td>1.40a</td>
<td>1.20b</td>
<td>1.07b</td>
</tr>
</tbody>
</table>

Means in a column followed by b are significantly different from the untreated check (pairwise *t*-test, *P* ≤ 0.05).