

Important sugarcane diseases

- Red rot
- Smut
- Grassy shoot
- Red stripe

Red rot (*Colletotrichum falcatum*)

Survival: Infected host debris, volunteer/ratoon plants

IPM practices:

- **Cultural practices:**
 - If few plants are affected uproot infected plants and burn them.
 - Crop rotation for at least three years.
 - Use disease free sets for planting.
 - Hot water treatment of setts before planting at 52 °C for 30 minutes
 - Dip fresh setts in 0.25% solution of Agallol or Aretan for 2-3 minutes.
 - Avoid ratooning of affected crop.
- **Resistant varieties:** Grow disease resistant varieties.
- **Chemical control:** Sett treatment with 0.25% Thiophanate methyl, Benomyl also protect the setts against the primary infection of red rot for 90 days.



Smut (*Ustilago scitaminea*)

Survival: Infected host

IPM practices:

- **Cultural:**
 - Remove the whip with thick cloth without allowing the spore to shed and destroy.
 - Use disease free sets for planting.
 - Treat the sets with hot water
 - Do not take ratoon of the affected crop.
- **Use of resistant varieties:** Grow disease resistant varieties
- **Chemical:** Carbendazim provide good control



Grassy shoot (virus)

Survival: Infected host

IPM practices:

- **Cultural:**
- Uproot and destroy the affected clumps.
- Avoid taking sugarcane crop for next 3-4 years
- Fresh sowing is done after 3-4 years with seed-sets from resistant variety
- Treat sets at with hot air 54°C for 8 hours to inactivate the casual Virus.
- Use disease free sets for planting.
- Give hot water treatment 50 °C for 2 hours.
- Control aphids by spraying insecticides twice a month.



Red stripe (*Xanthomonas albilineans*)

Survival: epiphytes on the sugarcane phyllosphere

IPM Practices:

- **Cultural:**
- If affected plants are a few in number, then rogue out these and burn them
- Otherwise discard the whole field for at least 3 years
- Fresh sowings are done with resistant variety in well drained soils.
- This is a difficult disease of sugarcane to control.
- When-ever the disease is noticed, the affected plants should be removed and burnt.
- Such systematic destruction of the affected plants reduces the disease incidence.
- Growing resistant varieties is, however, is the best method of control.

