Diseases of Sesame

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Diseases of Sesame

Charcoal rot /	
Dry Root rot / Stem rot	**– *Macrophomina phaseolina***
Fusarium wilt	**- *Fusarium oxysporum* f. sp. *sesami***
White spot	**- *Cercospora sesami***
Phytophthora leaf blight	**- *Phytophthora parasitica* var. *sesami***
Powdery mildew	**- *Erysiphe cichoracearum***
	(Syn. *Oidium acanthspermi*)
Alternaria leaf blight	**- *Alternaria sesami***
Bacterial blight	**- *Xanthomonas campestris* pv. *sesami***
Bacterial leaf spot	**- *Pseudomonas syringae* pv. *sesami***
Leaf curl	**- Tobacco leaf curl virus**
Phyllody	**- Phytoplasma**

Root rot – *Macrophomina phaseolina*

Symptoms

The pathogen attacks the stem at the collar region.

The symptoms include yellowing of lower of leaves and drooping and defoliation of leaves.

The infected portion rots and turns to a characteristic black colour.

Abundant dot-like black structures (pycnidia or sclerotia) are produced on the inflected area.

Diseased plants can be pulled out very easily from the soil.

If the disease attacks mostly the plants nearing maturity, filling of pods and maturity of seeds are highly impaired.

Fusarium wilt - *Fusarium oxysporum* f. sp. *sesami*

Symptoms

Leaves become yellowish, droop and desiccate.

The terminal portion dries up and become shrink and bent over.

In less severe infection few branches may develop symptoms of wilt resulting in partial wilting.

In matured plants appearance of reddish brown discolouration of the plant from the root to the apex is the characteristic symptom of the disease. Later these streaks become black in colour.

Discolouration of the vascular system is conspicuous in the roots.

Powdery mildew – *Erysiphe cichoracearum*

Symptom

Small white powdery growth appear on the upper surface of leaves. These spots coalesce to form large patches finally covering the entire leaf surface with powdery fungal growth.

In severe cases, infection is seen on the flowers and young capsules.

Seriously diseased plants shed their leaves prematurely.

Under favourable conditions the white mycelial growth changes to dark grey or black colour due to the formation of cleistothecia.

White spot - *Cercospora sesami*

Symptoms

Small, circular 5 mm dia spots are scattered in the surface of the leaf.

The spots are with whitish centre surrounded by blotch.

Under humid conditions the disease spreads quickly and leads to premature defoliation.

