

COFFEE

Sc.Name: *Coffea arabica/Coffea robusta*

MAJOR DISEASE OF COFFEE

FUNGAL DISEASE	
Leaf rust	<i>Hemileia vastatrix</i>
Anthracnose	<i>Colletotrichum coffeanum</i> (i.s) <i>Glomerella cingulata</i> (p.s)
Brown eye spot	<i>Cercospora coffeicola</i>
Black rot	<i>Corticium koleroga</i>
Sooty mould	<i>Capnodium brasiliense</i>

LEAF RUST OF COFFEE

- Also known as Oriental leaf disease.
- It cause Severe epidemics in Srilanka in 1868.

SYMPTOMS

- The fungus confines itself to the leaf blade, rarely occurs on the berries
- Small, pale yellow spots on the upper surfaces of the leaves usually around the margins.
- Later masses of orange uredospores appear on the under surfaces
- The fungus sporulates through the stomata rather than breaking through the epidermis, so it does not form the pustules typical of many rusts.
- The powdery lesions on the undersides of the leaves can be orange-yellow to red orangein color.
- The centers of the spots eventually dry and turn brown, while the margins of the lesions continue to expand and produce uredospores.
- Infection slowly progresses upward in the tree and host tissue becomes dark brown, then black and dries up.
- The infected leaves drop prematurely, leaving long expanses of twigs devoid of leaves.
- The damage to the plant is severe when it affects the young flush, causing defoliation and considerable reduction in yield.

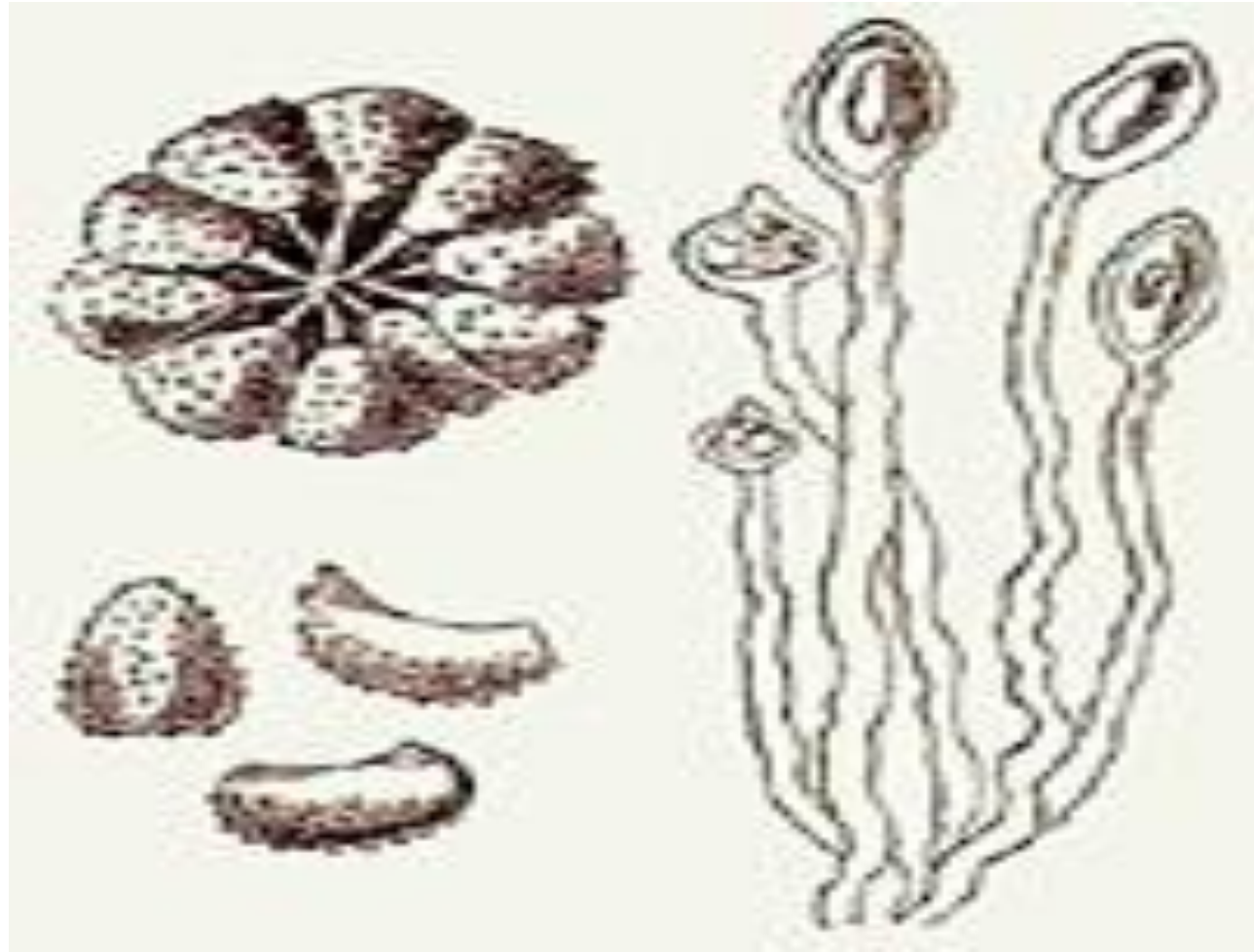
LEAF RUST OF COFFEE



PATHOGEN

- Causal organism: *Hemiliea vastatrix*
- The fungus is mostly intercellular drawing food from cells through haustoria.
- It produces uredospores and teleutospores on club-shaped erumpent stalks rising through the stomata.
- Uredospores are reniform, with an orange segment like appearance, the convex side echinulate and the lower or concave side smooth.
- Telial stage develops in the same spot producing turnip like, hyaline thick walled teleutospores.

UREDOSPORES AND TELEUTOSPORES



Cont..

SURVIVAL AND SPREAD

- P.I: Survive as mycelium or uredospores in infected leaves.
- S.I: Uredospores dispersed by wind and water.
- **Pycnial and aecial stages are not known.**

FAVOURABLE CONDITIONS

- Uredospores germinate only in free moisture
- Thick canopy of shade prevents the ready spread of the spores and thus secondary spread of the disease
- Rainy weather and heavy dew
- Severe from July to Dec
- **Management**
- Spray the bushes once with BM@0.5% or COC@0.25% and subsequently 2-3 times during monsoon.
- Spray Triadimefon@0.05%
- Collect diseased leaves and destroy.