

Red Rot Disease

Causal organism: *Colletotrichum falcatum* Went, *Glomerella cingulata*

Red Rot Disease on Sugarcane



Red rot is one of the major constraints in the profitable cultivation of sugarcane in many states of India. Except Maharashtra, the disease has been recorded in all the states. This disease drastically retards the yield and considerably deteriorates the juice quantity and quality thus hitting both the cane growers and millers. Many good varieties have gone out of cultivation due to red rot.

Symptomatology

Stalk Symptoms

- Drying up of the 3rd & 4th leaf of the crown at margins. Later, the entire crown dries up & drops down.
- Brown or reddish brown stripes appear externally at nodal region. On splitting, the internal tissue becomes red with white transverse bands.
- Tissues emit alcoholic sour smell.
- Tiny acervuli develop on outer surface of shrinkled upper internodes. Cottony gray fungal mass develops in the pith region of the internodes and sporulates abundantly.



Leaf Symptoms

- Tiny reddish lesions on the upper surface of the lamina. These lesions are 2 to 3 mm in length and about 0.5 mm in width.
- Minute red spots on the upper surface of the midrib in both the directions. Later on becomes straw colored in the center with the development of black acervuli and dark reddish brown margins.



Transmission

Primary transmission through soil and diseased sets, while the secondary transmission through air, rain splash and soil.

Control

Adopting one or more of the following measures can minimize the disease incidence.

- Avoid planting of highly susceptible varieties.
- Follow the long furrow method or pair row method of layout for planting and irrigation.
- Planting material should be collected from the seed nursery.
- Before primary and general cane planting set treatment with 0-1% carbendazim (Bavistin) for 15-20 minutes dipping should be followed.
- To control the secondary spread of the disease, follow the following practices
 - a. Rogue out the affected clumps & destroy it by burning. Stools should not be buried in the soil or should not be kept or thrown on bunds.
 - b. After roguing, drench the spot with the 0.1% carbendazim containing fungicide.
 - c. Foliar application of the Bavistin (0.1%), or Baynlate 70% w.p. (0.1% to 0.15%) by 2 to 3 times at an interval of 10 to 12 days may be tried. Spraying may be done immediately after the disease incidence.
 - d. After the harvest of the diseased crop, left over trash with stools should be burnt immediately.
 - e. Crop rotation should be followed to break the rapid build up of the disease. In rotations, it is advisable to include green manure crop. Because this not only increases the population of the antagonistic mycoflora but also helps to break the life cycle of disease.
- Avoid ratooning of the diseased crop.