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DISEASES OF CHILLI

Session-18

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ANTHRACNOSE AND FRUIT ROT

- 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.



Cont..

FRUIT SYMPTOMS

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- 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.

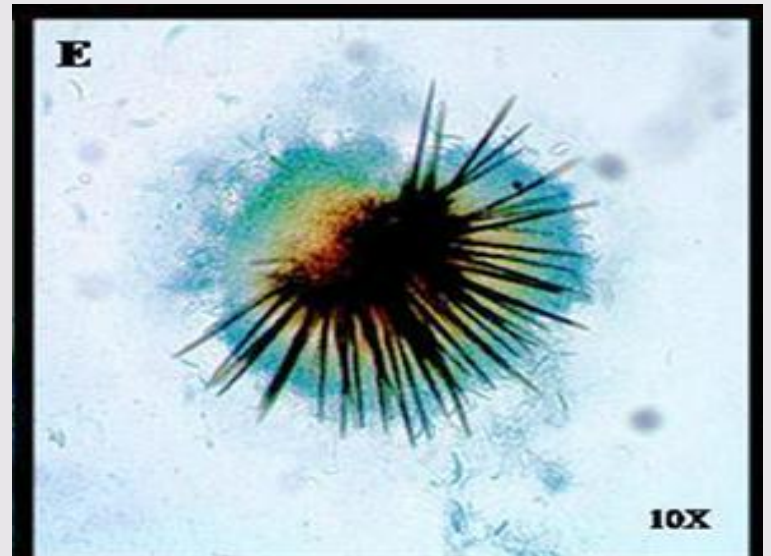


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PATHOGEN

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CONT.. PATHOGEN

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- **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, 28^o C with RH more than 97%.
- Humid weather with rainfall at frequent intervals.



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MANAGEMENT

- Collect and destroy all infected plant parts.
- Collect seeds only from 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

- **Disease symptoms** are characterised by an initial slight yellowing of the foliage and wilting of the upper leaves .
- That progress in a few days into a permanent wilt with the leaves still attached.

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

Sub-division: Deuteromycotina

Disease cycle

- **Primary Infection:** Chlamydospores
- **Secondary Infection:** Conidia

Favourable condition:

- Acidic or light textured soils with poor drainage facility increase disease incidence.

Management:

- Use of wilt resistant varieties.
- Drenching the soil with 1% Bordeaux mixture.
- Seed treatment with 4g *Trichoderma viride* formulation or 2g Carbendazim per kg seed is effective.
- Mix 2kg *T. viride* formulation mixed with 50kg FYM, sprinkle water and cover with a thin polythene sheet. When mycelia growth is visible on the heap after 15 days, apply the



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CHILLI LEAF CURL

Causal Organism: *Chilli leaf curl virus*

Symptom:

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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.



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