

# **DISEASES OF BEAN**

DFHCM (2+1)

THEORY CLASS

5THSEM

# ANTHRACNOSE OF BEAN

## SYMPTOMS

- All the above ground parts are affected at any stage of crop growth. However, the characteristic symptoms appear on pods.
- On cotyledons spots are sunken dark brown or black with pink spore mass appear in sever condition.
- Infection in Seedling results in collapse of seedling.
- Spots on leaves appear on lower side and are black. Later these may also appear on upper surface. When the infection is severe, the affected plants wither off.
- **Black, sunken, circular spots of varying sizes appear on pods with bright red, yellow or orange margins.**
- The centre of these spots later turns grey or pink due to sporulation of the pathogen. The border of these spots appear raised.

**PATHOGEN:** *Colletotrichum lindemuthianum*

## Survival and spread

- P.I: Through **seed and collateral hosts**
- S. I: Conidia by splashing rain water or air borne conidia
- Host range: All vegetable beans and cowpea, mungbean, blackgram etc.

## Management

- Use healthy seed for planting.
- Seed treatment with Carbendazim@2g/kg seed
- Protect the crop by spraying 0.2% Bavistin or Zineb @2Kg/ha at 7-10 days interval

# **ANTHRACNOSE – COLLETOTRICHUM LINDEMUTHIANUM**



# BACTERIAL BLIGHT OF BEAN

## Symptom:

- Red irregular and sunken lesions are formed on the leaves.
- Yellow halo around the spots are common symptom.
- Lesions coalesce to form bigger spots and large area is affected.
- Leaf becomes distorted and finally defoliation occurs. Pods are also affected and show small brownish to reddish sunken spots.
- On green pods water soaked spots are seen and later it turn reddish.

# BACTERIAL BLIGHT OF BEAN



**Causal organism:** *Xanthomonas campestris* pv. *phaseoli*

**Disease cycle:**

- **Primary infection:** Primarily through seeds and it survive in the seed for more than two years.
- **Secondary infection:** The secondary spread through bacterial ooze that develops on the leaves and through rain splashes.

**Favourable conditions**

- . Optimum temperature 26 to 32°C.

**Management**

- Use healthy seeds.
- Seeds should be collected from healthy crops.
- Crop rotation.
- Rogueing of infected plants.
- Infected debris should be destroyed.
- Seed treatment with Streptocycline @ 0.01 %.
- Spray Streptocycline @ 0.01 % and Copper oxychloride @ 0.3%.