Reference: - eagri.org

Pest of Mango

1.	Mango Hoppers	Idioscopus niveosparsus, I. clypealis, Amritodus atkinsoni
2.	Stemborer	Batocera rufomaculata
3.	Fruitfly	Bactrocera dorsalis
4.	Mango Nut Weevil	Sternochaetus mangiferae
5.	Mango Mealy Bug	Drosicha mangiferae
6.	Bark Eating Caterpiller	Indarbela tetraonis, I. quadrinoatata
7.	Flower Gall Midge	Procystiphora mangiferae, Erosomyia indica, Dasineura amaramanjarae
8.	Mango Leaf Webber	Orthaga exvinacea
9.	Shoot Borer	Clumetia transversa
10.	Leaf Caterpiller	Bombotelia jacosatrix
11.	Flower Webber	Eublemma versicolor

1. Mango hoppers: *Idioscopus niveosparus, I. clypealis, Amritodus atkinsoni*

Host range: Mango

Damage symptoms

- Both nymphs and adults suck the sap from tender shoots and inflorescence resulting in withering and shedding of flower buds and also wilting and drying of shoots and leaves.
- The flower stalks and leaves in infested trees become sticky due to the deposition of honeydew secreted by the hoppers that encourages the growth of black sooty mould on foliage and other parts.
- The hoppers take shelter in cracks and crevices on the bark during non-flowering season.

Management

- Avoid excess use of nitrogenous fertilizers
- Spray dimethoate 30 EC or moncrotophos 36 SL 2.5-3.3 L , methyldemeton 25 EC or malathion 50 EC 1.5 -2.0 L in 1500 – 2000 L of water per ha or acephate 75 SP @ 1 g/L, phosalone 35 EC @1.5 ml/L, or new molecules like buprofezin 25 SC 1-2ml/L of water or imidacloprid 17.8 SL 2-4ml/tree or lambda cyhalothrin 5 EC 0.5-1.0ml/L of water at 10 -15 L of water per tree
- Neem oil 5 ml/lit of water can be mixed with any insecticide for spray
- Spray 3 per cent neem oil or neem seed kernel powder extract 5 per cent

2. Stemborer: *Batocera rufomaculata*

Host range: Mango, rubber, jack-fruit, fig, papaya, apple, eucalyptus and mulberry, morings and silk cotton.

Damage symptoms

- The grubs feed by tunneling the bark of branches and main stem.
- Shedding of leaves and drying of terminal shoots takes place in early stage of attack while damage to main stem causes tree death

Management

- Grow tolerant mango varieties viz., Neelam, Humayudin.
- During off-season, apply absorbent cotton soaked in 10 ml monocrotophos 36 SL per tree by padding without unnecessarily injuring the trunk.
- Use a needle or long wire to pull out the grubs from the bore holes. The bore holes may be filled with DDVP @ 5 ml or monocrotophos 36 WSC 10 to 20 ml or one celphos tablet (3 g aluminum phosphide) or apply carbofuran 3G 5 g per hole and plug with clay + copper oxychloride paste.

3. Fruit fly: *Bactrocera dorsalis*

Host range: Mango, guava, peach, apricot, cherry, pear, ber, citrus, banana, papaya, avocado, passion fruit, coffee, melons, jack fruit, strawberry.

Damage symptoms

- The maggots destroy and convert the pulp into bad smelling, discolored semi liquid mass unfit for human consumption.
- Infestation results in fruit drop and liquid oozes out from the fruit upon pressing.

Management

- Apply a bait-spray of malathion 50 EC @ 2 ml/ L with molasses or jaggery (10 g/L) before ripening.

4. Mango nut weevil: *Sternochaetus mangiferae*

Damage symptoms

- The grub tunnels in a zig-zag manner through the pulp endocarp, seed coat and finally reaches the cotyledons and destroys them. As the fruit develops the tunnel get closed.
- The adults that emerge from the pupae also feed on the developing seed and hasten the maturity of infested fruit.

Management

- Collect and destroy the fallen fruits and stones
- Spray application of malathion 50 EC 1ml/L; Carbaryl 3-4 kg (4 g/L of water) or Quinalphos 3- 4 L (2 ml/L of water) in 1500-2000 L water per ha in Sept-Oct on the tree first at marble stage of the fruit second at 15 days interval.
- During non-flowering season direct spray towards the base of the trunk.

