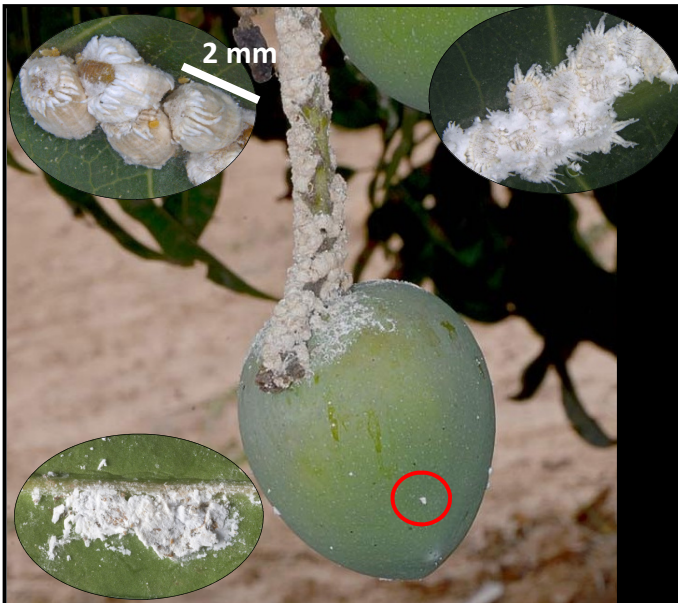




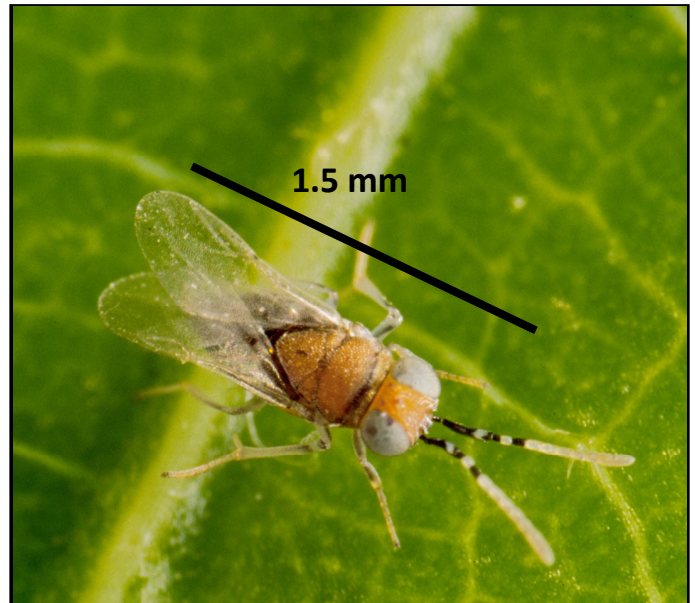
## Common pests and diseases on mango in Ghana



### Mealybugs

*Rastrococcus iceryoides (Rastrococcus invadens)*  
(©NBAIR)

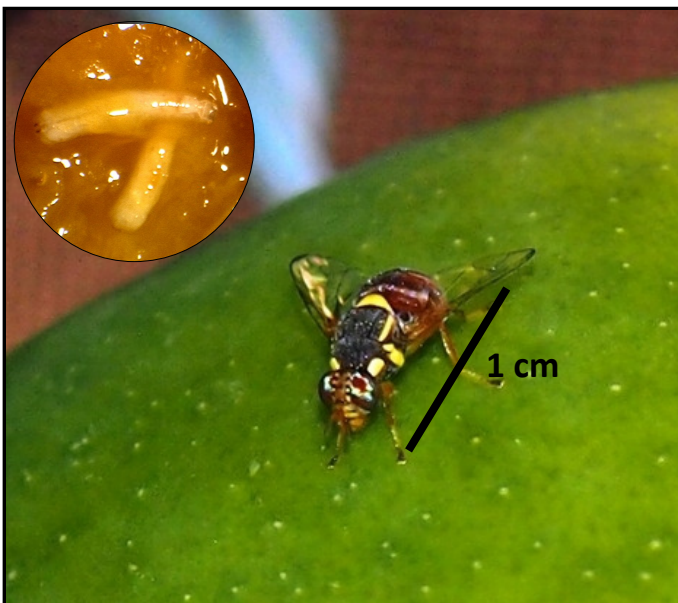
- Cotton wool-like small oval insects in stem joints, under leaves and on other protected areas of the plant
- Sticky leaves (caused by residue secreted by mealybugs to attach themselves)
- Wilting, yellowing or deformation of leaves



