

DISEASES OF MANGO



**B. Sc (Agril.)
Semester-VI**

Course No. Pl. Path-321

**Diseases of Field and Horticulture Crops and Their Management-II
Credit 3 (2+1)**

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Major Disease of Mango

- Anthracnose: *Colletotrichum gloeosporioides*.
- Malformation: *Fusarium moniliforme* var. *subglutinans*.
- Bacterial blight: *Xanthomonas campestris* pv. *mangiferae indicae*.
- Powdery mildew: *Oidium mangiferae* (*Acrosporium mangiferae*).

Anthracnose of Mango

Symptoms :

- This disease produces leaf spots, blossom blight, wither tip, twigs blight and fruit rot.
- Young leaves wither and dry up.
- Sometimes leaf margins darken, dry up, may fall out, giving the leaf a ragged appearance.
- Tender twigs wither.
- Affected branches ultimately dry up.



- Spots appear on fruits when they are more than half c.m. near the stem end as small brown areas that **enlarge rapidly and become black**.
- In some cases the areas involved are in the form of streaks running down from the stem end.
- The affected areas usually **crack and sink slightly**.
- The decay is confined to the skin of the fruit except in late stages when it penetrates the flesh in shallow areas.
- **The latent infection is carried from the field and develops further which causes rotting in the storage.**

Survival and spread

- **Contact with diseased fruit** during transport and storage.
- The inoculum remains on dried leaves, defoliated branches mummified flowers and flower brackets.
- **The secondary spread is through rain drops.**

Favourable conditions :

- Temperature of 25°C and R.H 95-97%.

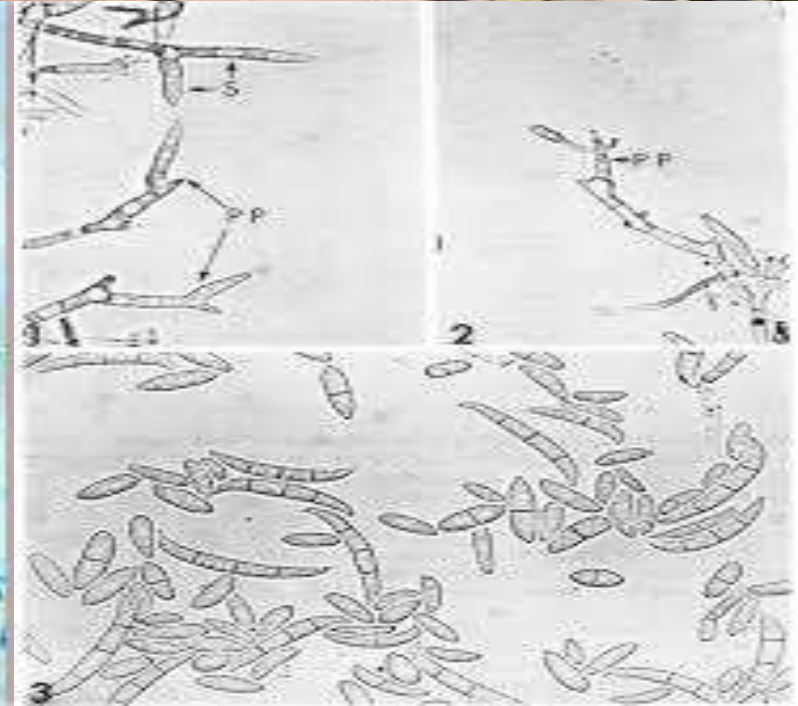
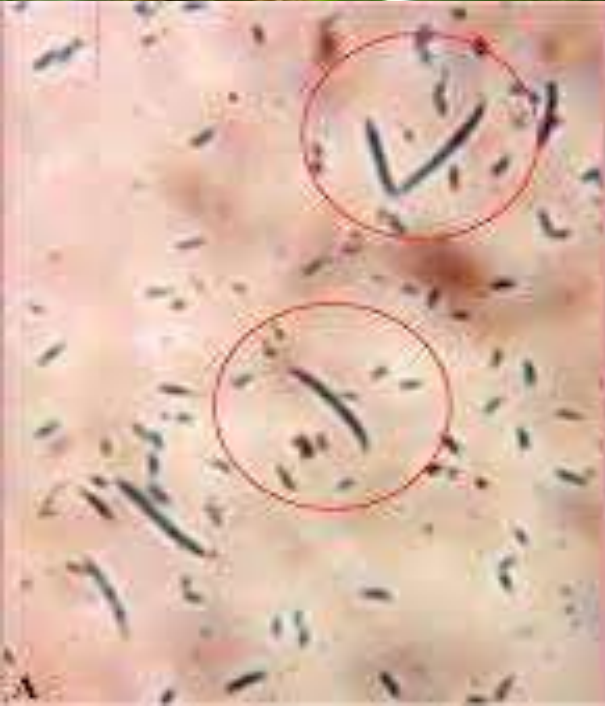
Management

- **Spray** carbendazim or Topsin M. (0.1%) or Chlorothalonil (0.2%), Blitox and Dithiocarbamate at **14 days intervals** until harvest.
- **Before storage**, treat with hot water, (50-55°C) for 15 minutes or dip in Benomyl solution (500ppm a.i.) or Thiobendazole (1000ppm) for 5 minutes or **expose them to ammonia, sulphur dioxide and Carbon dioxide gases.**

Mango malformation

Symptoms

- There are two types of symptoms namely floral malformation and vegetative malformation.
- There is a proliferations of infected tissue.
- The flowering panicles instead of coming out as a normal one turns into just compact bunch of hard flowers.
- Individual flower is greatly enlarged and has a large disc.
- The inflorescence gets hypertrophied.
- The percentage of bisexual flowers in malformed panicles is very low.



