

Cost Effective Production of Bacilusthuringiensis (Bt) Biopesticide

The technology, Cost Effective Production of Bacilusthuringiensis (Bt) Biopesticide, produces insecticidal spore-crystal proteins from *Bacillus thuringiensis*(Bt) bacterium. These spore-crystal proteins are toxic to insects, which primarily include caterpillars of the Lepidoptera order. These insects affect many vegetable, cotton, rice, oil seeds, pulses and other plants. Bt products are found to be safe for use in the environment and with mammals. The EPA (environmental protection agency) has not found any human health hazards related to using Bt. In fact the EPA has found Bt safe enough that it has exempted Bt from food residue tolerances, groundwater restrictions, endangered species labeling and special review requirements. Bt is often used near lakes, rivers and dwellings, and has no known effect on wildlife such as mammals, birds, and fish.

Salient features

- Bt strain (Bt subsp. galleriae/ colmeri) is highly entomocidal, relatively broad specific, does not produce any human pathogenic beta exotoxins
- The Bt growth medium is simple but supplies adequate carbon, nitrogen and all essential minerals at right proportion. It is readily available and economical
- Eliminates the needs of stringent fermentation conditions and highly skilled persons
- The costly and time consuming procedure of centrifugation is not required to remove β -exotoxin from culture supernatant because the Bt strain does not produce human pathogenic β -exotoxin
- The aqueous liquid formulation is easy to prepare and doesn't require spray drier to concentrate the broth and formulator to formulate the product

Areas of application

- Agriculture
- The developed formulation can be used for the management of lepidopteran insect larvae on vegetables, pulses, cotton, rice, oilseeds and many other crops

End users

- Cottage industries
- Farmers
- Big companies / industries for efficient mass production of Bt biopesticide for the management of a broad range of lepidopteran insect larvae in agriculture eco-system