

Rust Disease

Causal organism: *Puccinia melanocephala*

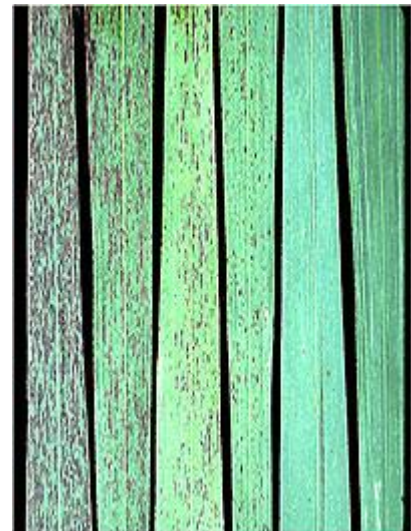
Rust Disease on Sugarcane



The rust disease of sugarcane is caused by *Puccinia melanocephala* H. & P. Syd. Since its serious outbreak in 1950 on Co475 in Maharashtra, it has become a limiting factor in releasing the suitable sugar cane variety. Subsequently, it was noted on Co678, Co775 and Co853. Due to reoccurrence of rust, Co475 had to be withdrawn from the general cultivation in Maharashtra State even though, it was high yielder, high sugared and good ratooning ability variety.

Symptomatology

- The earliest symptoms of common rust on the leaves are small, elongated yellowish spots which are visible on both the surfaces. These spots increase in size, mainly in length, and turn red-brown to brown in color. A narrow, pale yellow-green halo develops around the lesions.
- When the common rust is severe, numerous lesions occur on individual leaves giving them an overall brown or rusty appearance. These lesions coalesce to form large, irregular necrotic areas which usually result in premature death of the leaf. In such cases, the number of live leaves per plant can be seriously reduced, while in very susceptible varieties there may be fewer stalks per stool and reduced diameter and length of the stalks.
- Affected crops take on a distinctive rusty to brown color, as disease intensity builds up. The



discoloration of these crops is readily seen from a distance.

- In some cases, bands of lesions may occur; resulting from intermittent heavy infection while the leaf is in the partially unrolled spindle.
 - Rust can also cause wilting, some leaf tip death and accelerated death of leaves.
 - Rust is more severe in the young stages of plant and ratoon crops, and it generally declines with increasing crop age.
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Transmission

The rust pathogen is transmitted by wind and water splash of the uredinospores.

Control

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

- Use of the disease resistant varieties.
 - Follow the long furrow or pair row method of planting.
 - Removal of affected and dried leaves and destruction by burning.
 - Foliar application of Mancozeb (0.15%) with callixin (0.075%) or Mancozeb (0.3%) or callixin (0.1%) 2 to 3 times at an interval of 10 to 12 days may be done immediately after the disease appear.
 - After the harvest of diseased crop the left over trash should be burnt immediately.
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