FUSARIUM

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- Division mycota
- Subdivision-Eumycotina
- Class- Deuteromycetes
- Order-moniliales
- Family-Tuberculariaceae
- Genus-*Fusarium*

The form genus is represented by large number of species. Most of the species are SAPROPHYTIC. Some species are facultative parasite and cause serious diseases. They cause root rot and wilt diseases.

- Wilt of pigeonpea (*Cajanus cajan*) is caused by ***fusarium udum***
- wilt of cotton (*Gossypium*) is caused by ***fusarium vasinfectum***
- wilt of tomato (Lycopersicon esculentum) is caused by ***fusarium lycopersici***.

Wilting Condition results due to blockage of vessels because the fungus colonizers itself in the vessels of xylem tissue.

The vessels are blocked with fungal mycelium and reproductive structures.

Mycelium Mycelium is well-developed, branched healing, septate and multinucleate. The mycelium in parasitic species is intracellular as well as intracellular. Hyphae are confined to the xylem vessels and tracheids. Hyphae produce toxic substances and block the xylem vessels completely.

Reproduction

Reproduction in fusarium occurs by a**sexual means only**.

As it is a member of duteromycetes sexual reproduction is absent in fusarium.

Asexual reproduction occurs by the formation of three types of asexual structures which include **microconidia, macroconidia** and **Chlamydospores, sclerotia.**

- **Microconidia**
- The microconidia are comparatively smaller than macroconidia.
- Microconidia are produced from tips of simple or branched coniophores.
- They are hyaline, elliptical, ovoid or curved.
- They are produced in large numbers

