



**FACULTY OF AGRICULTURAL SCIENCES AND ALLIED INDUSTRIES**

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

## LECTURE 09

### 1. NAME OF DISEASE – ANTHRACNOSE

**Pathogen-**Colletotrichum lindemuthianum

#### **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
- Seedling infection 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
- 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



#### **Survival and spread**

- **Primary:** Mycelium or conidia on seed and collateral hosts: cowpea, mungbean, blackgram
- **Secondary:** Wind blown and rain splashed conidia

### **Management**

- Use healthy seed for planting
- Periodically harvest all mature pods and sort and destroy infected ones
- Seed treatment with Carbendazim 2g/kg seed
- Protect the crop by spraying Benomyl or Carbendazim 0.1% or Zineb or Mancozeb 0.25% at 10-15 days interval

## **2. NAME OF DISEASE – BACTERIAL BLIGHT**

**Pathogen-***Xanthomonas campestris* pv *phaseoli*

### **Symptoms**

1. There are two widespread [bacterial blights](#) that affect most types of beans, common blight (*Xanthomonas campestris* pv *phaseoli*) and halo blight (*Pseudomonas syringae* pathovar *phaseolicola*).
2. The stems, leaves and fruits of bean plants can be infected by either disease. Rain and damp weather favor disease development.
3. Halo blight occurs primarily when temperatures are cool.
4. Light greenish-yellow circles that look like halos form around a brown spot or lesion on the plant. With age, the lesions may join together as the leaf turns yellow and slowly dies. Stem lesions appear as long, reddish spots.
5. Leaves infected with common blight turn brown and drop quickly from the plant.
6. Common blight infected pods do not have the greenish-yellow halo around the infected spot or lesion. Common blight occurs mostly during warm weather.



### **Management**

1. Both of these diseases come from infected seeds. The diseases spread readily when moisture is present.
2. Avoid overhead watering and do not touch plants when the foliage is wet. The bacteria can live in the soil for two years on plant debris.
3. Do not plant beans in the same location more frequently than every third year. Buy new seeds each year.
4. Fixed copper can be applied at ten day intervals. Wait one day between spraying and harvest.