

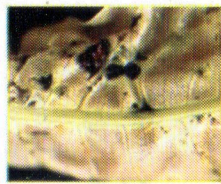
### CECID FLY (*Procantarinia* sp.)



Adult



Larvae

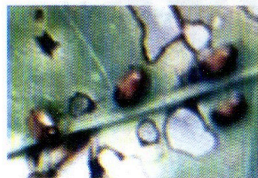


Damage

#### Control measures:

- Prune crowded and infested leaves/flushes.
- Underbrush and clear surroundings.
- Timely application of insecticides to protect new flushes.
- Shallow soil cultivation and burning a thin layer of dry grasses/leaves below the tree canopy to destroy pupae present.

### CORN SILK BEETLE (*Monolepta bifasciata*)



Adults



Damage

### GREEN BEETLE (*Anomala* sp.)



Adults



Damage

#### Control measures:

- Spray insecticides on new flushes to protect leaves from beetle infestation.

- Place basin or wide container containing water and insecticide, below the canopy. Beat canopy or tree branches to dislodge adults. Collect adults that drop on the ground and destroy it by burning.

### WEB WORM/TENT CATERPILLAR (*Orthaga melanoperalis*)



Larvae



Damage

#### Control measures:

- Prune and destroy (burn) infested shoots to kill larvae that hide in the "web or nests."
- Spray area below the canopy to destroy larvae that fall on the ground.
- Shallow cultivation of soil below the canopy to expose and destroy pupae.

## IMPORTANT INSECT PESTS OF MANGO

### (Part A)



DEPARTMENT OF AGRICULTURE  
(BUREAU OF PLANT INDUSTRY)

Guimaras National Crop Research,  
Development and Production  
Support Center

#### For more information, please contact:

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**Insects damaging the roots, trunks and twigs:**

**TERMITES** (*Macrotermes gilvus*)



Adults                      Damage on roots                      Earthen tunnels

**Control measures:**

- Prune heavily infested parts and burn them.
- Construct holes on the nest and pour kerosene to destroy the entire colony.
- Destroy earthen tunnel which contain the workers by spraying insecticides.

**GRUBS** (*Leucopholis irrorata*)

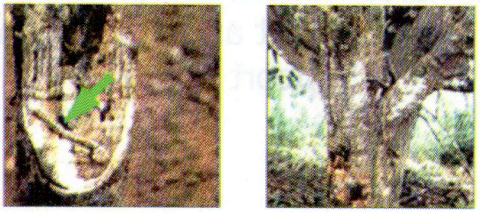


Larvae                      Damage

**Control measures:**

- Infested plant should be uprooted and soil around it cultivated to expose and destroy the larvae/grubs.
- Apply granular insecticides at the base of the plant.

**FLAT HEADED BORER** (*Plocaederus sp.*)



Larvae                      Damage

**Control measures:**

- Cut and burn affected parts.
- Holes on the trunk may be sprayed with insecticides.
- Plug holes with mud or cement to kill larvae/ adults.

**SCALE INSECT** (*Aonidiella orientalis*, etc.)



Adults                      Damage

**Control measures:**

- Prune infested parts (branches and twigs) preferably during summer. Place them in pit constructed on a corner of the orchard. Allow branches and twigs to dry until parasites escape. Burn remaining debris.
- Spray oil or add sticker to insecticide recommended for sucking insects and spray the "crawler" stage or nymphs.

**CIRCULAR WHITE BACK BORER**

(*Callimetopus sp.*)



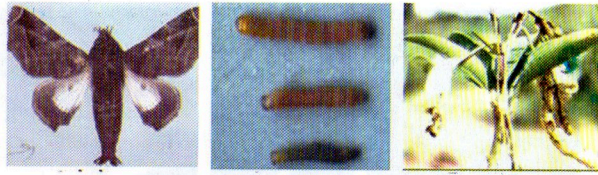
Adult                      Larva                      Damage

**TWIG BORER** (*Niphotrocta albata*)



Adult                      Larva                      Damage

**TIP BORER** (*Chlumetia transversa*)



Adult                      Larvae                      Damage

**Control measures:**

- Protect young flushes by spraying with insecticides since these are attractive to adult beetles and moths for egg laying.
- Prune and burn infested parts to kill larvae.

**Insects damaging the leaves:**

**THRIPS** (*Scirtothrips dorsalis*)

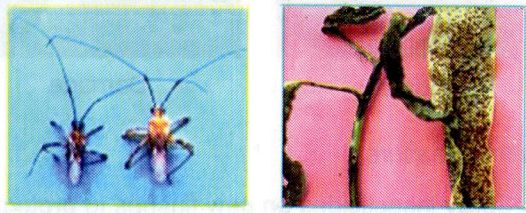


Adults                      Damage

**Control measures:**

- Spray insecticides recommended for sucking insects as fine mist on the upper and lower leaf surfaces.
- Prune undesirable branches and infested leaves.

**CAPSID BUG** (*Helopeltis sp.*)



Adults                      Damage



## SEED BORER (*Noorda albizonalis*)



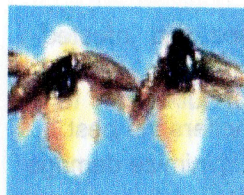
Adult & larva



Damage

- Control male population by application of methyl eugenol mixed with malathion at a ratio of 96:4. Place mixture in fiber board squares at 4 pieces per hectare.
- Apply protein hydrolyzate bait spray (e.g. GF-120 Naturalyte) at recommended rate to control both males and females.

