



FACULTY OF AGRICULTURAL SCIENCES AND ALLIED INDUSTRIES

**DISEASES OF FIELD&HORTICULTURAL CROPS&
Management 1 PPA - 312**

LECTURE 10

1. NAME OF DISEASE – SOFT ROT OR RHIZOME ROT

Pathogen- *Pythium aphanidermatum*/ *P. vexans* / *P. myriotylum*

Disease symptoms

- The infection starts at the collar region of the pseudo stem and progresses upwards as well as downwards.
- Affected pseudo stem becomes water soaked and the rotting spreads to the rhizome resulting in soft rot. At a later stage root infection is also noticed.
- Foliar symptoms appear as light yellowing of the tips of lower leaves which gradually spreads to the leaf blades.
- In early stages, the middle portion of the leaves remain green while the margins become yellow.
- The yellowing spreads to all leaves of the plant from the lower region upwards and is followed by drooping, withering and drying of pseudo Stems.



Cross section of rotten region



Rhizome rot

Survival and spread

- The disease is soil-borne.
- The fungus can survive in two ways: (a) in diseased rhizomes kept for seed, and (b) through resting structures like chlamydo spores and oospores that reach the soil from infected rhizomes.
- The fungus multiplies with buildup of soil moisture with the onset of south west monsoon.

Favourable conditions

- Younger sprouts are the most susceptible to the pathogen. Nematode infestation aggravates rhizome rot disease.
- A high temperature above 30° C and high soil moisture are the important predisposing factors favouring the disease.
- Waterlogging in the field due to poor drainage increases the intensity of the disease.

Management

- Treatment of seed rhizomes with mancozeb 0.3% for 30 minutes before storage and once again before planting reduces the incidence of the disease.
- Cultural practices such as selection of well drained soils for planting is important for managing the disease, since stagnation of water predisposes the plant to infection.
- Seed rhizomes are to be selected from disease free gardens, since the disease is also seed borne.
- Once the disease is located in the field, removal of affected clumps and drenching the affected and surrounding beds with mancozeb 0.3% checks the spread of the disease.