

Leaf Miner

Management | Market Threshold

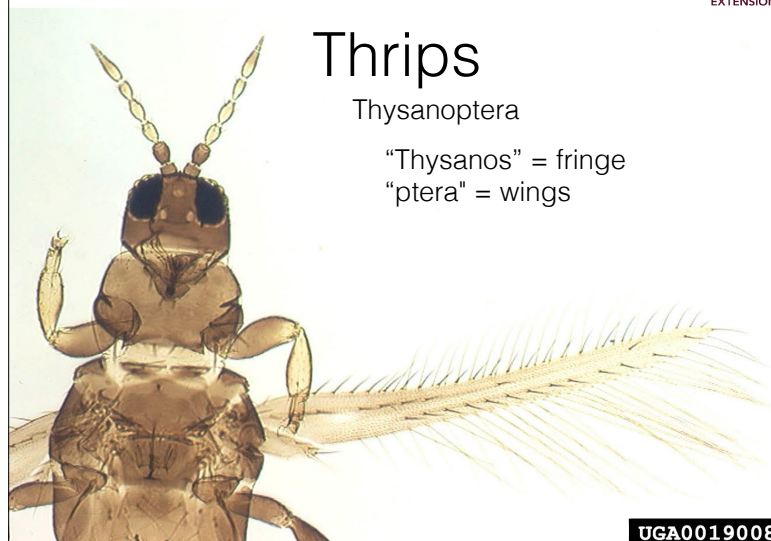


117

Thrips

Thysanoptera

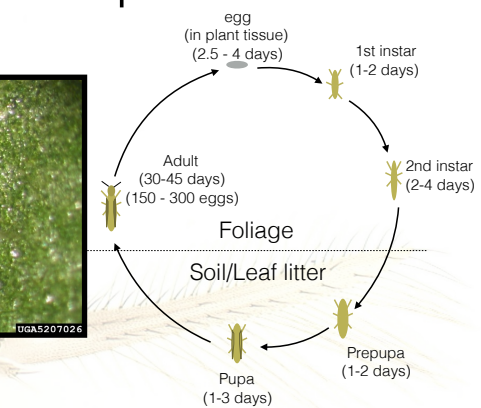
"Thysanos" = fringe
"ptera" = wings



UGA0019008

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Thrips



UGA0019008

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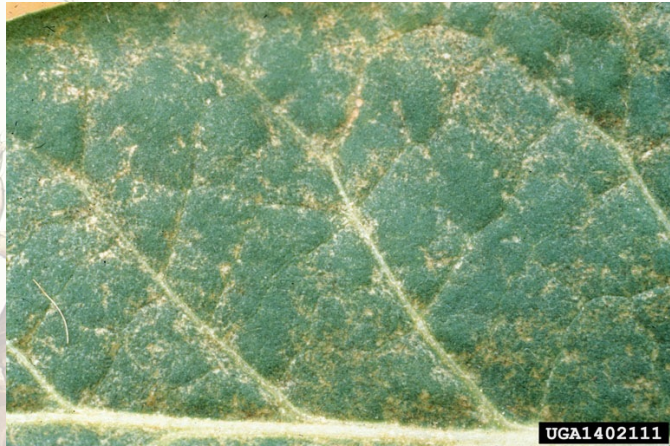
Thrips



UGA1327079

120

Thrips



UGA1402111 008

121

Thrips



UGA0176007 008

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Thrips

Symptoms

Tomato spotted wilt virus



Florida Division of Plant Industry, Florida Department of Agriculture and Consumer Services, Bugwood.org

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Thrips

Symptoms

Tomato spotted wilt virus



William M. Brown Jr., Bugwood.org

124

Thrips

Symptoms

Tomato spotted wilt virus
(on pepper)



Gerald Holmes, California Polytechnic State University at San Luis Obispo, Bugwood.org

125

Thrips

Symptoms

Tomato spotted wilt virus
(on pepper)



Gerald Holmes, California Polytechnic State University at San Luis Obispo, Bugwood.org

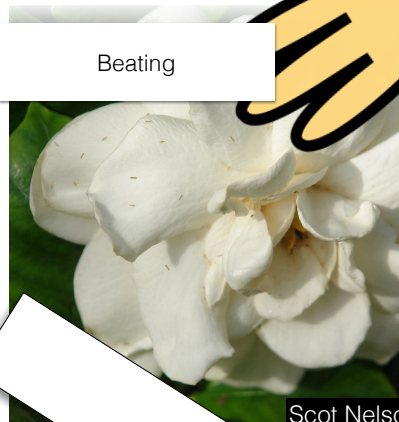
126

Thrips

Monitoring

Thrips

Beating



Scot Nelson

127

Twospotted spider mites



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Twospotted spider mites



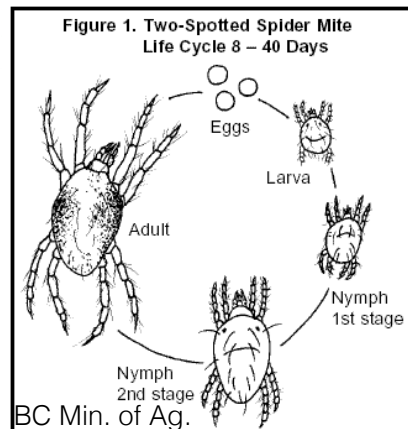
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Twospotted spider mites