## PULP WEEVIL (*Sternochetus frigidus*)



Adults



Larvae



Damage

### Control measures:

- Cultural management (pruning and sanitation) are recommended.
- Bagging of fruits.
- If insecticides are used, spraying should be done prior to bagging.
- Destroy other mango varieties which serves as host of the insect.
- The island of Palawan is under quarantine because of this pest. Strict regulation should be imposed so that mango fruits and other parts of the tree will not leave the area.

## FRUIT FLY

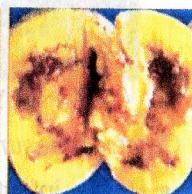
(*Bactrocera philippinensis* and *B. occipitalis*)



Adult



Ovipositional punctures

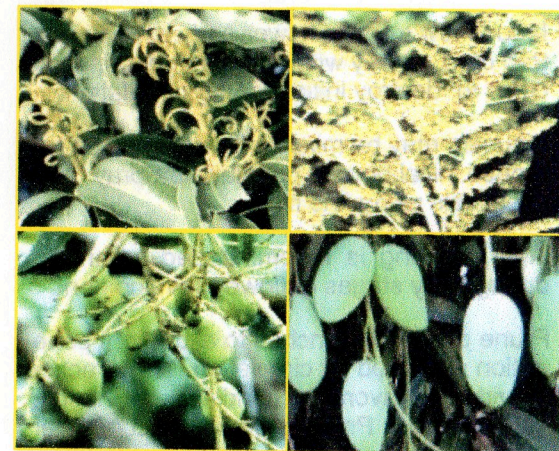


Damage of larvae

### Control measures:

- Avoid intercrops like guava, papaya, santol, seniguelas since these are alternate hosts of the insect.
- Bag/wrap fruits at 50 to 60 days after flower induction.
- Remove fruits with cracks and bruises that hang on the tree.
- Collect fallen fruits and properly disposed them by either burying or burning.

# IMPORTANT INSECT PESTS OF MANGO (Part B)



DEPARTMENT OF AGRICULTURE  
BUREAU OF PLANT INDUSTRY

**GUIMARAS NATIONAL CROP RESEARCH,  
DEVELOPMENT AND PRODUCTION  
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## Insects damaging the flowers

### **MANGO LEAFHOPPERS**

(*Idioscopus clypealis*)



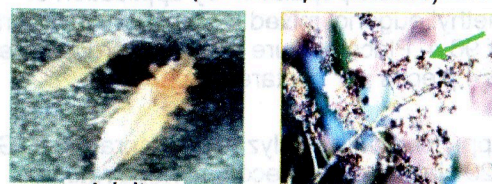
Adults

Damage

#### **Control measures:**

- Induce few trees to flower early to serve as trap crop. Spray with recommended insecticides to destroy initial hopper population.
- Inducers may be mixed with insecticides to reduce initial hopper population. Spray chemicals using fine mist.
- Light trapping is recommended before or during early stages of flower development.
- Prune crowded branches to allow light penetration and good air circulation. This practice provides unfavorable condition for hopper multiplication. Pruning should be done after harvest.
- Monitor insect population from 25 randomly selected panicles. If the average number of hoppers is greater than 3 adults per panicle, spray insecticides. Protect susceptible stages of flower development from hoppers attack which are from bud elongation to flower opening. Avoid spraying during full bloom (28-32 DAFI). Protect early fruit set by chemical spraying if infestation is high.
- Build fire to produce smoke under the tree canopy to drive away adults, preferably done early morning or late in the afternoon (stop at pre-anthesis to post bloom stage).
- Some botanical insecticides have shown to control hoppers (neem, tobacco leaves, tubli and bulb onions).

### **THRIPS** (*Scirtothrips dorsalis*)



Adults

Damage

#### **Control measures:**

- Spray insecticide (recommended for sucking insects) as fine mist to protect flowers and flushes.
- Prune undesirable branches and infested leaves.
- Brisking of flowers at post full-bloom to remove dried florets that shelters the pest.
- Bagging of young fruits will minimize damage from thrips.

### **TIP BORER** (*Chlumetia transversa*)



Adult & larvae

Damage

#### **Control measures:**

- Adult moths are attracted to young leaves/ flower stalks for egg laying hence, these should be sprayed with insecticides.
- Insecticides except for those which are specific only for the control of mango leafhoppers can also kill tip borers, provided they have not entered the stalk. Hence, protection of flowers is very important.
- Infested part should be pruned and burned.
- Set-up light traps to attract adults.

## Insects damaging the fruits

### **CAPSID BUG** (*Helopeltis* sp.)



Adults

Damage

### **CECID FLY** (*Procantarinia* sp.)



Adult & larvae

Damage

#### **Control measures:**

- Pruning of crowded branches and infested leaves.
- Underbrushing and clearing of surroundings.
- Shallow soil cultivation and burning a layer of grasses/leaves below the tree canopy to destroy pupae in the soil.
- Timely application of insecticides to protect new developing fruits, preferably in the afternoon.
- Early bagging of fruits.

### **SCALE INSECT** (*Aonidiella orientalis*, etc.)



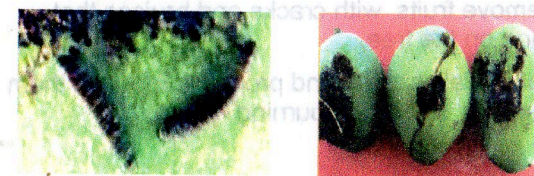
Adults & Nymphs

Damage

#### **Control measures:**

- Prune infested parts (branches and twigs) preferably during summer.
- These should be placed in pits constructed at one corner of the orchard. Allow branches and twigs to dry until the parasites escape. Burn the remaining debris.

### **BLACK BORER** (*Nephoteryx* sp.)



Larvae

Damage