DISEASES OF CHILLI

Session-18
M.S.Swaminathan School of Agriculture,CUTM
ANTHRACNOSE AND FRUIT ROT

Symptoms

- Appear in December - October in transplanted crop.
- Small, circular to irregular, brownish black scattered spots appear on leaves.
- Severely infected leaves defoliate.
- Infection of growing tips leads to necrosis of branches from tip backwards.
- Necrotic tissues appear grayish white with black dot like acervuli in the center.
- Shedding of flowers due to the infection at pedicel and tips of branches.
FRUIT SYMPTOMS

Ripe fruits are more liable for attack than the green ones.

- Small, circular, yellowish to **pinkish sunken spots appear on fruits**.
- Spots increase along fruit length attaining elliptical shape.
- Severe infection result in the shrivelling and drying of fruits.
- Such fruits become white or greyish in colour and lose their pungency.
- On the surface of the lesions minute black dot like fruiting bodies called ‘**acervuli**’ develop in **concentric rings and fruits appear straw coloured**.
- The affected fruits may fall off subsequently. The seeds produced in severely infected fruits are discoloured and covered with mycelial mat.
PATHOGEN
The mycelium is septate and grows both inter and intracellularly in the host tissue.

- The asexual fruiting bodies, acervuli contain many rigid, brown coloured, 1-5 septate setae.
- A large number of conidia are borne on conidiophores in each acervulus which are falcate, unicellular, hyaline having a normally truncated base.

**DISEASE CYCLE**

- P.I: Infected seeds and diseased crop debris.
- S.I: Conidia dispersed by rain splash and wind.

**FAVOURABLE CONDITIONS**

- Temp, 280 C with RH more than 97%.
- Humid weather with rainfall at frequent intervals.
MANAGEMENT

• Collect and destroy all infected plant parts.

• Collect seeds only form fruits without infection.

• Removal and destruction of Solanaceous weed hosts and infected plant debris.

• Seed treatment with captan or Thiram 3-4g/kg

• Spray thrice with captan@1.5% or mancozeb@0.25%. just before flowering, at fruit formation stage and 15 days after second spray.

• Resistant varieties: G3, G4, B61, Lorai, etc.
FUSARIUM WILT

Symptom:

-初期症状主要表现为叶片轻微发黄和上部叶片萎蔫。

-这在几天内会进一步发展成为永久性萎蔫，叶片仍附着在其上。

Causal Organism: *Fusarium oxysporum* f.sp.*capsici*

Sub-division: *Deuteromycotina*

Disease cycle:

- **Primary Infection**: Chlamydospores

- **Secondary Infection**: Conidia

Favourable condition:

- 酸性或质地较轻的土壤，排水不良会增加疾病的发生率。

Management:

- 使用耐萎蔫品种。

- 用1%波尔多混合物灌根。

- 种子处理，每公斤种子用4g *Trichoderma viride* 这种制剂或2g carbendazim。

- 混合2kg *T. viride* 这种制剂与50kg FYM，浇水后覆盖一层薄的聚乙烯薄膜。当真菌生长在堆上的15天后，将混合物应用在1英亩的辣椒行中。
CHILLI LEAF CURL

Causal Organism: *Chilli leaf curl virus*

**Symptom:**
- Leaves curl towards midrib and become deformed.
- Stunted plant growth due to shortened internodes and leaves greatly reduced in size.
- Flower buds abscise before attaining full size and anthers do not contain pollen grains.

**Disease cycle:**
- **Primary Infection:** Diseased wild and chilli plant
- **Secondary Infection:** Insect vector white fly

**Favourable condition:** High humidity, mild temperature, low wind speed

**Management:**
- Spray dimethoate @0.2% to control the vector.
- Grow resistant varieties.
- Uproot the disease plant.