

Insect pests of Sugarcane

Ent-202

Sugarcane top borer

- T.N: *Scirpophaga nivella*
- Family: Pyralidae
- Order: Lepidoptera



Identification

- **Larvae:** Creamy white – prominent dorsal vessel
- **Adults:** Pure white
- **Female:** Tuft of hairs at the end of abdomen
- Larvae overwinter in the top of canes





150 eggs in cluster
lower side of leaves
Covered with silken cap



Hatching 1 week



Larvae 4-5
weekws



4-5 generation/year



Pupal and adult 1 week



Damage

- Larvae bore into midrib of leaves – enter the canes
- Attacked plant shows **reddish streaks** on the midrib of leaves
- Larvae enter into top portion of canes and cause dead heart and bunchy top
- **Dead heart**: top portion dries up – early stage of crop
- **Bunchy top**: side shoots (tillers) develop on top – later stage of crop
- Quality and quantity of juice reduced



Bunchy top



Dead Heart



Streaks/marking

Control

- Pulling out dead hearts
- Collecting and destroying eggs
- Light traps - collection of adults
- Trichogramma – egg parasitoids
- Insecticides
 - Carbofuran G 10-15 kg/acre
 - Diazinon G 10 kg/acre

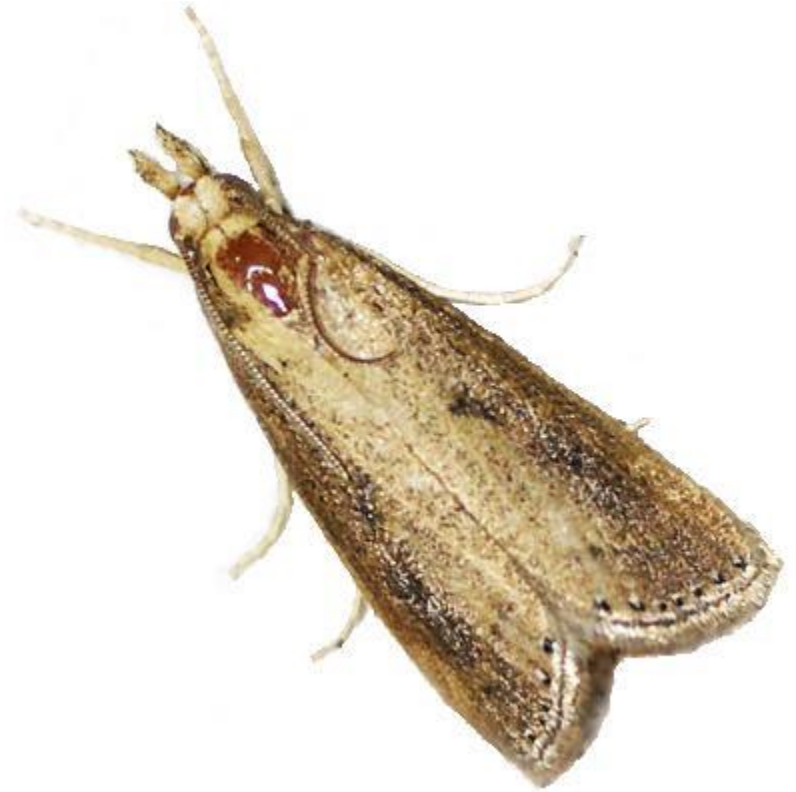


SUGARCANE STEM BORER

T.N. *Chilo infuscatellus*

Family: Pyralidae

Order: Lepidoptera



Identification

Larvae

- Dirty white color
- Having 5 longitudinal stripes on the body
- Larvae over-winter in the stubbles

Adults

- Forewings - straw color
- Hind wings - whitish



300-400 eggs in cluster
Hatching 1 week



Egg batch

1 week



Adult Moth

4-5 generation/year

Larvae bore into cane
Live 3-4 week

Larvae



Pupae inside cane in chamber
1 week

Pupae



Damage

- After hatching the larvae reach the plant base,
- Bore into shoot and feed there.
- Borers feed in the stem and destroy the canes which results in drying up of central growing shoot called as **'Dead Heart'** which is **easily pull able**.



Control

- Uprooting of stubbles
- By collecting and destroying egg clusters
- Light traps for collection of adult moths
- *Trichogramma spp.* - parasitoid of sugarcane stem borer
- Application of;
- Carbofuran G 10-15 kg/acre
- Cartap G 12-15 kg/acre

SUGARCANE ROOT BORER

T.N. *Emmalocera depressella*

Family: Pyralidae

Order: Lepidoptera



Identification

Eggs - creamy white

Larvae - creamy white with brown head and wrinkled body

Larvae overwinter in the stubbles.

Adults - brown color and have white hind wings



Damage

- Young larvae bore into the stem below the soil surface
- Damage results in the drying up of the central growing shoot called “**Dead Heart**” which can not be easily pulled out
- Sugar contents of the canes are also reduced



Control

- Destruction of stubbles.
- Sugarcane ratooning should be avoided.
- Light trap for collection of adult moths.
- Canes should be harvested below the soil surface to kill the larvae.
- *Trichogramma* spp. - egg parasitoid of sugarcane stem borer.
- Application;
- Chlorpyrifos 20% EC @ 5 lit/ha along with irrigation water

Sugarcane Gurdaspur Borer

- T.N. *Acigona stenniella*
- Family: Pyralidae
- Order: Lepidoptera



Life cycle

Eggs

- Female lays 100-300 in clusters on upper surface of leaves
- Hatch in 1 week

Larvae

- Live for 4 weeks
- Overwinters in stubbles

Pupa

- Lasts for 2 weeks

Adult

- Live for 1 week
- 2-3 generation in a year



Damage

- Young larvae enter top portion of cane through a hole from node
- Feed by making upward spiral galleries
- Beginning patches in field – later spread in entire field
- Canes dry up
- Attacked node portion of cane break even by slight disturbance
- Sugar content of canes reduce



Control

- Destruction of stubbles
- By cutting the attacked portion of canes
- No ratooning of crop
- Application of insecticides
 - Carbofuran G 10-15 kg/acre
 - Diazinon G 10-15 kg/acre

Sugarcane Pyrilla or Sugarcane Leafhopper

T.N. *Pyrilla perpusilla*

Family: Lophopidae

Order: Homoptera



Identification

Adult:

Brown – long beak in front of head

Nymphs:

Brown – 2 feathery filaments at the end of abdomen





4-6 weeks



300-550 eggs
Cluster - underside of leaf
Covered with cottony
material
Hatching - 2 week

3-4 generations/year



5 nymphal instars
Duration - 8 weeks

Damage

- Both nymphs and adult suck cell sap
- Leaves become yellow and then dry
- Secrete large quantity of honey dews - Black mold grow-
affect photosynthesis



Control

- Collecting and destroying egg clusters
- Use of hand nets for nymphs and adult collection
- Clean cultivation
- Biological control: Ladybird beetle and *Epipyrops spp.*
- Insecticides
- Granular
- Chloropyriphos 1000 ml per 100 litres of water