Mango

Diseases

Powdery Mildew *(Oidium mangiferae)* :

Powdery mildew is one of the most serious diseases of mango affecting almost all the varieties. The characteristic symptom of the disease is the white superficial powdery fungal growth on leaves, stalk of panicles, flowers and young fruits. The affected flowers and fruits drop pre-maturely reducing the crop load considerably or might even prevent the fruit set. Rains or mists accompanied by cooler nights during flowering are congenial for the disease spread.

Control : Alternate spraying of Wettable sulphur 0.2 per cent (2 g Sulfex/litre), Tridemorph O.1 per cent (1 ml Calixin/litre) and Bavistin @ 0.1 % at 15 days interval are recommended for effective control of the disease. The first spray is to be given at panicle emergence stage.

Anthracnose *(Colletotrichum gloeosporioides) :*

It is of widespread occurrence in the field and in storage. The disease causes serious losses to young shoots, flowers and fruits under favorable climatic conditions (high humidity, frequent rains and the temperature range of 24-32°C). The disease produces leaf spot, blossom blight, withered tip, twig blight and fruit rot symptoms. Tender shoots and foliage are easily affected which ultimately cause die back of young branches. Older twigs may also be infected through wounds, which in severe cases may be fatal. Black spots develop on panicles. Severe infection destroys the entire inflorescence resulting in failure of fruit setting. Young infected fruits develop black spots, shrivel and drop off. Fruits infected at mature stage carry the fungus into storage and cause considerable loss during storage, transit and marketing.

Control : The diseased twigs should be pruned and burnt along with fallen leaves. Spraying twice with Carbendazirn (Bavistin 0.1%) at 15 days interval during flowering controls blossom infection. Spraying of copper fungicides (0.3%) is recommended for the control of foliar infection.

Postharvest disease of mango caused by anthracnose could be controlled by dip treatment of fruits in Carbendazim (0.1%) in hot water at 52^{0}C for 15 minutes.

Die Back (*Botryodiplodia (Lasiodiplodia)* theobromae) **:**

Die back is one of the serious diseases of mango. The disease on the tree may be noticed at any time of the year but it is most conspicuous during October-November. The disease is characterized by drying of twigs and branches followed by complete defoliation, which gives the tree an appearance of scorching by fire. Initially it is evident by discoloration and darkening of the bark. The dark area advances and extends outward along the veins of leaves. The affected leaf turns brown and its margins roll upwards. At this stage, the twig or branch dies, shrivels and leaf falls. This may be accompanied by exudation of yellowish brown gum.

Control : Pruning of the diseased twigs 2-3 inches below the affected portion and spraying Copper Oxychloride (0.3%) on infected trees controls the disease. The cut ends of the pruned twigs are pasted with Copper Oxychloride (0.3%).

Phoma Blight *(Phoma glomerata)* **:**

The symptoms of the disease are observed only on old leaves. Initially, the lesions are angular, minute, irregular, yellow to light brown, scattered over leaf lamina. As the lesions enlarge, their colour changes from brown to cinnamon and they become almost irregular. In case of severe infection such spots coalesce forming patches resulting in complete withering and defoliation of infected leaves.

Control : The disease is controlled by spraying Benomyl (0.2%) just after the appearance of the disease followed by 0.3% Miltox (Copper Oxychloride + Zineb) at 20 day interval.

(e) Bacterial Canker *(Xanthomonas campestris* pv. *mangiferaeindicae)* **:**

Canker is a serious disease in India. The disease causes fruit drop (10-70%), yield loss (10-85%) and storage rot (5-100%). Many commercial cultivars of mango including Langra, Dashehari, Arnrapali, Mallika and Totapuri are susceptible to this disease. The disease is found on leaves, petioles, twigs, branches and fruits. The disease first appears as minute water soaked irregular lesions on any part of leaf or leaf lamina. Several lesions coalesce to form irregular necrotic cankerous patches. In severe infections the leaves turn yellow and drop off. Cankerous lesions also appear on petioles, twigs and young fruits. The water soaked lesions also develop on fruits which later turn dark brown to black. They often burst open, releasing highly contagious gummy ooze containing bacterial cells.

Control : Three sprays of Streptocycline (0.01%) or Agrimycin-100 (0.01%) after first visual symptom at 10 day intervals and monthly sprays of Carbendazim (Bavistin 0.1%) or Copper Oxychloride (0.3%) are effective in controlling the disease.

Red Rust *(Cepbaleuros virescens)* :

The disease attack causes reduction in photosynthetic activity and defoliation of leaves thereby reducing the vitality of the host plant. The disease is evident by the rusty red spots mainly on leaves and sometimes on petioles and bark of young twigs. . The spots are greenish grey in colour and velvety in texture. Later, they turn reddish brown. The circular and slightly elevated spots sometimes coalesce to form larger and irregular spots. The affected portion of stem cracks. In case of severe infection, the bark becomes thick, twigs get enlarged but remain stunted and the foliage finally dries up.

Control : Two to three sprays of Copper Oxychloride (0.3%) is effective in controlling the disease.

Sooty Mould *(Meliola mangiferae) :*

The disease is common in the orchards where mealy bug, scale insects and hoppers are not controlled efficiently. The disease in the field is recognized by the presence of a black sooty mould on the leaf surface. In severe cases, the trees turn completely black due to the presence of mould over the entire surface of twigs and leaves. The severity of infection depends on the honey dew secretion of the above insects. Honey dews secretions from insects stick to the leaf surface and provide necessary medium for fungal growth. Although the fungus causes no direct damage, the photosynthetic activity of the leaf is adversely affected.

Control : Pruning of affected branches and their prompt destruction followed by spraying of Wettasulf (0.2%)+ Metacid (0.1 %)+ gum acacia (0.3%) helps to control the disease.

Diplodia Stem-end Rot (*Lasiodiplodia theobromae)* :

The fungus enters through mechanically injured areas on the stem or skin. The fungus grows from the pedicel into a circular black lesion around the pedicel.

Control : Careful handling to minimize mechanical injuries. Postharvest dip of fruits in Carbendazirn (0.1%) in hot water at 52 ± 1°C for 15 minutes controls the disease in storage and transit.