Infestation biology and life history of CBB: New discoveries
(Desperate Times Require Desperate Measures)

Robert G. Hollingsworth, Research Entomologist
US Pacific Basin Agricultural Research Center, Hilo, Hawaii
Feral coffee
Fate of CBB in Berries with and without ground cover
Bare ground vs Ground Cover
Lehuula Farms (Bob Nelson)
Lehuula Farms (Bob Nelson)
Kona Rainforest Farm
(Robert and Dawn Barnes)
Perennial Peanut Groundcover (Kona Rainforest)
Stump Out (Lignin dissolver) vs EM-1
Bob Nelson’s Farm
### Results After 4 weeks

**Bob Nelson's Farm**

Number of Adult Females per 10 berries

Set up October 8, 2015

<table>
<thead>
<tr>
<th>Adult Beetles</th>
<th>15-Oct</th>
<th>23-Oct</th>
<th>29-Oct</th>
<th>4-Nov</th>
<th>SUBTOTAL</th>
<th>Beetles/Berry</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plot 1</td>
<td>Bare</td>
<td>15</td>
<td>39</td>
<td>24</td>
<td>26</td>
<td>104</td>
</tr>
<tr>
<td>Plot 2</td>
<td>Grass</td>
<td>74</td>
<td>11</td>
<td>27</td>
<td>7</td>
<td>119</td>
</tr>
<tr>
<td>Plot 3</td>
<td>Bare</td>
<td>15</td>
<td>20</td>
<td>13</td>
<td>27</td>
<td>75</td>
</tr>
<tr>
<td>Plot 4</td>
<td>Grass</td>
<td>40</td>
<td>7</td>
<td>2</td>
<td>1</td>
<td>50</td>
</tr>
</tbody>
</table>

6 of 10 "rotten"
# Results from Bare vs. Groundcover

Bob Nelson's Farm

Number of Adult Females per 10 berries

Set up October 8, 2015

<table>
<thead>
<tr>
<th>Adult Beetles</th>
<th>15-Oct</th>
<th>23-Oct</th>
<th>29-Oct</th>
<th>4-Nov</th>
<th>SUBTOTAL</th>
<th>Beetles/Berry</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plot 1 Bare</td>
<td>15</td>
<td>39</td>
<td>24</td>
<td>26</td>
<td>104</td>
<td>2.6</td>
</tr>
<tr>
<td>Plot 2 Grass</td>
<td>74</td>
<td>11</td>
<td>27</td>
<td>7</td>
<td>119</td>
<td>3.0</td>
</tr>
<tr>
<td>Plot 3 Bare</td>
<td>15</td>
<td>20</td>
<td>13</td>
<td>27</td>
<td>75</td>
<td>1.9</td>
</tr>
<tr>
<td>Plot 4 Grass</td>
<td>40</td>
<td>7</td>
<td>2</td>
<td>1</td>
<td>50</td>
<td>1.3</td>
</tr>
</tbody>
</table>

6 of 10 "rotten"

<table>
<thead>
<tr>
<th>12-Nov</th>
<th>18-Nov</th>
<th>25-Nov</th>
<th>2-Dec</th>
<th>8-Dec</th>
<th>16-Dec</th>
<th>SUBTOTAL</th>
<th>Beetles/Berry</th>
<th>TOTALS</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>22</td>
<td>28</td>
<td>37</td>
<td>76</td>
<td>35</td>
<td>218</td>
<td>3.6</td>
<td>322</td>
</tr>
<tr>
<td>16</td>
<td>7</td>
<td>0</td>
<td>3</td>
<td>27</td>
<td>9</td>
<td>62</td>
<td>1.0</td>
<td>181</td>
</tr>
<tr>
<td>21</td>
<td>12</td>
<td>2</td>
<td>18</td>
<td>47</td>
<td>16</td>
<td>116</td>
<td>1.9</td>
<td>191</td>
</tr>
<tr>
<td>0</td>
<td>0</td>
<td>3</td>
<td>4</td>
<td>23</td>
<td>0</td>
<td>30</td>
<td>0.5</td>
<td>80</td>
</tr>
</tbody>
</table>

4 berries
average number of adults per raisin

CBB adults in raisins collected at 7 different farms in the Kona District
Nematodes could be ideal for killing CBB in rocky soil