

# Sheath blight disease

- This is a fungal disease

## Symptoms

- The fungus causes spots or lesions mostly on leaf sheaths and leaf blades.
- Firstly the spots are greenish grey, ellipsoid or ovoid and then the spots enlarge and become greyish white with brown margins and irregular in outline.
- In advanced stage brown sclerotia are formed on the spots
- Eventually the whole sheath rots, leafs become totally blighted and the plant dies



# Etiology

*Rhizoctonia solani* (Sub-division: Deuteromycotina)

Sexual stage: *Thanatephorus cucumeris*

## Disease cycle

- **Primary infection** – Sclerotia present in the soil
- **Secondary infection** – sclerotia floating in the irrigation water and infecting the plants

## Epidemiology

- High relative humidity (96-97 %), and warm temperature (30-32 °C)
- Closer planting and heavy doses of nitrogenous fertilizers.

# Management

- Avoid excess doses of fertilizers and adopt optimum spacing.
- Elimination of weed hosts.
- Avoid flow of irrigation water from infected fields to healthy fields.
- Deep ploughing in summer and burning of stubbles.
- Grow disease tolerant varieties
- Application of Validamycin @0.2%
- Seed treatment with *Pseudomonas fluorescens* @ 10g/kg of seed
- Soil application of *P. fluorescens* @ of 2.5 kg/ha after 30 days of transplanting .

# False smut of rice

- This is a fungal disease
- First reported from Tamil Nadu but is mainly prevalent in east Indian states

## Symptoms

- The fungus transforms individual grains into greenish spore balls of velvety appearance which are small at first and become longer at later stages.
- Only a few grains in a ear are affected
- The glumes are covered superficially with the green mass of spores
- At early stages the spore balls are covered by a membrane which bursts with further growth

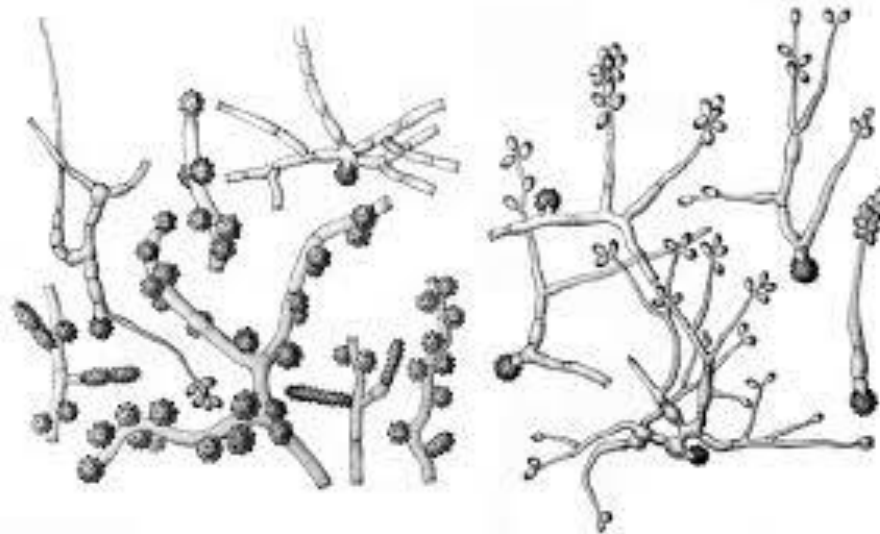


# Causal organism

*Ustilaginoidea virens* (Subdivision- Deuteromycotina)

P.S: *Claviceps oryzae - sativa* (Ascomycotina)

- Rough, olive green conidiospores are formed laterally or terminally on short sterigmata on hyphae
- They germinate to give pear shaped secondary conidia



- Sclerotia forms as the survival structure

## **Disease Cycle**

- **Primary infection** – Sclerotia overwintering in soil
- **Secondary infection** – Air borne Chlamydospores

## **Favourable Condition**

- Rainfall and cloudy weather during the flowering and maturity periods of the grains favours disease incidence.

## **Management**

- Seed disinfection with copper oxychloride reduces disease incidence
- Application of Carbendazim + Mancozeb @0.2% at panicle emergence stage