## PREVENTIVE MEASURES

- Monitor weather condition; high relative humidity and intermittent rain favors the development of the insect. In such case, set-up traps to check adult population in the field. Traps could be made out of a gallon capacity plastic container cut into half painted black with transparent polyethylene (P.E.) plastic receptacle that is oiled inside. This should be placed 1m inside to 1m outside the canopy dripline. Magnifying glass or stereo microscope is needed to properly identify the insect.

## CONTROL MEASURES

- If adult population is high on monitored traps and/or initial damage is observed on fruits or leaves, spray insecticides.
- Spray insecticides early in the morning or in the afternoon. Mix insecticide with sticker especially if intermittent rain is experienced in the area.
- Spray also surrounding areas and vegetation to destroy population.
- Carbaryl or Lambdacyhalothrin is found effective to reduce infestation.


**For more information, please contact:**

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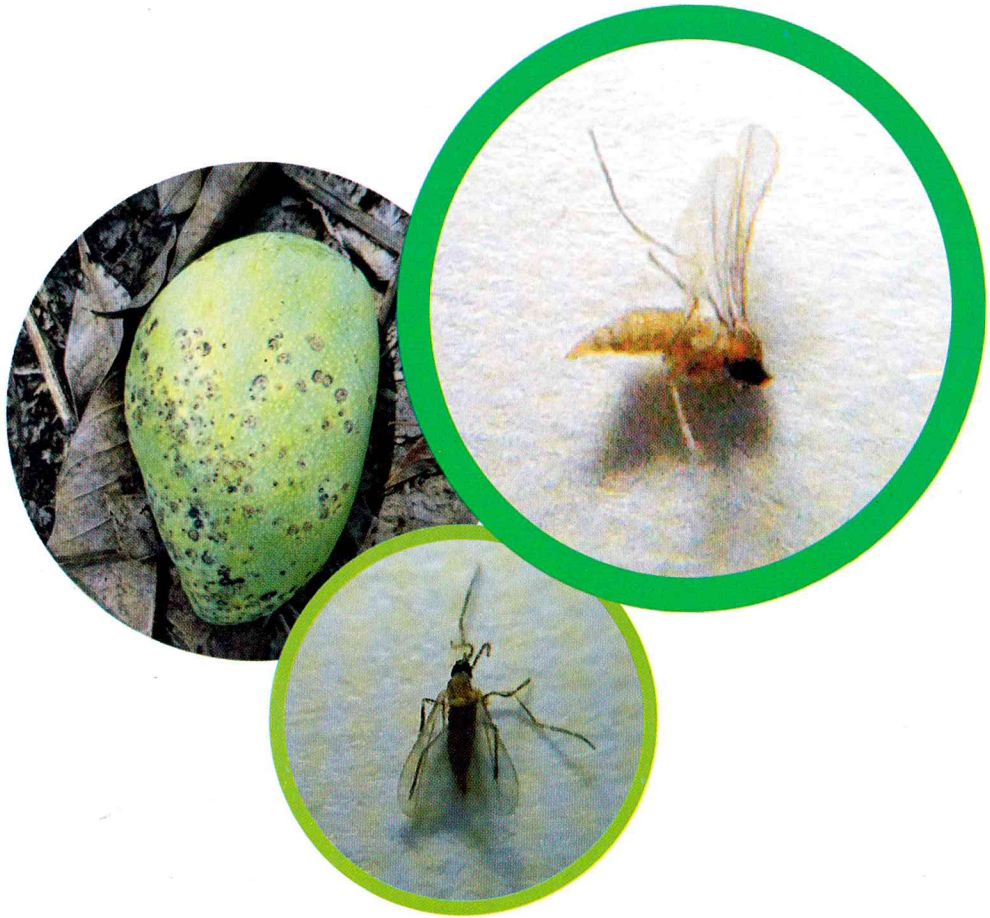
- Crop Pest Management Division, Bureau of Plant Industry


