

Sugarcane Crop Protection practices to be followed in U.P. Period: May - June 2010

The spring planted crop is in tillering phase. Any sett-borne pathogen that has come with the infected planting material starts damaging the crop. Among the diseases smut and leaf scald are more prominent at this period. Smut whips may be observed appearing both in plant and ratoon crop. So is the case with leaf scald, scalding (burning) of leaves is frequently encountered in this dry period. In well irrigated condition, especially in ratoon crop, spindle infection of red rot may be occasionally observed.

Identification and Disease Management

Red rot

Type of red rot symptoms observed in this period



Spindle infection;
Plant crop

Spindle infection,
ratoon crop

Early settling mortality

Late settling mortality

In case of appearance of red rot, uproot and destroy the affected clumps and spot application of *Trichoderma* multiplied culture in the affected clump site. In case of nonavailability of *Trichoderma*, use any disinfectant like bleaching powder to kill the leftover inoculum.

Smut

Type of smut symptom observed in this period



Smut whip, affected
clump

Smut whip, plant
crop

Smut whip; Ratoon
crop

Close up view

The affected clumps should be uprooted preferably covering with polythene or gunny bag and then destruction of the disease clumps through burning.

Leaf scald

Type of leaf scald symptoms observed in this period



Scalding of leaves, ratoon crop

Scalding of leaves

White pencil line symptom

Leaf scald in pot

The affected clumps should be uprooted, dry out and burned.

Grassy shoot



Grassy shoot

Grassy shoot

Grassy shoot

Grassy shoot

If settling developing from the infected setts show marked albinism. In plant crop, the proliferation of tillering differentiates it from deficiency symptoms. At this stage of the crop rouging of the infected clump and destruction through burning. Spray dimecron (0.2 ml/litre of water) or rogor (0.3 ml/litre of water) to kill the insects that help in secondary spread.

Identification of insect-pests and their management

Top borer

Presence of red streak in midrib, shot holes on open leaves and dead heart (drying of central leaf).



Adult

Egg mass

Mid-rib travel

Crown symptom

Shoot borer

In shoot borer infested shoots, dead hearts are formed which can be pulled easily.



Dead heart

Dead hearts

Pink borer hole

Pink borer larva

Black Bug

It is a small black insect dwelling in leaf sheaths and central whorl during day time. Nymphs and adults suck the sap from leaves during night results in eye shaped black spots.



Black bug

Black bug

Pyrilla

Adults are wheat straw in color with a long snout while nymphs are having two hairy tails on their abdomen. Both nymphs and adults suck the sap from lower surface of the leaves. Females lay their eggs on lower surface of leaves and cover with white cottony hair. It gives white appearance to the egg masses.



Pyrilla egg mass

Pyrilla nymph

Pyrilla adult
Epiricania laying eggs after
emergence from cocoon

Parasitization
of nymph

Defoliators

Army worms and grass hoppers eat the lamina and left the mid-rib only if incidence is severe.

Management

- In this period (May) top borer is in II brood (generation) and mostly producing dead hearts.
- In first fortnight of May, collection of egg mass and removal of dead hearts including larva and pupa of different borer pests and destruction is recommended.
- In the month of June to control the top borer, apply Furadan 3G @ 33kg /ha or Thimet 10G @ 30 kg /ha at a sufficient moisture in the field during third week of June or at the appearance of moth whichever is earlier. If moisture is limiting, provide light irrigation.
- The pink borer is often migrating to sugarcane after wheat harvest and producing dead hearts. Mechanical control as outlined in case of top borer is also followed.
- For controlling black bug, spray Dursban 20 EC (chlorpyrifos) @ 1.0 litre /ha in ratoon crop. Spray should be directed in the inner leaves of the crown.
- For the management of defoliators (grasshoppers, armyworms) application of fenvalerate or fenitrothion dust @ 20-25kg/ha is recommended.
- For the management of *Pyrilla*, its ectoparasite *Epiricania melanoleuca* is very effective. Look for the cocoon of *Epiricania*, if present in the field, it will take care of the *Pyrilla* in due course of time. In case of non availability of *Epiricania*, collect cocoons from other fields (sugarcane, sorghum, maize, wheat) and redistribute in the affected field.