

Grassy Shoot Disease

Causal organism: *Phytoplasma*.

Grassy Shoot Disease on Sugarcane



Grassy Shoot disease is one of the most important diseases caused by *Phytoplasma* and affecting sugarcane crop through out its crop growth stages. It is observed in many states of India. This disease causes severe damage to the ratoon crop.

Symptomatology

- This disease is characterized by the production of numerous small and thin tillers having narrow leaves with or without albinism.
- Diseased plants exhibit varying degrees of loss of chlorophyll, ranging from total green to white. Premature & excessive tillering gives a crowded appearance like 'grass' to the clump.
- The root system of the affected plant reduced and plants are usually reduced in height (stunted growth). Affected clumps hardly produce one or two weak canes.
- In some cases, there is also formation of aerial roots at the lower nodes.
- Secondary infection on the full-grown canes shows side sprouting and yellowing.



Transmission

The grassy shoot disease is primarily transmitted through the diseased seed material and perpetuated through ratooning. This disease is also transmitted by a) mechanically by Cutting knife, b) Insects (aphids) and c) Dodder (root parasite).

Control

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

- Use of healthy diseased free planting material collected from seed nursery for planting.
- Roguing of affected stools and destruction – Mass eradication may help consistent reduction in inoculum in the area.
- Heat therapy: seed/planting material should be treated with hot water (50°C for 120 Min.) or moist hot air (54°C hr, 2½ hrs.) that eliminates the Pathogen from diseased seed materials. Ratooning of affected crop must be avoided. Crop rotation may be employed to reduce inoculum in the field.
- Control of insect pests.