



## White Grub Management in Groundnut (\*Mukesh Jakhar<sup>1</sup>, Shishpal Kantwa<sup>2</sup> and Suman Kudi<sup>2</sup>)

<sup>1</sup>Department of Entomology, DBRAU, Agra (U.P.)

<sup>2</sup>Department of Soil Science and Agricultural Chemistry, SHUATS, Prayagraj, (U.P.)

\*Corresponding Author's email: [jakharmukesh689@gmail.com](mailto:jakharmukesh689@gmail.com)

**H**olotrichia is a genus of beetle in the family Scarabaeidae, which are well known as "chafer beetles" or "white-grubs" for their white larvae that are found under the soil where they feed on the roots of plants.

**Scientific Name:** *Holotrichia consanguinea* L., *Holotrichia serrata* L.

### Life Cycle

The adult beetles emerge from pupae in October and hibernate in soil till next season. With the first monsoon rains in June (following year), the adults emerge out during dusk from the soil, fly short and feed on the foliage of trees such as neem, ber, *Acacia* etc. In the following morning adults go back to soil, hide and lay eggs. Females lay about 30 eggs in soil over a period of 3 weeks. The incubation period is 10 days. The grub stage lasts for 70 days. These species have one generation per year.

### Identification of the pest

- **Eggs:** White, almost round.
- **Larvae:** Young grubs are translucent, whitish yellow in colour, fleshy 'C' – shaped
- **Adults:** Dark brown beetle. Beetles emerge out of the soil within 3-4 days after the onset of rain.

### Symptoms of damage

- The grubs feed roots and damage pods.
- Grubs feed on fine rootlets, resulting in pale wilted plants, dying in patches.

### Management of white grub in groundnut

- The infestation of white grub is generally more in sandy or sandy loam soil.
- The white coloured larvae feed on root system of the plant. As a result, plant slowly wither and dry off.
- The grub feed on one plant and move forward to another in the same row. Large number of gap-patches appears in the field.
- On an average, 70-80 per cent crop loss is observed due to this pest.
- These grubs also cause damage to the developing pods at the later stage. At this time, plants are not withered but turn yellow.
- Trees around the field should be pruned every year.
- The infestation remains low in the fields in which ploughing is practised during summer.
- Spray quinalphos 25 EC @ 20 ml per 10 lit of water on the trees present around the field.

- After first heavy monsoon rain, the adults of white grubs come out from the soil and feed on babul, ber, drumstick, neem etc. trees. Shake the branches, so that insects drop, collect and destroy them. • Install pheromone (Anisole), methoxy benzene traps. Put 4-5 drops of the same on pieces of sponge and hang them out on the tree. The adults attract to them.
- Install one light trap in the field and destroy the attracted insects.
- Arrange at least 5 fire stations in infested area. The adults get attracted to them and then killed.
- For seed treatment mix chlorpyrifos 20 EC @ 20 ml per kg of seed before sowing, with this infestation remains under control.
- Apply *Beauveria bassiana* or *Metarhizium anisopliae*, fungus base powder @ 5 kg per hectare with 300 kg castor cake in soil before sowing. If not done, drench the same @ 40 g per 10 lit of water in rows 30 days after sowing.
- In standing crop, apply chlorpyrifos 20 EC @ 4 lit per hectare through irrigation, drop by drop method.
- Mix chlorpyrifos 20 EC @ 4 lit in 5 lit of water with 100 kg of sand. Dry this under shade and apply in the field. If the rainfall is not there after application, follow light irrigation.
- Application of phorate 10 G @ 10 kg or carbofuran 3 G @ 33 kg per hectare in furrow will also control the white grubs effectively.