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Twospotted spider mites



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Twospotted spider mites

Management | Prevention

- “Man-made” pest problem
- High Nitrogen = High Reproduction
- Perform best in hot, dry, and dusty conditions; wash off dust from plants periodically during dry season
- Some insecticides can kill predators of twospotted spider mites (i.e. Sevin aka Carbaryl)
- Some insecticides can decrease plant natural defenses (i.e. imidacloprid, thiamethoxam)

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Twospotted spider mites

Management | Prevention



Wyss U., Inst. Phytopathology, Kiel University, Germany

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Rhinoceros beetle

- Cause of mortality to coconut trees
- burrow at the base of the coconut tree and feed on the coconut hear root



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Rhinoceros beetle

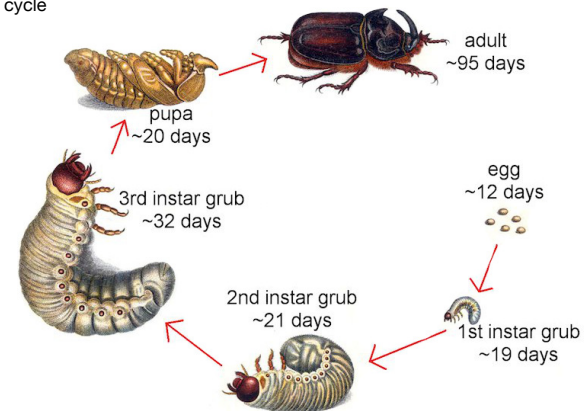
- Aloeus Ox Beetle?
(*Strategus aloeus*)



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Rhinoceros beetle

Life cycle



Generation time varies by species, temperature, and other factors

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Rhinoceros beetle

Damage



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Rhinoceros beetle

Damage

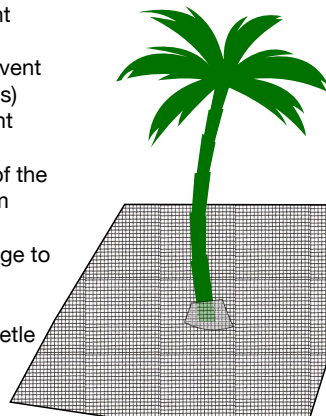


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Rhinoceros beetle

Management | Prevent (Experimental)

- Mesh fine and durable enough to prevent beetle from burrowing into trunk.
- Mesh around perimeter; sufficient to prevent burrowing towards the trunk (~2 m radius)
- Bury the edges or staple down to prevent beetle from going underneath the mesh
- Wrap portion of mesh around the base of the trunk and tie tightly to prevent borer from moving in
 - check periodically to ensure no damage to tree from the tie



Similar strategy used for a root feeding beetle on citrus (*Diaprepes root weevil*)

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Diamondback moth

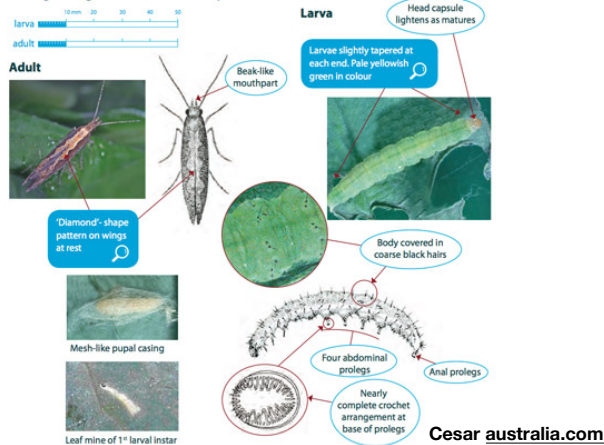


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Diamondback moth

Life cycle

Distinguishing characteristics/description



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Diamondback moth

Life cycle



Whitney Cranshaw, Colorado State University, Bugwood.org

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Diamondback moth

Damage



143

Diamondback moth

Monitoring | Pheromone trap

- 25 lures = \$38.50 USD
= ~ GY\$8,017
- GY\$320/lure

Only need 1 or maybe 2 lures for small plot; change at least annually

Sticky card and "delta" trap are more expensive than the lure - can make homemade sticky traps!