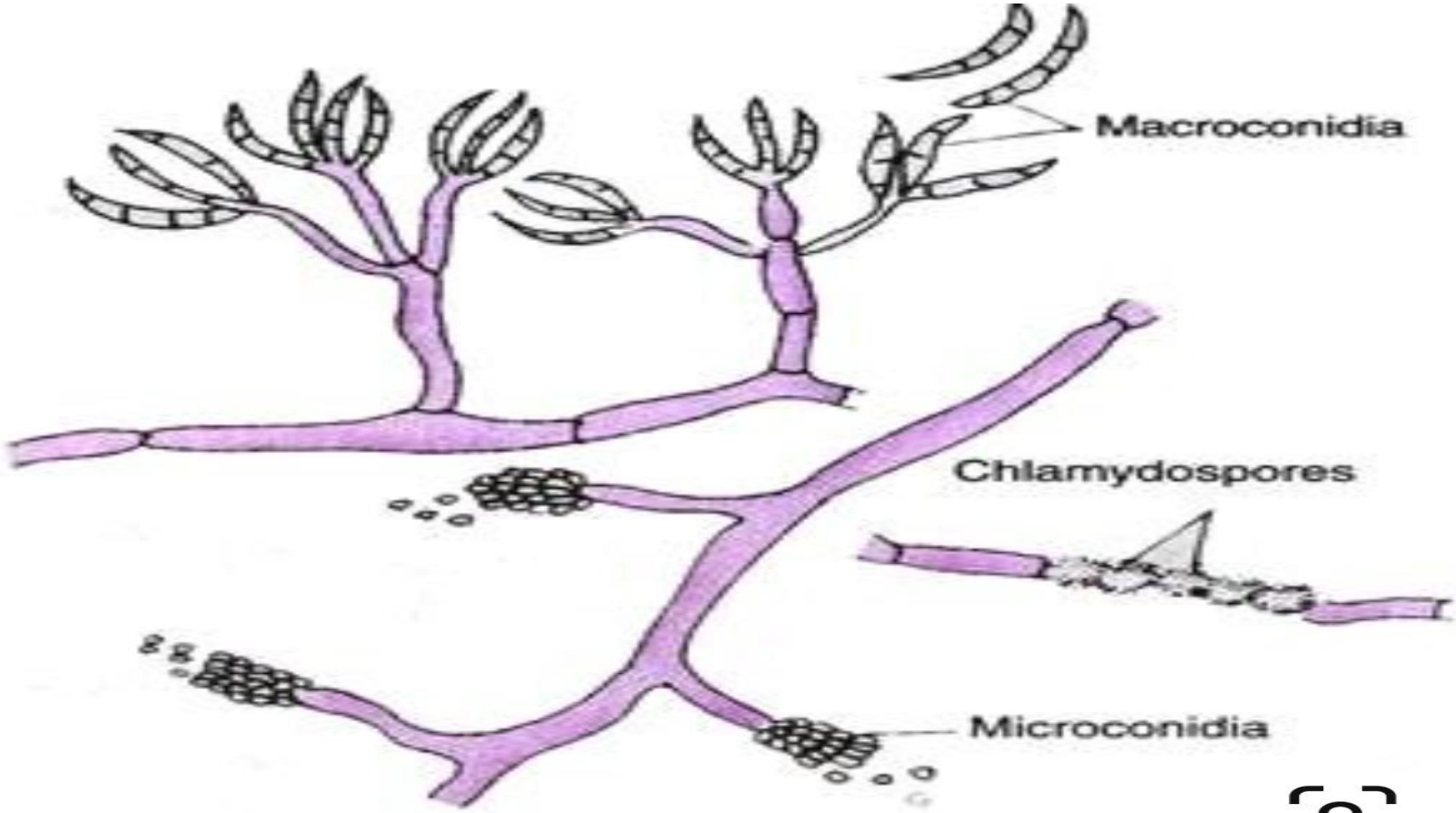
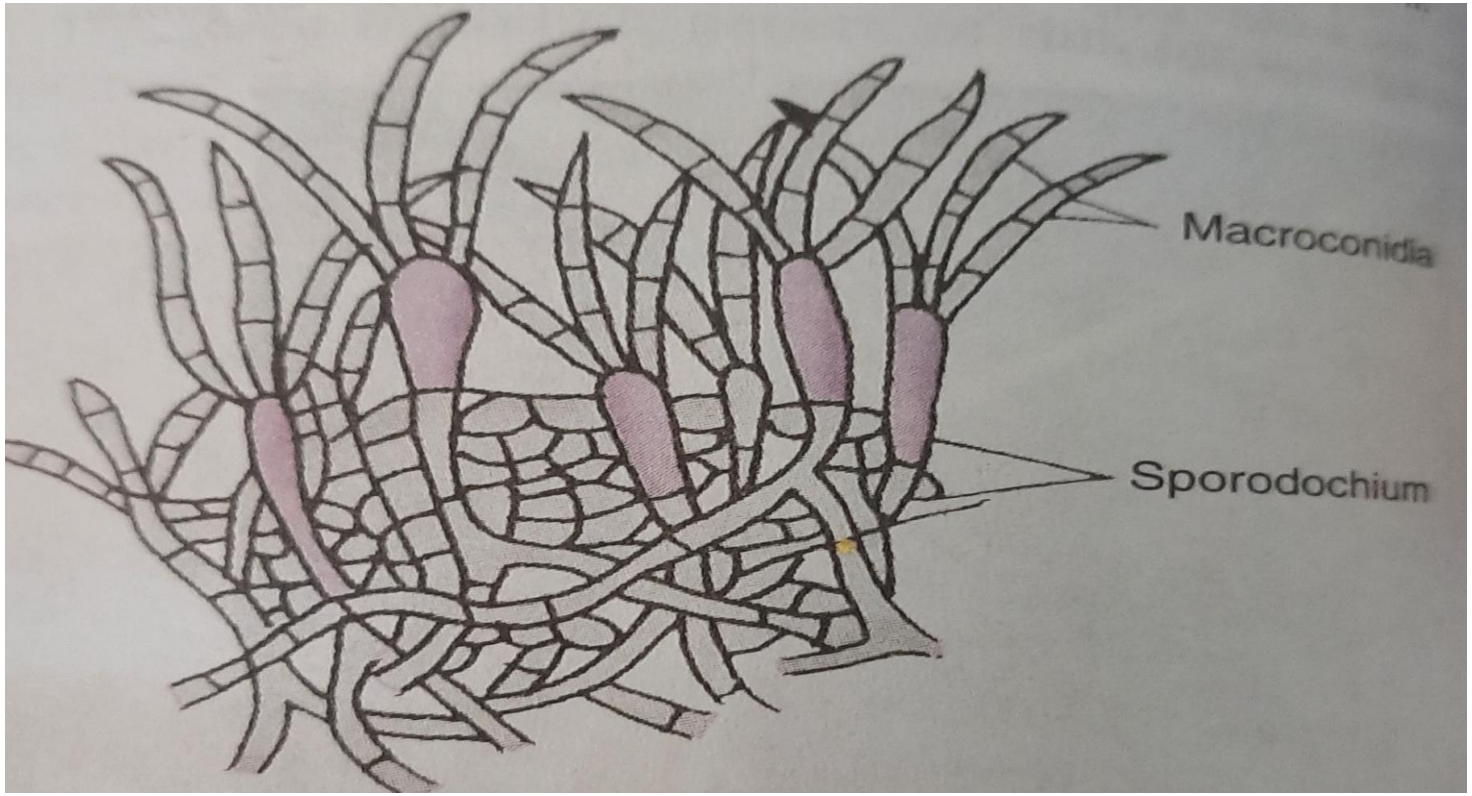


Fig. 16.7. *Fusarium*. Macroconidia and clustered microconidia. Portion of a hypha bearing chlamydospores is also shown.

- **Macroconidia** Macroconidia are produced in the same manner as microconidia. Macroconidia are comparatively larger than microconidia and multicellular. They are produced at the tips of simple or rarely branched conidiospores. Conidiospores assemble to form sporodochium type of fructification .They are hyaline, cylindrical or crescent shaped and tapered at both ends. They are 4 to 5 transversely septate. They are produced in large numbers.
- Microconidia and macroconidia are produced in large numbers. They are distributed by the wind. On falling on a suitable substratum they germinate and initiate new infections.
- **Chlamydospores** are formed Under unfavourable conditions. They are highly resistant structures. They are small, spherical, thick walled and highly resistant Spores. They are normally formed in chains. Their position maybe terminal or intercalary. After maturity they get separated from the parent hyphae and act as resting spores. Under favourable conditions chlamydospores germinate by means of germ tubes. The germ tube develop into a new mycelium.

- Sclerotia: The mycelium often forms compact resting bodies of thick walled hyphae. They function as storage organs and also means of perennation and Vegetative propagation.



Thanks