

Important Diseases

- Major Diseases
 - 1. Soft rot

- Pythium spp., Rhizoctonia spp.

- Minor Diseases
 - 1. Bacterial wilt

- Ralstonia solanacerum

2. Leaf spot

- Phyllosticta zingiberi

Soft rot

❖ Pythium spp., Rhizoctonia spp.

Symptoms

- 1. Sprouts fail to grow resulting in **pre-emergence damping off.**
- 2. Leaves turn yellow along the margins
- 3. Leaves dry up and start withering from younger to older leaves
- 4. Dead leaves ultimately drop off and hang down along the stem
- 5. On stem, a translucent brown lesions develop at collar region and later becomes water soaked and soft,
- 6. Soft rot extends from the collar region to rhizomes which first become discoloured and gradually decompose, forming a watery mass
- 7. Roots arising from affected rhizome undergo rotting and softening.
- 8. Rotting is also noticed during storage.



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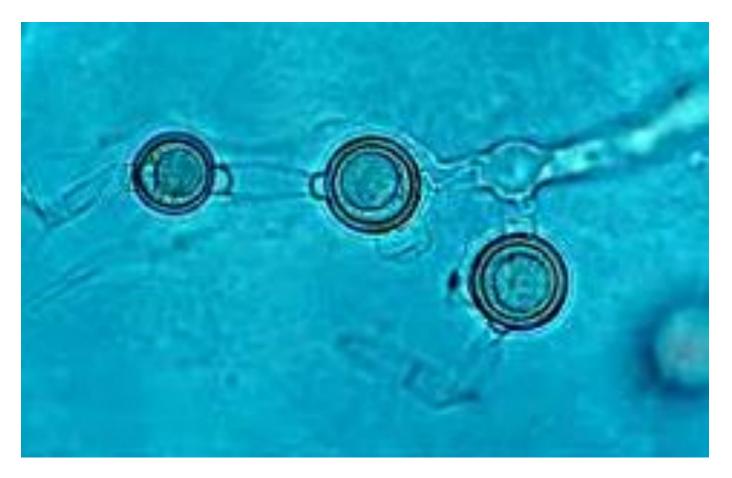


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Etiology

- Hyphae Coenocytic
- ❖ Asexual spores Zoospores in sporangia
- **❖**Sexual spores Oospores



*****Disease cycle

- ***** Primary infection
- **Secondary infection**

- Rhizomes/ Crop debris/Soil
- Zoospores/ Sporangia in irrigation water

*****Favourable Conditions

- ✓ Close planting
- ✓ Frequent rains
- ✓ Water logging
- ✓ Monocropping

*****Management

- 1. Crop rotation for 3-5 years with non-host crops
- 2. Avoid water stagnation
- 3. Collect the seed from disease free plot
- 4. Rhizome treatment with Metalaxyl@0.2
- 5. Drench the field with COC@0.3% or Metalaxyl@0.2%

Leaf spot

❖Phyllosticta zingiberi



Bacterial wilt

❖ Ralstonia solanacearum