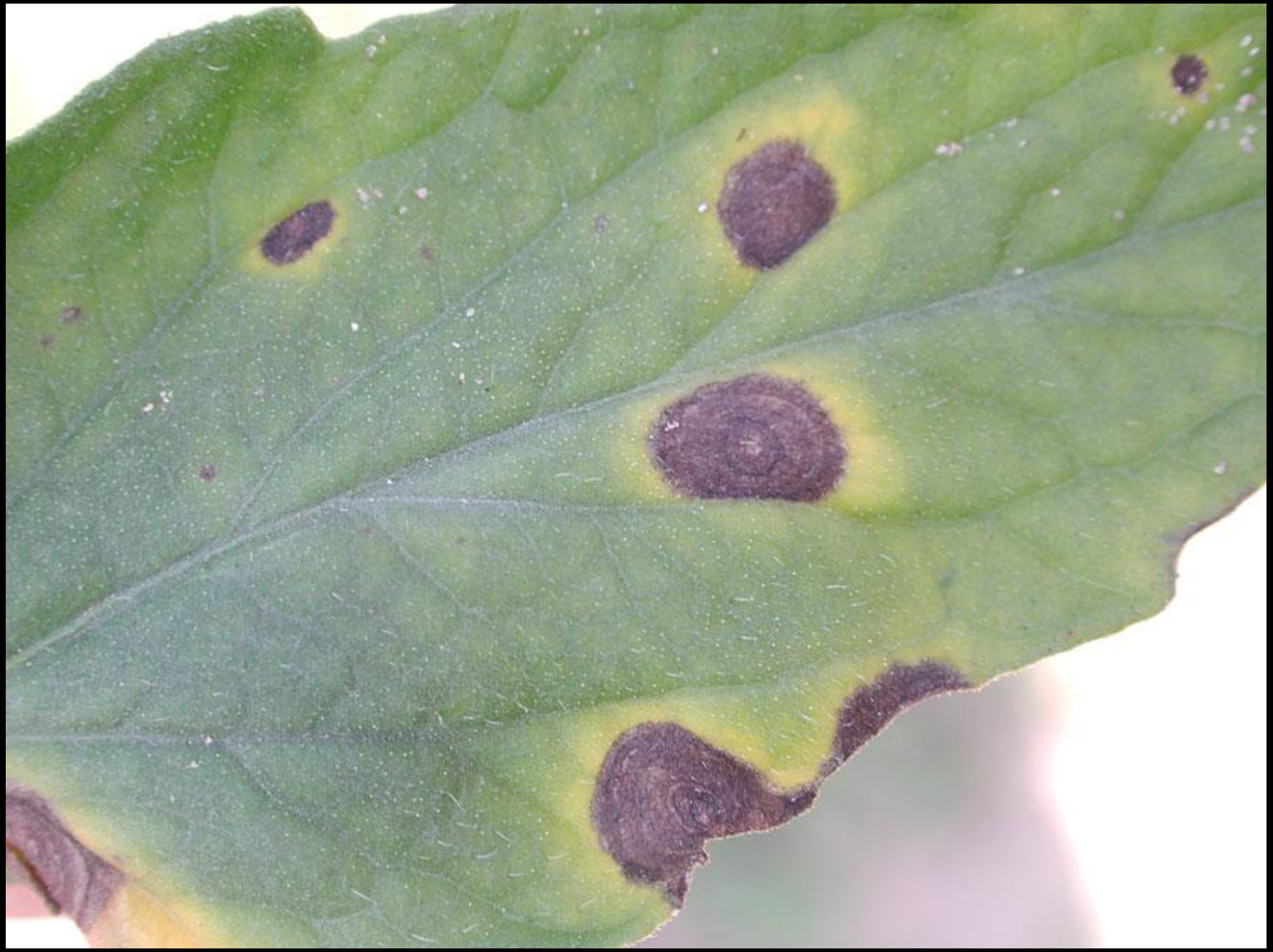
The spots on petioles are elongated and on the capsule they are more or less circular and brown to black.

Leaf blight – *Alternaria sesami*

Symptoms

- Reddish brown lesion is circular, water-soaked and found on the foliage of seedlings. They enlarge in size and become circular in shape and often have concentric zonation on the upper leaf surface.
- Lesions may coalesce to form large necrotic areas and defoliation results.
- Dark brown lesions appear on the petioles and stem.
- Lesions may spread to entire length of the stem.
- Dark brown lesions on the capsules result in premature splitting with shriveled and poorly matured seeds.

Leaf blight – *Alternaria sesami*



Phytophthora leaf blight- *Phytophthora parasitica* var. *sesami*

Symptoms

- Disease attacks all stages of the plant
- Water soaked spots appear on leaves and stems and turn to black
- Premature leaf fall occurs
- As the severity of disease increases diseased plants are easily pulled out

Pathogen

- Survives in seed and soil
- Heavy rain for 2 weeks and more than 90 % RH favours the incidence
- Heavy soil and high rainfall also favour the disease

Corynespora blight – *Corynespora cassiicola*

Symptoms

On leaves purple brown specks which develop into large spots

Infected leaves curl and defoliate

On stem, purple brown elongated lesions appear

On capsule, circular to elongated sunken spots appear

Bacterial leaf spot- *Xanthomonas campestris* pv. *sesami*

Bacterial blight - *Pseudomonas syringae* pv. *sesami*

Phyllody – *Ca.* Phytoplasma

Symptoms

Affected plants are stunted

The inflorescence is replaced by a growth consisting of short, twisted leaves closely arranged with very short internodes.

The most characteristic symptom of the disease is transformation of flower parts into green leaf-like structures.

The calyx becomes polysepalous. The sepals become leaf-like and smaller in size. The corolla becomes polypetalous and deep green. The anthers become green and contain abnormal pollen grains.

Transmission: Jassid, *Orosius albicinctus*

Management

- Removal of infected plants
- Early sowing enable to escape from phyllody incidence
- Rabi planting shows lesser incidence than kharif planting and in Kharif season early sowing in June shows lesser incidence
- Intercropping with pigeonpea at 6 :1 ratio shows reduced incidence
- Spraying of systemic insecticides like acetamiprid or cypermethrin or methyl demeton @ 2 ml/lit controls vector population


Thank you