5. Mango mealy bug: *Drosicha mangiferae*

Host range: Mango, apple, apricot, ber, cherry, Citrus spp., fig, grape vine, guava, jack, jamun, litchi, mulberry and pomegranate.

Damage symptoms:

- Damages caused by nymphs and wingless females
- . They infest the leaves and inflorescence.
- Nymphs climb up the tree congregate together and suck juice from young shoots, panicles and flower pedicels.
- The affected parts dry up and yield is reduced substantially.

Management

- Remove weeds like *Clerodendrum inflortunatum* and grasses by ploughing during June-July.
- If necessary spray dimethoate 30 EC or moncrotophos 36 SL 2.5-3.3L , methyldemeton 25 EC or malathion 50 EC 1.5 -2.0 L or chlorpryriphos 20 EC 3.0 – 4.0 L or methyl parathion 50 EC 1.5 – 2.0 L in 1500 – 2000 L water per ha

6. Bark eating caterpillar: *Indarbela tetraonis*

Host range: Mango, guava, zizyphus, litchi, orange, pomegranate, bauhinia, loquat, mulberry, moringa, rose, guava and eugenia.

Damage symptoms

- Caterpillars bore into the trunk or junction of branches make zig zag galleries Presence of gallery made out of silk and frass is the key symptom.

- They remain hidden in the tunnel during daytime, come out at night and feed on the bark. Under severe infestation, flow of sap is hindered, plant growth arrested, and fruit formation is drastically reduced.

Management

- Kill the caterpillars by inserting an iron spike into the tunnels.
- Injecting ethylene glycol and kerosene oil in the ratio of 1:3 into the tunnel by means of a syringe and then seal the opening of the tunnel with mud.
- Dip a small piece of cotton in any of the fumigants, like chloroform or petrol or kerosene, introduce into the tunnel and seal the opening with clay or mud.

7. Flower gall midge: *Procystiphora mangiferae, Erosomyia indica, Dasineura amaramanjarae*

a. *Procystiphora mangiferae*

Damage symptoms: The maggot feeds on stalks of stamen, anthers, ovary.

b. *Erosomyia indica*

Damage symptoms: Maggots attack the inflorescence stalk, flower buds and small developing fruits. Inflorescence is stunted and malformed and buds do not open.

c. *Dasineura amaramanjarae*

Damage symptoms: Maggots feed inside buds and the buds fail to open and drop down

Management

- Spray dimethoate 30 EC or methyl demeton 25 EC 3.0 - 4.0 L in 1500-2000 L of water per ha (10-15 L of spray fluid per tree.

8. Mango leaf webber: *Orthaga exvinacea*

Damage symptoms

- Larvae web up leaves into clusters and feed within. Leaves surface are scraped, and they wither and dry up.

Management

- Remove and destroy the webbed leaves along with larvae and pupae
- Spray carbaryl 50 WP at 2.0 L Conserve predators like carabid beetle *Parena lacticincta*, reduvid *Oecama sp*, parasitoid *Hormiusa* and fungus *Paecilomyces farinosus*.

9. Shoot borer: *Chlumetia transversa*

Damage symptoms

- Neonate caterpillars bore into mid ribs of tender leaves, come out and bore into tender shoots near the growing point tunnelling downwards, throwing excreta through entrance hole.
- Leaves of affected shoots whither and droop down.

Management

- Clip off and destroy affected shoots in initial stage of attack.
- In case of severe attack spray carbaryl two times at three weeks interval commencing from initiation of new flush of leaves.

10. Leaf caterpillar: *Bombotelia jacosatrix* (Noctuidae: Lepidoptera)

- Larvae feeds on tender leaves causing defoliation. Larva is smooth with pink spots on the body. Pupation takes place in soil and adult moth is dark brown with lower half of the hind wings white.

11. Flower webber: *Eublemma versicolor*

Damage symptoms

- Flowers in the inflorescence are webbed together by the larvae, hich remain inside the silk lined gallery and feed.
- They also bore into the inflorescence stalk.

Management

- Spray phosalone 35 EC 3.0 - 4.0 L or carbaryl 50 WP 3.0 kg in 1500-2000 L of water per ha (10-15 L of spray fluid per tree)