

Shatpada Terminator - Liquid formulation of *Bacillus thuringiensis* isolates against lepidopteran pests

- **Brand Name:** Shatpada Terminator
- **Microbial Constituent:** *Bacillus thuringiensis* (ICAR-NBAIR-BTG4 strain)
- **Microbial Culture and accession number:** *Bacillus thuringiensis* var. *kurstaki* ICAR-NBAIRBTG4 (NCBI GenBank Accession JN120765 and JN120763; Identification and DNA Fingerprint obtained from NBAIM)
- **Formulation type:** Liquid formulation 1×10^8 cfu/ml, Potency 16340 IU/mg
- **Target pest and crop:** Legume pod borer (*Helicoverpa armigera*, *Maruca* sp.), diamond back moth (*Plutellaxylostella*), *Chilopartellus*, rice leaf folder, brinjal shoot borer (*Cnaphalocrocismedinalis*), and *Amsactaalbistriga*
- **Method of application:** Two to three foliar sprays at 10 to 20 mL/L of water at pre flowering and post flowering stages; Water required for each spray: 200 L/ha.
- **Dosage of application:** 10 to 20 mL/L mixed in water.
- **Target states:** Karnataka, Andhra Pradesh, Maharashtra, Tamil Nadu, Gujarat, Orissa
- **Validation:** The technology was tested at UAS-Raichur; AAU, Anand; RRS, Annakapalle; TNAU, Coimbatore; Karnataka; OUAT, Orissa during 2016-17, 2017-18, 2018-19, 2019-20.



Untreated plot



Treated plot

- **Benefits:** 83-85% reduction in pest; 19-35% increase in yield.
- **Commercialization of technology:** Toxicological data required for CIB&RC registration is available
- **Contact:** Director, ICAR- National Bureau of Agricultural Insect Resources, Bangalore-560 024. director.nbair@icar.gov.in