

LEAF SPOT OF MAIZE

ECONOMIC IMPORTANCE

- In Andhra Pradesh, it is severe in the districts of Warangal, Karimnagar, Medak, Nizamabad, Adilabad and Ranga Reddy.

SYMPTOMS

- Disease is characterized by long **elliptical grayish green or tan lesions on the leaves** measuring 2.5 to 25 cm in length and upto 4 cm in width.
- The fungus affects the maize plant at young stage. Small yellowish round to oval spots are seen on the leaves.
- The spots gradually increase in area into bigger elliptical spots and are straw to grayish brown colour in the centre with dark brown margins.
- The spots coalesce to form bigger spots and gives blighted appearance.
- The surface is covered with olive green velvety masses of conidia and conidiophores.
- Under high humidity the whole leaf area becomes necrotic and plant appears as dead. Lesions may be extended to husk.

LEAF SPOT OF MAIZE



PATHOGEN: **IMPERFECT STAGE:** *Helminthosporium turcicum* (Syn : *H. Maydis*)
(*Sub-division-Deuteromycotina, Order-Moniliales, Family-Moniliaceae*)

PERFECT STAGE: *Trichometasphaeria turcica*

- Conidiophores are in group, **geniculate, mid dark brown, pale near the apex and smooth.**
- Conidia are distinctly curved, fusiform, and pale to golden brown with 5-11 pseudosepta.

DISEASE CYCLE

- Fungus survives in plant debris, seed and collateral hosts.
- The fungus is **externally seed borne.**
- **It also infects Sudan grass, Johnson grass, sorghum, wheat, barley, oats, sugarcane** and spores of the fungus are also found to associate with seeds of green gram, black gram, cowpea.
- **Secondary spread is through wind borne conidia.**

FAVOURABLE CONDITIONS

- Optimum temperature for the germination of conidia is 18 to 27°C provided with free water on the leaf.
- Infection takes place early in the wet season.

MANAGEMENT

- Crop rotation
- Grow resistant hybrids like DHM-1
- Treat the seeds with Captan or Thiram at 4 g/kg
- Spray Mancozeb@0.25%

SYMPTOM AND CONIDIA OF *HELMINTHOSPORIUM TURCICUM*



Conidia are 3 - 8 septate, spindle-shaped, and have a protruding hilum.

SOURTHEN LEAF SPOT



NORTHERN LEAF SPOT



COMPARISON SOUTHERN AND NORTHERN LEAF BLIGHT OF MAIZE

