

**BorerGuard™**  
**Bio Pesticide- Biological Control of Borers**  
**APPROVED FOR USE IN ORGANIC AGRICULTURE**

### **Introducing BorerGuard™**

BorerGuard™ is a biological insecticide based on a consortium of selected strains of beneficial naturally occurring microbes that protects crops from Borer attack caused by several types of borers like stem borer and shoot borer.

BorerGuard™ is used as an effective foliar spray/ stem swabbing agent, to combat borers through the antagonism expressed by the microbial consortia towards borers.

BorerGuard™ contains composting microbe cultures and bio pesticide cultures. It is formulated as Sprayable Liquid. BorerGuard™ is approved for use in Organic Agriculture.

### **Mode of Action**

**Borers in Action:** Borers bore a hole in either the shoot or stem. Excreta is observed coming out of the hole / tunnel. Application of conventional pesticides / bio pesticides is not effective, as it cannot enter this hole.

**Excreta decomposition:** Composting microbes have an affinity for soft biomass like excreta coming out of hole bored by Shoot / Stem Borer. They start decomposing this excreta and act as a scout.

**Pathogenising Borers :** The entomopathogenic microbes of BorerGuard™ piggy back on the composting culture microbes. As the scouts of the composting culture, microbes keep going inside the hole, the entomopathogenic microbes of BorerGuard™ go inside and attack borers, pathogenise and kill them.

### **Method of Application**

**Swabbing:** Dilute 1 ml. of BorerGuard™ in 1 L water and swab stem twice a year.

**Foliar Application:** Mix 1 ml. BorerGuard™ in 1 L of water and give drenching spray on all plant parts including stem.

Spray volume depends on the crop canopy.

## Target Pests

Brinjal ( Egg Plant ) shoot borer (*Leucinodes orbonalis*), Tomato stalk borer (*Symmetrischema tangolias*), Okra ( Lady's finger / Bhendi ) shoot borer, (*Earias vittela*), Coffee white stem borer (*Xylotrechus quadripes*), Grapes stem borer (*Celosterna scabrator*) Maize stem borer (*Busseola fusca*), Dark headed stem borer of Rice (*Chilo polychysus*), Gold-fringed stem borer (*Chilo auricilius*), Pink stem borer, Violet stem borer (*Sesamia inferens*), Striped stem borer (*Chilo suppressalis*), White stem borer (*Scirpophaga innotata*), Yellow stem borer (*Scirpophaga incertulas*), Early stem borer of Sugarcane (*Chilo infescatellus*), Sugarcane top shoot borer (*Scirpophaga excerptalis*)

## Crops

BorerGuard™ is suitable for application for commonly attacked crops like Brinjal ( Egg Plant ) , Tomato , Okra ( Lady's finger / Bhendi ) , Coffee , Grapes Rice , Maize , Sorghum and Sugarcane

## Compatibility

BorerGuard™ is compatible with BioPesticides and not with Chemical Fungicides.

## Shelf Life

BorerGuard™ is stable for a period of 12 months from the date of manufacturing.

## Mass Composition

CONSTITUENT	W/W %	FUNCTION
<i>Microbial consortia</i>	2.00%	Active
Carrier inert liquid	q.s.	Inactive

## BIOLOGICAL COMPOSITION

CONSTITUENT	CFU/g.	FORMULATION
<i>Microbial consortia</i>		Liquid

*Free from Salmonella, Shigella , E.Coli*

## Cautions for handling and use of product

1. Avoid inhalation and skin contact while diluting as there could be spillage / splashes of the product.
2. Mixing and spraying equipment is to be thoroughly rinsed with water and detergent before using the same equipment for spraying other pesticides.
3. Surplus spray solution should not be disposed in crop lands / stagnant water / flowing water where there is a possibility of causing pollution to natural resources
4. Do not eat / drink / smoke during application.
5. Direct incidence of BorerGuard™ may cause irritation and therefore it is recommended that the operator should use protective gear viz gloves, apron, mask, eye gear and hood.

## Symptoms and Antidotes

**Symptoms:** Occasional symptoms include head ache and nausea

**Antidote:** In the case of ingestion: symptomatic treatment is advised In the case of contact with Eyes: Flush with water liberally for 20 minutes. In case of Skin contact, wash the affected area with plenty of water and soap

## Citations

BorerGuard™ is a proprietary product and public citations of the same aren't available.

## Commitment to Nature

- BorerGuard™ is approved for use in organic agriculture.
- BorerGuard™ can be used as an effective component in IPM programmes, thereby leading to a reduction in use of chemical pesticides/ fungicides and creating a safer environment.
- BorerGuard™ does not lead to residue problems and doesn't cause resistance or resurgence problems.

## Benefits from BorerGuard™

- BorerGuard™ effectively controls stem borer and shoot borers of economical crops like Brinjal ( Egg Plant ) , Tomato , Okra ( Lady's finger / Bhendi ) , Coffee , Grapes Rice , Maize , Sorghum and Sugarcane .
- Pest load reduction leads to improved plant health and thereby increased crop productivity.
- BorerGuard™ is earthworm friendly , pet friendly , eco friendly and infant friendly