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# Center for Smart Agriculture

## Hi Tech Fruit Culture



**Module 5: Pest And Disease Management**  
**Session 3: Guava Pests And Disease**



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## DISEASES

1. Wilt: *Fusarium oxysporum f. sp. psidii*
2. Fruit canker: *Pestalotiopsis psidii*
3. Anthracnose: *Collectotrichum psidii*



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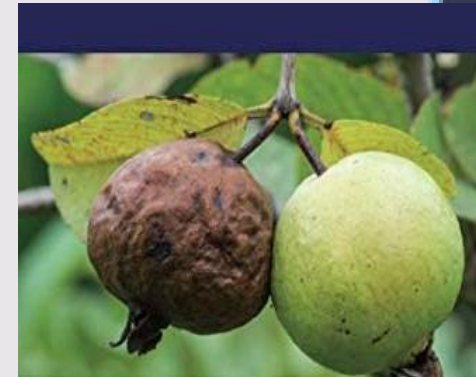
## 1. Wilt: *Fusarium oxysporum f. sp. psidii*,

### Symptoms:

- Fruits of all the affected branches remain underdeveloped, hard and stony.
- Later, the entire plant is defoliated and eventually dies.

### Management:

- Cross of *Psidium malle* x *P. guajava* has been found free from wilt and this material can be used as resistant root stock.
- Biological control by *Aspergillus niger* strain AN-17 is found effective.





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## 2. Fruit canker: *Pestalotiopsis psidii*

### Symptoms:

- Minute, brown or rust colored, circular, necrotic areas forms on green fruits.
- The infected fruits remain underdeveloped, become hard, malformed and drop.



### Management:

The spread of disease is controlled by 3 to 4 sprays of 1 per cent Bordeaux mixture or lime sulphur at 15 days interval







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### 3. Anthracnose: *Gloeosporium psidii* (*Collectotrichum psidii*)

- The fungus develops from the infected twigs and then petiole and young leaves and even on fruits.
- The plant begins to die backwards from the top of a branch.



Symptoms of Anthracnose in Guava Plant

#### Management:

- Spray of Bordeaux mixture (3:3:50) or Copper oxychloride (0.3 %) just after initiation of disease.
- For post harvest treatment, 20 min. dip in 500 ppm tetracycline is effective.
- Application of bio agent viz *Streptosporangium pseudovulgare* on fruits before emergence of symptom





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## PESTS

- 1) Fruit fly : *Bactrocera correcta*, *B. dorsalis*, and *B. zonata*.
- 2) Tea mosquito bug: *Helopeltis antonii*
- 3) Mealy bug: *Ferrisia virgata*, *Maconellicoccus hirsutus*



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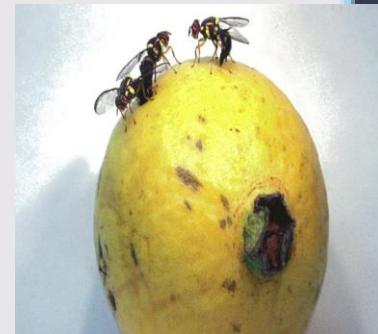
1) Fruit fly : *Bactrocera correcta*, *B. dorsalis*, and *B. zonata*.

- The fruit fly is the most destructive insect in the production of guava, particularly during rainy season.
- Fruit soften at the site of infestation. The affected fruits rot and drop down prematurely.



### Management:

- Hanging of methyl eugenol bottle traps (containing 100 ml solution of 0.1% methyl eugenol & 0.1% malathion) is highly effective in controlling the pests.
- Ten such traps may be hanged in a hectare at a height of 5-6 ft, well before the ripening of fruits.





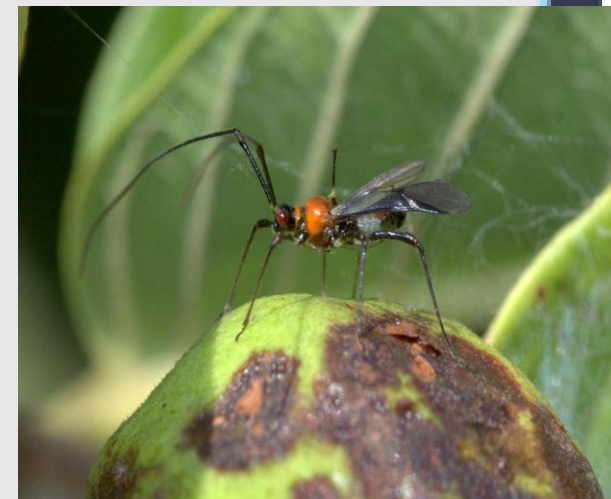
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## 2) Tea mosquito bug: *Helopeltis antonii*

- Adults and nymphs feed on petioles, tender shoots and leaf veins causing necrotic lesions, coalesce to form patches.
- rusty corky growth /scab formation on fruits, widespread drying of shoots, inflorescence and flowers and shedding of fruits is witnessed.

### Management

- Undertake pruning to regulate the shade to facilitate proper penetration of sunlight inside the canopy.
- Monocrotophos 36 WSC @ 2.5 L in 1500 – 2000 L water per ha at new flush formation.







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### 3) Mealy bug: *Ferrisia virgata*, *Maconellicoccus hirsutus*

- Both nymphs and adults suck sap that results in crinkling and yellowing of leaves and rotting of berries and Development of sooty mould takes place on the honeydew excreted by these insects on the affected parts

#### Management

- Spray dichlorvas 1.0 L or chlorpyriphos 1.25 L or methomyl 40 SP 1.25 kg with 500 L water/ha.
- Release Australian lady bird beetle (*Cryptoleamus montrouzieri*) @ 2500 – 3750/ha
- Conserve and release coccinellid beetles and lepidopteran predators



Heavy Infestation of Mealy Bug



Mealy Bug in Fruits



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**Thank you**

