

B.Sc. Third Year, Semester - V
Botany Paper No. XVI (C)
Plant Pathology Unit-2

7) Weeds

a) Rust of Euphorbia



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7) Weeds:

a) Rust of Euphorbia

Causal Organism: *Melampsora euphorbiae*

Host: *Euphorbia hirta*

. Classification

- **Division-** Mycota
- **Sub Division-** Eumycotina
- **Class-** Basidiomycetes
- **Order-** Pucciniales/ Uredinales
- **Family-** Melampsoraceae
- **Genus-** *Melampsora*
- **Species-** *euphorbiae*

Distribution

It is an herb found in many part of the world. Locally known as Dudhani a weed of uncultivated areas was found infected with rust disease. The plant is native from India, but it is tropical weed found especially on roadsides and wasteland. The plant has a reputation for increasing milk flow in cattle(goat).

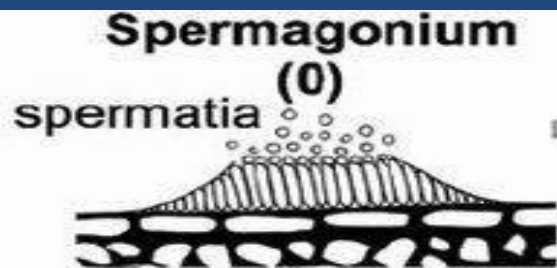
Symptoms:



The pustules were orange yellow in colour necrotic spots were appearing on upper surface of leaves with orange spore masses on the lower surface.

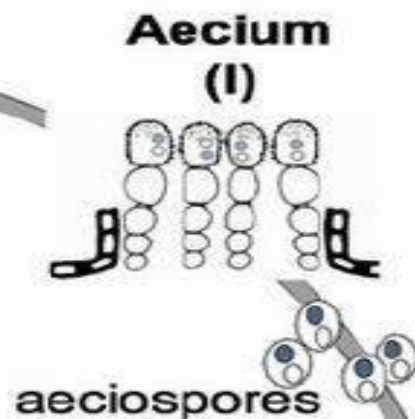
Causal organism and disease cycle:

Rust of Euphorbia was caused by *Melampsora euphorbiae*. It is an autoceous rust infects a large number of wild and cultivated species of Euphorbia. Uredina 0.3- 0.5 mm diameter with capitate paraphyses, uredinospores are subgloboid or ellipsoid with 1.0 to 2.5 micrometer thick, hyaline and echinulate walls and teliospores were 27 to 55 micrometer long and 13 to 16 micrometer wide with pale brown walls 1.0 to 1.5 micrometer thick apically thickened to 2.5 micrometer.



Plasmogamy

aecia primordia receive nuclei from opposite mating type spermatia through receptive hyphae



AECIAL HOST
Depending on the *telamspora* species

urediniospores

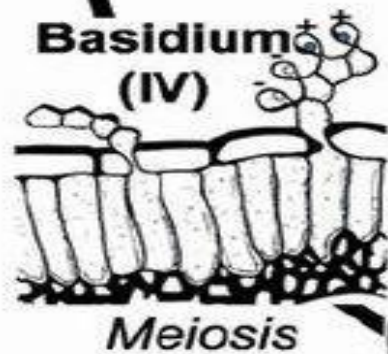
Epidemic cycles



Telium (III)

teliospores

Karyogamy



basidiospores



Control measures:

- **Eradication**
- **Use weedicide like 2-4 D, Atrazine weedicide**

Thank you