

Study on the stem rot disease of jute

Symptoms:

This disease appears from seedling to maturity. In seedling stage blackish streak developed from the hypocotyl and in moist condition the seedling may also occur damping off. In mature plants leaves are infected buff to black color lesions are developed at the apex, in margin, midrib and also petiole. After progress of the disease that dark brown to black lesions developed at the nodal region. This lesion spread along the stem. Cortex become shredded and exposed the fibers. The later stage of disease, the plant sheds leaves, stem rots and ultimately die. Then the capsules and seeds are also infected. Numerous black sclerotia and frequently subcarbonaceous pycnidia developed on diseased parts. Only dark black stem remains on the field. Causal Organism: *Macrophomina phaseolina*

Pathogenic characters:

Mycelium hyaline in young, dark or pale brown in mature, profusely branched and septate. The pycnidia are spherical to obpyriform (inverted pear-shape), dark brown to black in color, round or globose, ostiolated and embedded in the host tissue with 3-4 layers of heavily pigmented thick walled cells on the outside. Pycnidia contain short conidiophores and conidia. Conidiophores are also known as phialid. Conidiophores are hyaline, simple, short at a pyriform or cylindrical and development from the inner wall of the pycnidia. The conidia are called pycnidiospores. Pycnidiospores are small, single celled, smooth, hyaline, ellipsoid to obvoid, oblong and thin walled.

Taxonomic position:

Kingdom: Fungi Division: Deuteromycota Class: Coelomycetes Order: Sphaeropsidales Family: Sphaeropsidaceae Genus: *Macrophomina* Species: *M. phaseolina*