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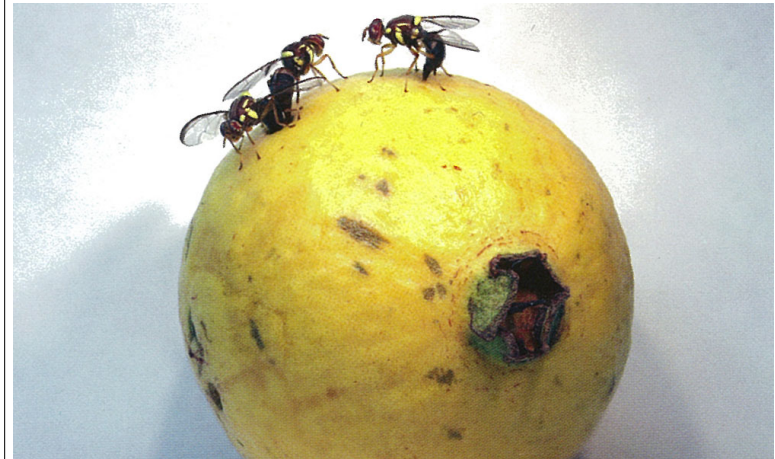
Diamondback moth

Management | Chemical

- *Bacillus thuringiensis*
 - MoA: 11A
- Caprid (Acetamiprid)
 - MoA: 4A
- Abamectin 18C (Abamectin)
 - MoA: 6

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Guava fruit fly



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Guava fruit fly

Symptoms



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Guava fruit fly

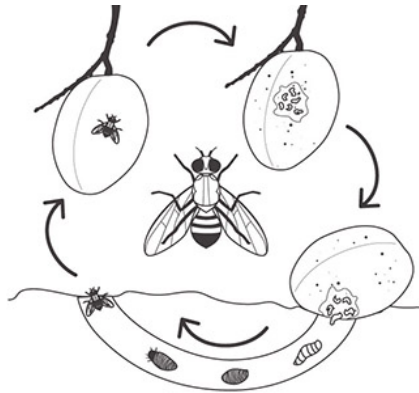
Symptoms



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Guava fruit fly

Life cycle



149

Guava fruit fly

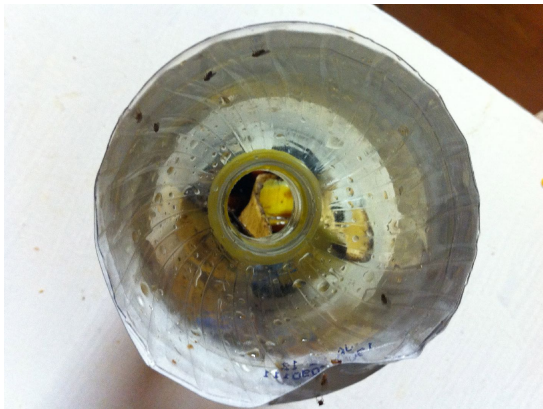
Monitoring | Yellow Sticky Cards



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Guava fruit fly

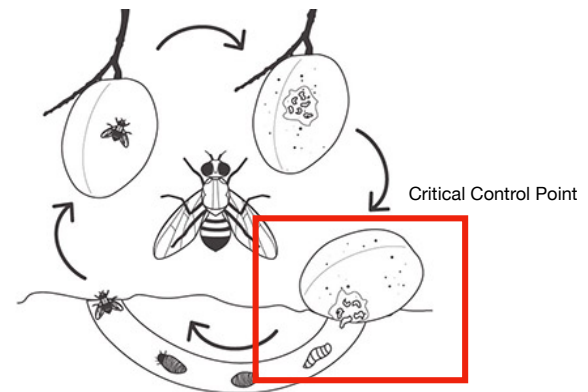
Monitoring | Fruit fly trap



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Guava fruit fly

Management

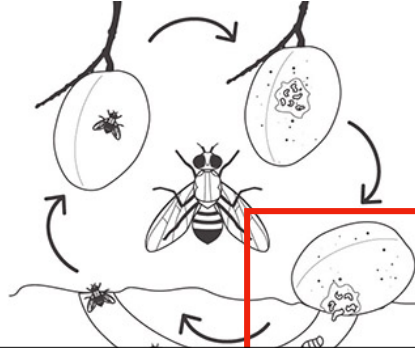


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Guava fruit fly

Management | Prevention

- Bag and remove any fallen or infested fruit
 - Solarize (cook it!) in the sun or bury deep in the soil
- Sanitation is key!



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Guava fruit fly

Management | Chemical control

Spinosad ideal (not currently available in Guyana?)

Mal-Shon

- MoA: 1B
- Broad-spectrum Organophosphate; may cause other pests to flare
- Spray when flies are out (based on monitoring); follow label directions on spray interval

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