Cages for Early Cacao Orchard Establishment

Alyssa Cho
UH-Manoa CTAHR
Chinese Rose Beetle
*Adoretus sinicus*

- Feeds at dusk
- Wide range of host plants
- Adults (0.5” reddish beetle) feed on plant tissue
- Leaves appear lace-like, shot-holes, or can leave only veins behind
- Attracted to dim light, repelled by bright lights

[Photo credit: Arnold Hara](http://www.ctahr.hawaii.edu/uhmg/faq/faq-chinese-rosebeetle.asp)
[Photo credit: Arnold Hara](http://www.extento.hawaii.edu/kbase/crop/Type/adoretus.htm)
Traps

https://youtu.be/kCleYZ_zwpM

https://snapguide.com/guides/make-a-rose-beetle-trap/
<table>
<thead>
<tr>
<th>Product</th>
<th>Active Ingredient</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amazin Plus 1.2% ME</td>
<td>1.2% Azadirachtin</td>
<td>BEETLES, such as: Bark Beetles, Flea Beetles, Japanese Beetles, Leaf Beetles</td>
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<tr>
<td>Azaguard Botanical</td>
<td>3.0% Azadirachtin</td>
<td>BEETLES and GRUBS: Bark Beetles, Blueberry flea beetles, Boll weevils, Colorado potato beetles, Flea beetles, Japanese beetles, Leaf beetles, Mexican bean beetles, Pepper weevils, Phylloxera, Rose Chafers, Twig girdlers, Elm Leaf Beetle, Cucumber Beetle, June Beetle</td>
</tr>
<tr>
<td>Azasol</td>
<td>6% Azadirachtin</td>
<td>BEETLES, larvae of: such as Bark beetles, Blueberry Flea beetles, Boll weevils, Colorado potato beetles, Flea beetles, Japanese beetles, Leaf beetles, Mexican bean beetles, Phylloxera, Rose Chafers, Twig girdlers</td>
</tr>
<tr>
<td>Azatin XL Biological</td>
<td>3.0% Azadirachtin</td>
<td>Billbugs Black Vine Weevil Colorado Potato Beetle Elm Leaf Beetle Flea Beetle Japanese Beetle June Beetle Mexican Bean Beetle Rose Chafer</td>
</tr>
<tr>
<td>Ecozin Plus 1.2% ME</td>
<td>1.2% Azadirachtin</td>
<td>BEETLES, such as: Bark Beetles, Blueberry Flea Beetles, Boll Weevils, Colorado Potato Beetles, Flea Beetles, Japanese Beetles, Leaf Beetles, Mexican Bean Beetles, Pepper Weevils, Plum Curculio, Rose Chafers, Twig Girdlers</td>
</tr>
<tr>
<td>Esteem Ant bait</td>
<td>0.5% Pyriproxyfen</td>
<td>none</td>
</tr>
<tr>
<td>Molt-X Botanical</td>
<td>3.00% Azadirachtin</td>
<td>BEETLES, such as: Bark Beetles, Blueberry flea beetles, Boll weevils, Colorado potato beetles, Flea beetles, Japanese beetles, Leaf beetles, Mexican bean beetles, Pepper weevils, Phylloxera, Rose Chafers, Twig girdler</td>
</tr>
<tr>
<td>Ornazin 3% EC Botanical</td>
<td>3.0% Azadirachtin</td>
<td>BEETLES, such as: Bark Beetles, Blueberry Flea Beetles, Boll Weevils, Colorado Potato Beetles, Flea Beetles, Japanese Beetles, Leaf Beetles, Mexican Bean Beetles, Pepper Weevils, Plum Curculio, Rose Chafers, Twig Girdlers</td>
</tr>
<tr>
<td>PREV-AM</td>
<td>0.99% Sodium Tetraborohydrate Decahydrate</td>
<td>Cereal leaf beetle</td>
</tr>
</tbody>
</table>

(HDOA, 2019)
Cages
Advantages/Disadvantages

• Shade
• Wind break
• Chinese rose beetle
• Herbicide drift
• Promotes good tree architecture

• Cost
• Weeding
How to build a cage

https://youtu.be/AjAiIjEJy_I
Questions?