

BRINJAL

SC.NAME:*Solanum melongena*

DFHCM (2+1)

THEORY CLASS

5THSEM

MAJOR DISEASE OF BRINJAL

FUNGAL DISEASE	
Phomopsis fruit rot or blight	<i>Phomopsis vexans</i> (P.S: <i>Diaporthe vexans</i>)
Leaf spots	<i>Cercospora melongenae</i>
Alternaria leaf spot	<i>Alternaria melongenae</i>
Collar rot	<i>Sclerotium rolfsii</i>
Damping off	<i>Pythium aphanidermatum</i> P. <i>debaryanum</i> P. <i>ultimum</i>
Verticilium wilt	<i>Verticilium dahliae</i>
BACTERIA AND PHYTOPLASMA DISEASE	
Bacterial wilt	<i>Ralstonia solanacearum</i>
Little leaf	Phytoplasma

PHOMOPSIS FRUIT ROT OR BLIGHT

The disease is severe in tropical and sub-tropical areas of the world. In India, it was reported in 1935 in Gujarat. The pathogen attacks foliage and fruits, but the latter phase is more destructive.

SYMPTOMS

- The plants are attacked at all stages of growth, producing damping-off symptoms in nurseries and collar rot on young plants
- On leaves, circular to irregular, clearly defined grayish brown spots having light centers appear.
- The lesions on stem are dark brown, round to oval and have grayish centers where pycnidia develop.
- On fruits the disease appears first as minute, sunken dull and dusky spots which later merge to form rotten areas.
- **In advance stages large number of black dot like pycnidia can be seen on older soft on leaf and rotting spot of fruit.**
- At the base of the stem, the fungus causes characteristic constrictions leading to canker development and toppling of plants.
- The infection of fruit through calyx leads to development of dry rot and fruits appear black and mummified.

