Integrated community approach successfully reduced white grubs infestation and prevented yield loss by 50% in Saurashtra region of Gujarat

- Outbreak of white grub damage started in the last few years and severe incidence was noticed during 2016 in many groundnut growing areas of Saurashtra region of Gujarat.
- Survey conducted in the following districts recorded up to 90 per cent incidence and complete failure of groundnut in many of farmer's field.

Incidence of white grub reported in groundnut fields

Sl. No.	District	Areas from where the incidence have been reported
1.	**Junagadh**	Chokli, Mendarda, Bilkha, Keshod, Maliya (Hatina), Visavadar, Vanthali, Manavadar
2.	**Porbandar**	Porbandar, Ranavav, Kutiyana
3.	**Gir Somnath**	Veravel
4.	**Rajkot**	Jetpur, Upleta, Dhoraji, Gondal, Kotda Sangani, Jasdan
5.	**Amreli**	Dhari Padadhari, Dhrol, Amreli, Bagasara
6.	**Jamnagar**	Jamjodhapur, Bhanvad
7.	**Bhavnagar**	Mahuva, Talaja

- Integrated community approach was formulated to tackle the problem during 2017 and awareness program started from before sowing itself.
- Technology was disseminated through pamphlets, field visits and conducting *melas*.

Integrated white grub management recommended for groundnut

Management of white grubs can be achieved only through the community approach by targeting the weak points in the life cycle or by altering the favorable factors responsible for infestation and establishment of the pest. The management practices were grouped suitably in to the following sub sections:

Adult control

- Place light traps @ 1 trap/ha between 7PM to 10PM after receipt of first monsoon rains.
- Trim off trees and shrubs in and around the fields.
- Place 3 pheromone (synthetic pheromone-Anisole) dispensers per tree at 15 meter radius for three consecutive evenings after the first monsoon rains. Spray the host trees with Imdachloprid 17.8 SL
- Collect and destroy the adults fallen near the base of trees.

Grub control

- Take up deep summer ploughing to expose the pupae to scorching sun radiation and predation by birds.
- Use well decomposed organic manures.
- Incorporate carbofuran 3G @ 33.0 kg/ha or phorate 10G @ 25.0 kg/ha in soil before sowing.
- Seed treatment with chlorpyriphos 20EC @ 6.5-12.0 ml/kg seed.
- Drench the root zone of crop with chlorpyriphos 20 EC @ 4.0 L/ha.
- Adoption of this technology resulted in drastic reduction in white grub incidence.
- About 80 per cent reduction in white grub damage was recorded in groundnut with good yield.
- Spending additional three thousand rupees for timely white grub management during 2017 resulted in monetary gain around 10,000-15,000 rupees compared to 2015 and 2016.