### Mealybug natural enemy — parasitic wasp

*Anagyrus* spp.  
(©Mourad Louadfel, Bugwood.org)

- Tiny, 1-2 mm in length, orange/brown/black
- Parasitic wasp that lays eggs inside mealybug eggs

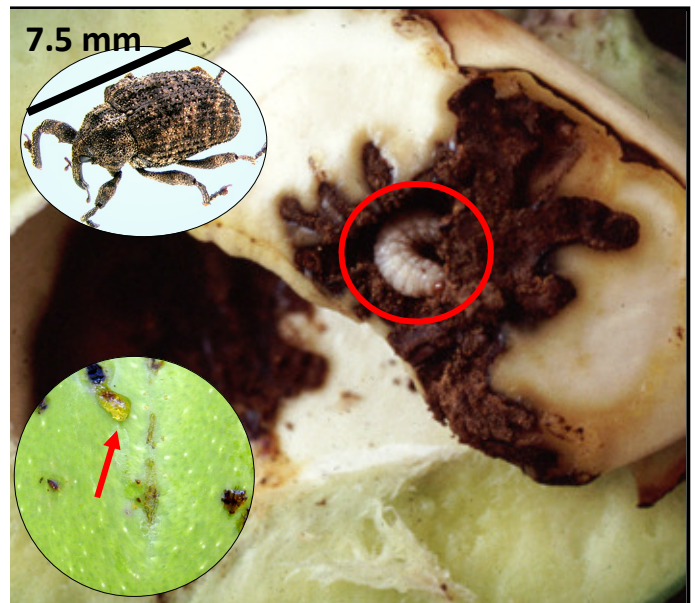


### Fruit flies

*Ceratitis* spp., *Bactrocera* spp., *Dacus* spp.

(©Ko Ko Maung, Bugwood.org; John W. Dooley, USDA APHIS PPQ, Bugwood.org)

- Adults: 0.5-1 cm in length, variable colour (often yellow/black)
- Larvae: white/cream, in fruits and soil below tree (2-5 cm deep)
- Pupa: reddish brown, about the size of a grain of wheat, in soil below tree (2-5 cm deep)
- Tiny egg laying holes surrounded by patches of brown/black soft rot and/or oozing or dry sap, on fruit surface



### Mango seed weevil

*Sternochetus mangiferae*

(©Peter A. Follett; ©Georg Goergen/IITA Insect Museum, Cotonou, Benin; Renkang Peng)

- Adults: black/grey/red/yellow, 7.5 mm long with a long 'nose', under bark, around tree base, in forks of branches or leaf litter
- Feeding damage on new leaf growth
- Egg laying marks (small, dark, crescent-shaped, area of about 0.3 mm) on fruit skin when fruit is marble size
- Amber coloured sap on immature fruit, abnormal fruit shape, malformed skin
- Larvae: (white, legless, dark head) feed inside the seed and cause rot



## Powdery mildew

*Acrosporium mangiferae* (syn. *Oidium erysiphoides* f. *mangiferae*)  
(©Mary Musyoka; AA Seif, ICIPE; Scot Nelson, Flickr)

- Small patches of white powder on flowers and leaves which may join together. As white patches wear away, purpleish-brown patches may appear on leaves and fruits — blotches may crack and form corky tissue
- Flowers may fail to open or drop from the panicles
- Distorted leaves may curl downwards, turn brown, dry and fall



## Anthraco

*Colletotrichum gloeosporioides*  
(©Scot Nelson, Flickr)

- Small, angular brown/black lesions on leaves, stems and flowers. These may join together to form large lesions
- Flowers may not set fruit
- Dark brown sunken decay spots on ripe fruit
- Pinkish-orange spore masses on stem and fruit lesions under wet conditions



## Mango thrips

*Scirtothrips mangiferae*  
(©Scot Nelson, Flickr)

- Thrips scrape the underside of the leaf, producing downwards curl and silvery sheen.
- Leaves turn brown and if infestation is severe may die.



## Bacterial black spot

*Xanthomonas axonopodis* pv. *mangiferaeindicae*  
(©Scot Nelson; Jeremiah Nuety Teye, MOFA)

- Small brown oily spots on leaves that turn into necrotic black angular raised spots, sometimes surrounded by a yellow halo
- Cracks, raised spots and cankers on branches, petioles and peruncles
- Small, black, raised spots, often teardrop-shaped on fruits. These enlarge and crack
- Sticky gum may ooze from cankers