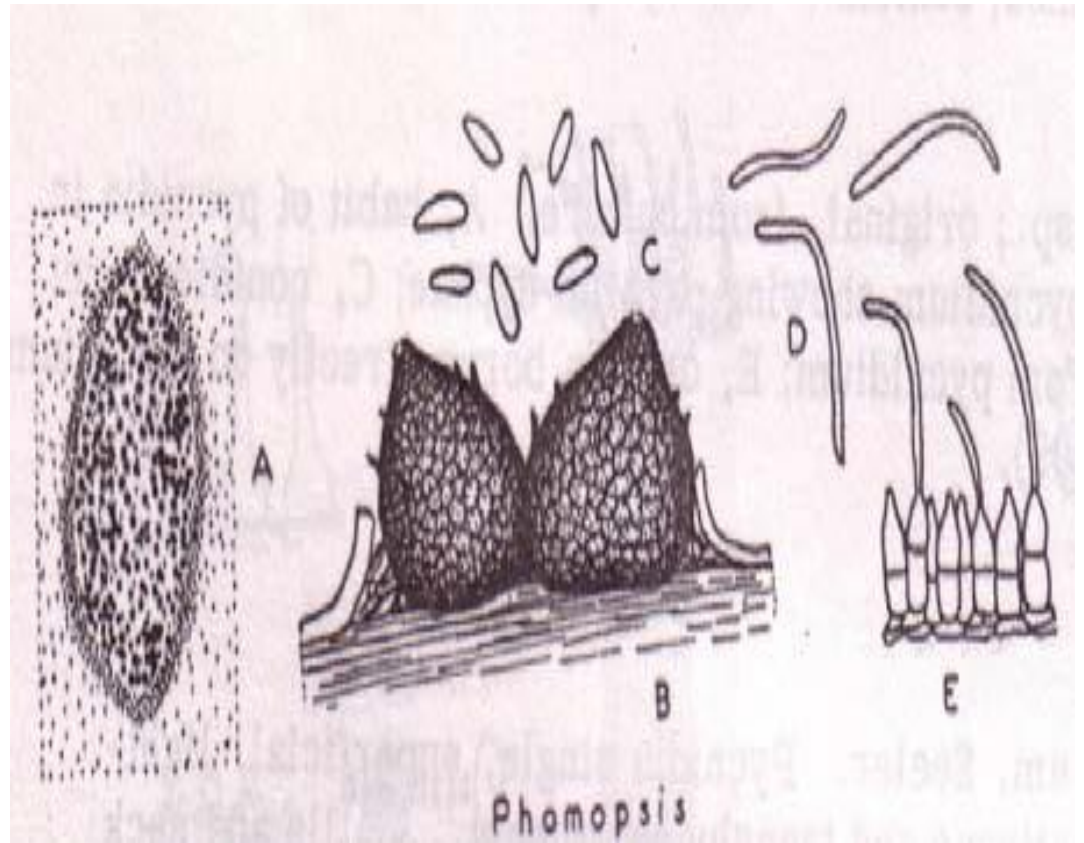
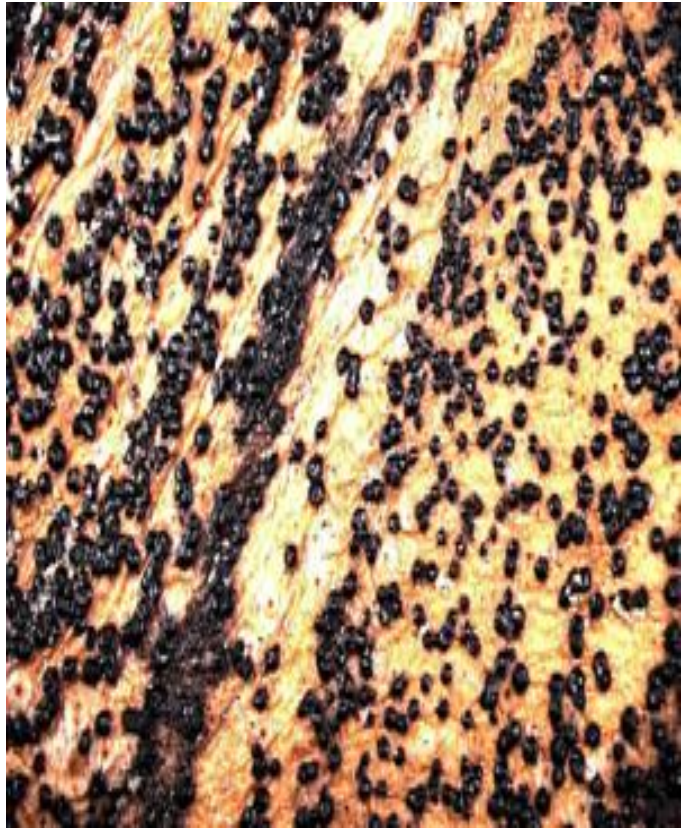
PHOMOPSIS FRUIT ROT AND LEAF BLIGHT



LEAF BLIGHT

PATHOGEN

- The mycelium of the pathogen is septate and hyaline becoming dark with age.
- Pycnidia are submerged and later becoming erumpent with a prominent ostiole.
- Conidia are produced on simple to branched conidiophores and are of 2 types: **Alpha conidia, which are sub cylindrical and beta conidia, which are filiform and curved.**
- The perfect stage produces perithecia in which asci with 8 hyaline, bicelled, ellipsoid-fusoid ascospores are produced which are usually constricted at septum.



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MODE OF SURVIVAL AND SPREAD

- P.I: Pathogen is seed borne and also survives in plant debris as mycelium and pycnidia.
- S.I: Conidia dispersed through rain splashes, irrigation water, agricultural tools and insects.

FAVOURABLE CONDITIONS

- High relative humidity coupled with higher temperatures favour disease development.
- Maximum disease development takes place at about 26°C under wet weather conditions with 55% R.H.

MANAGEMENT

- Removal and destruction of diseased crop debris
- Practicing crop rotation and summer ploughings helps in reducing initial inoculum.
- Use of disease free seed
- Hot water treatment of seed at 50°C for 30 minutes
- Seed treatment with thiophanate methyl at 1g/kg seed
- Spray twice with thiophanate methyl or carbendazim@0.1% at 20 days interval.

COLLAR ROT

Symptoms

- The disease occasionally occurs in serious form.
- The lower portion of the stem is affected from the soil borne inoculum (sclerotia).
- Decortication is the main symptom. Exposure and necrosis of underlying tissues may lead to collapse of the plant.
- Near the ground surface on the stem may be seen the mycelia and sclerotia

COLLAR ROT

