

SUBTERRANEAN PESTS

1. **Termites**, *Odontotermes obesus*, Termitidae, Isoptera

Symptom of damage: Poor germination of setts (after planting), characteristic semi-circular feeding marks on the margin of the leaves in the standing crop. Entire shoot dries up and can be pulled out. Setts hollow inside and may be filled with soil. Cane collapses if disturbed; rind filled with mud.

Adult: Creamy coloured tiny insects resembling ants with dark coloured head.

2. **Root borer**, *Emmalocera depresella*, Crambidae, Lepidoptera

Symptom of damage: Young shoots with deadhearts which cannot be pulled out easily and do not emit any smell. Grown up canes with yellow leaves.

Nature of damage: Caterpillars bore at the base of a stem, which is very close to the root. Although they do not actually bore into the roots, but since they do so near the soil surface they are called root borers. It differs from the shoot borer damage in the way that the dead-heart when pulled out the whole plant comes out and it does not possess bad smell. Besides central leaf whorl, some side leaves also dry.

Egg: Eggs are laid singly on the leaves, stem or in soil. Eggs are flat, oval and creamy white in colour.

Larva : Creamy white with an yellowish brown head and light brown prothoracic shield.

Pupa: Pupates within the stem and makes an exit hole for emergence of the adult about 1-1.5 cm above the ground surface.

Adult: Small moth with pink head, brown thorax and abdomen, forewings and hindwings light yellow. Forewings possess light black longitudinal stripes. Adult moth is 27 mm across the wings.

3. **Whitegrub**, *Holotrichia consanguinea*, Melolonthidae, Coleoptera

Symptom of damage: Drying of crown, preceded by yellowing and wilting of leaves. Affected canes come off easily when pulled. Cause extensive damage to roots.

Grub: Fleshy 'C' shaped, whitish yellow in colour found close to the base of the clump.

Adult: Dark brown.

4. **Root aphid**, *Tetraneura javensis*, Aphididae, Hemiptera

Symptom of damage: Root colonized with aphids; movement of black ants.

Adult: Spherical yellowish aphids.

OTHER PESTS

Gurdaspur borer, *Bissetia steniellea*, Crambidae, Lepidoptera

Grasshopper, *Oxya velox*, Acrididae, Orthoptera

Spiny beetle, *Asmangulia cuspidata*, Hispididae, Coleoptera