**Department of Agriculture**
**BUREAU OF PLANT INDUSTRY**

# CECID FLY

*(Procontarinia spp.)*



**GUIMARAS NATIONAL CROP RESEARCH, DEVELOPMENT AND PRODUCTION SUPPORT CENTER**

## WHAT IS CECID FLY?

- Cecid fly (*Procontarinia* spp.) belongs to the Family Cecidomyiidae, order Diptera.
- It is called Mango midge, Leaf gall midge, Gall fly and Mango leaf gall.
- It is considered as major pest of mango which infests the young leaves and fruits.
- The species attacking the leaves is different from those infesting the fruits (Medina, 2013). *Procontarinia pustulata* attacks the leaves while *Procontarinia frugivora* infests fruits.
- During high infestations, damage on fruits reaches up to 70 percent.

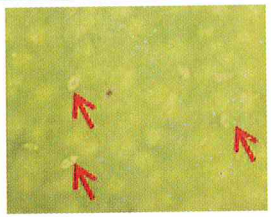
## BIOLOGY OF PEST

### Adult

- The adult fly looks like a mosquito but smaller in size with yellow-orange body and black head.
- The male adult fly measures about 1.61 mm while the female is 1.32 mm.
- The adult life span is about 1 to 2 days.

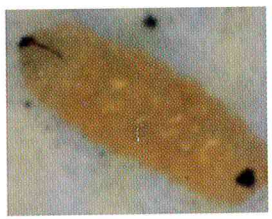
### Egg

- Eggs are small, white oblong laid on fruit or leaf surface and hatch in 1 to 2 days.



### Larva

- The newly-hatched larva is creamy in color and bores on the fruit skin or on young leaves using its saliva to soften the tissue forming galls and feeds inside.
- The larva stays on the fruit or leaves for 4 to 5 days and pops out to pupate.

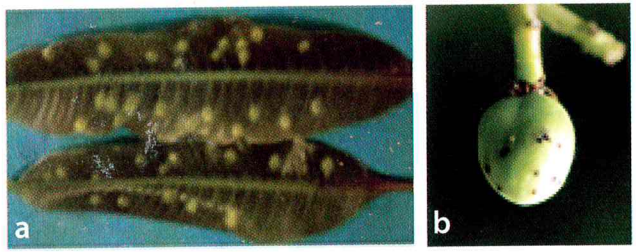


### Pupa

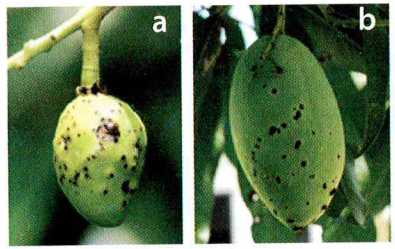
- Initially yellowish and turns blackish-yellow as it matures.
- Pupation occurs in the soil and develops into adult after 2 to 3 days.

## NATURE OF DAMAGE

- The insect infests young leaf and fruits from 32 to 70 days after flower induction (DAFI).
- The insect damage is usually associated with galling of young leaves. Fruits attacked produce circular, brown scab-like spots randomly distributed on the fruit surface.
- The damage is commonly called "buti," "nora-nora," "armalite," "kurikong," and "saksak walis" by growers. Infested fruits retain the scabby lesions up to harvest affecting their quality.




Damage on: a) young leaves and b) fruit 32 DAFI




Damage on fruits at: a) 40 and b) 70 DAFI

## PREVENTIVE MEASURES

- Damaged fruit should be collected and disposed properly to destroy the life cycle of the insect.
- Bag fruits early at 40 to 45 days after flower induction (DAFI).
- Underbrush and clear surroundings to destroy the habitat of the pest.
- Smudge early in the morning and in the afternoon during early fruit development stage to repel the insect.
- Prune trees to allow light penetration on the canopy to discourage the adult insect from staying.