

## Tamarind: Powdery Mildew Disease

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### SUMMARY

Tamarind (*Tamarindus indica* L.) belongs to the family Leguminaceae and subfamily Caesalpinaceae. Tamarindus genus is monotypical, and it contains one species. Tamarindus indica is generally called tamarind. Tamarind is widespread in the tropics and subtropics, and grows in Africa, Asia and Central America in more than 50 countries. It's native to Tropical Africa. Though there is a widespread misconception that tamarind is originally from India

### INTRODUCTION

Tamarind is an important crop in the dry tropic region of Mexico. Powdery mildew (*Oidium* sp.) is a disease that affects this leguminous crop and causes fruit production to decrease by up to 60 per cent. Lesions on leaves are powdery a white mycelium is formed on the foliar surface, with a hyphal net. Powdery mildew has a close connection to the monsoon season, the emergence of young plant shoots and thus dry days, the maximum incidence of disease occurs during August-October. The damage this disease causes increases in orchards that have poor agricultural management practices.

### Symptoms

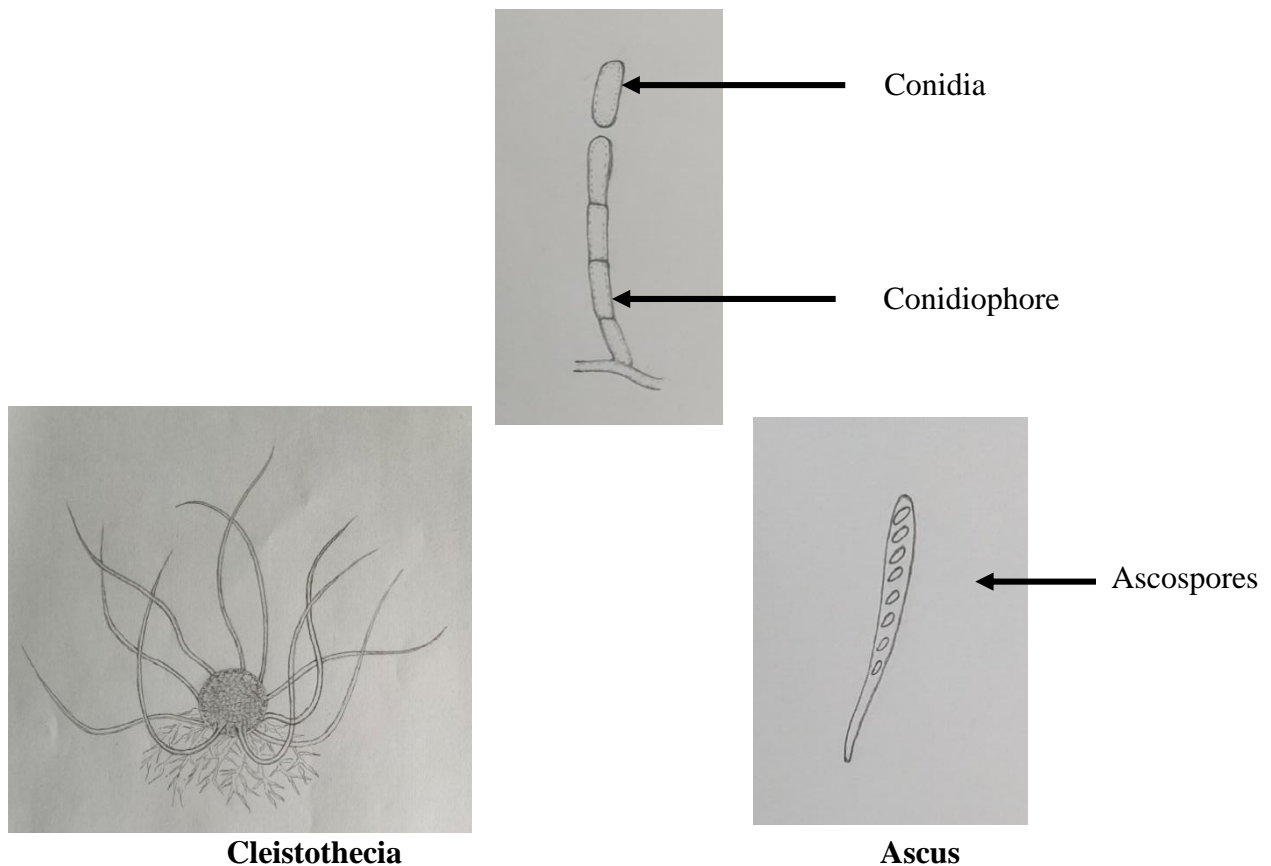
- The pathogen infects the tree at all stages.
- The infected leaves appear small irregular powdery spots on the upper leaf surface.
- These spots are gradually increasing its size and become circular which also covers the lower surface.
- When the infection is extreme, both leaf surfaces are entirely covered with whitish powdery growth.
- In severe infections, foliage is yellow causing the defoliation to premature.
- During the mid and late summer the disease gets severe.
- The white powdery spots fully cover the stem and the petioles. The plant takes a grayish white look.
- Yield is reduced in infected trees.

### Pathogen

- The fungus is ectophytic, it spreads across the surface of the leaf and brings haustoria into the epidermal cells.
- Emerge vertically from the surface of the leaf, in short chains bearing conidia.
- Conidia are hyaline, thin walled, elliptical or barrel shaped or cylindrical and single celled.



Powdery mildew infected leaves



- Later in the season appears as minute, black, globose structures with myceloid appendages.
- Each cleistothecia contains 4-8 asci and each ascus contains 3-8 elliptical, hyaline, and single-celled ascospores.

### Disease Cycle

The fungus is an obligate parasite and survives as **cleistothecia** in the infected plant debris.

**Primary infection** - Ascospores and Cleistothecia.

**Secondary spread** - Air-borne conidia (Rain splash).

### Favorable Conditions

Powdery mildew is most common in spring and fall, during dry, humid rainy weather, when the days are dry and the nights are cool. Excess nitrogen also causes the disease. It's heavy in moderately to deeply shaded areas.

### CONCLUSION

To treat powdery mildew disease foliar spray with Wettable sulphur @ 0.2% or Carbendazim or Tridemorph or Dinocap @ 0.1per cent is recommended.

### REFERENCES

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