- **In bunchy top**, compact leaves are formed in a bunch at the apex of shoot or in the leaf axil.
- A similar bunch consisting of small rudiments crowded together on short shootlets is seen in Vegetative malformation in which the growth of shootlet is arrested.
- **Vegetative malformation** is more pronounced in young seedling and seedling trees.
- The malformed heads dry up in black masses and persist on the trees for a long time.

● **Management**

- Incidence reduced by spraying 100-200ppm **NAA** during October.
- Use of disease free planting material and prophylatic spray of insecticides and fungicides.
- Diseased plants should be destroyed.
- Certification of plants used for propagation by nurseries should be made compulsory.
- Pruning of diseased parts along the basal 15-20 cm apparently healthy portions.
- This is followed by the spraying of Carbendazim (0.1%) or Captof (0.2%).

Bacterial blight or Black Spot

Symptoms

- If affects leaves, petioles, fruits and tender stems.
- **Small, water soaked lesions appear in groups towards the tip of the leaf blade.**
- They increase in size, turn brown to black and get surrounded by a distinct halo.



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- On young fruits water-soaked lesions develop which also turn dark brown to black.
- Infected fruits may show crack in the skin and badly affected ones drop prematurely.

Spread and survival

- Spread during the rains and becomes severe in July-August.

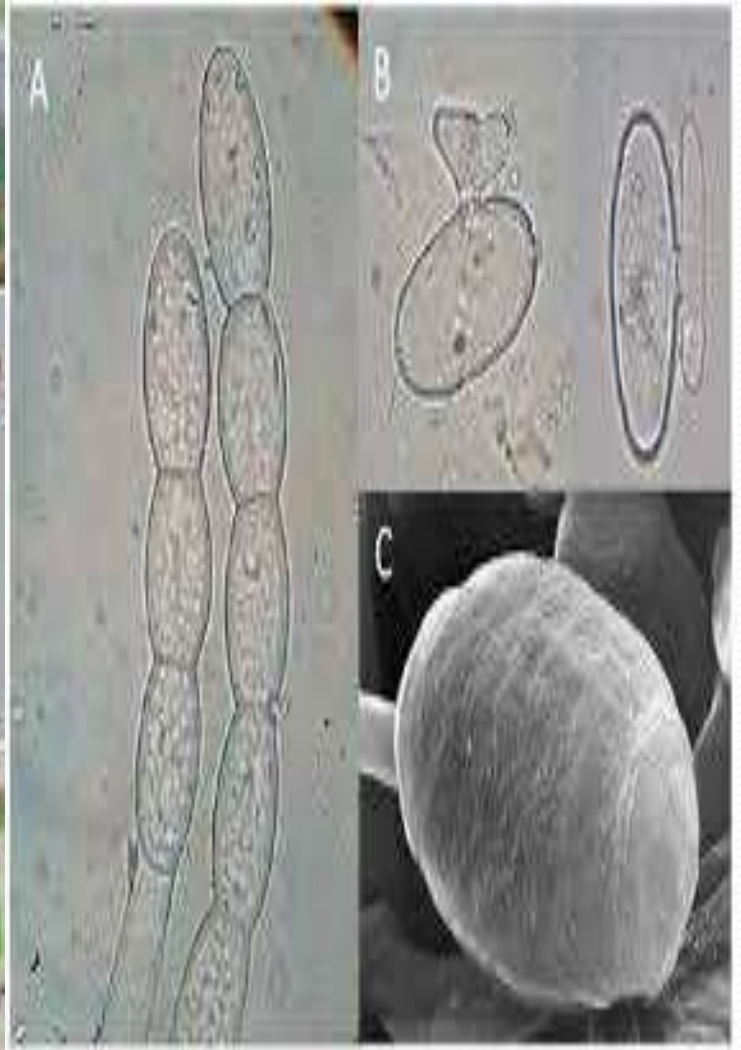
Management

- Orchard sanitation and seedling certification.
- **Spray** Agrimycin-100, Plantomycin (200 ppm) or Carbendazim 0.1%.

Powdery mildew

Symptoms

- It attacks the **leaves**, **flower scales**, **buds stalks** and **fruits**.
- It manifests itself by the appearance of wefts of white mycelium on the affected parts.
- The whole surface is later on covered with a powdery substance which is brown away by even a slight disturbance caused by winds.



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- The affected fruits do not grow in size and may drop before attaining pea size.

Favourable conditions

- Warm temperature with heavy morning dew and cloudy weather.

Management

- **Dusting** the plants with fine sulphur (250-300 mesh) at the rate of 0.5 kg/tree.
- The first application may be soon after flowering, second 15 days later followed by a third one or spray benlate (0.2%) or wettable sulphur (0.2%), Carbendazim (0.1%), microsul (0.2%) butrimate, Tridemorph (0.05 to 0.1%), Karathane 0.07%.