


BIOCON TRIVIA

WHITE MUSCARDINE FUNGUS

(Beauveria bassiana)



 cpmd@buplant.da.gov.ph

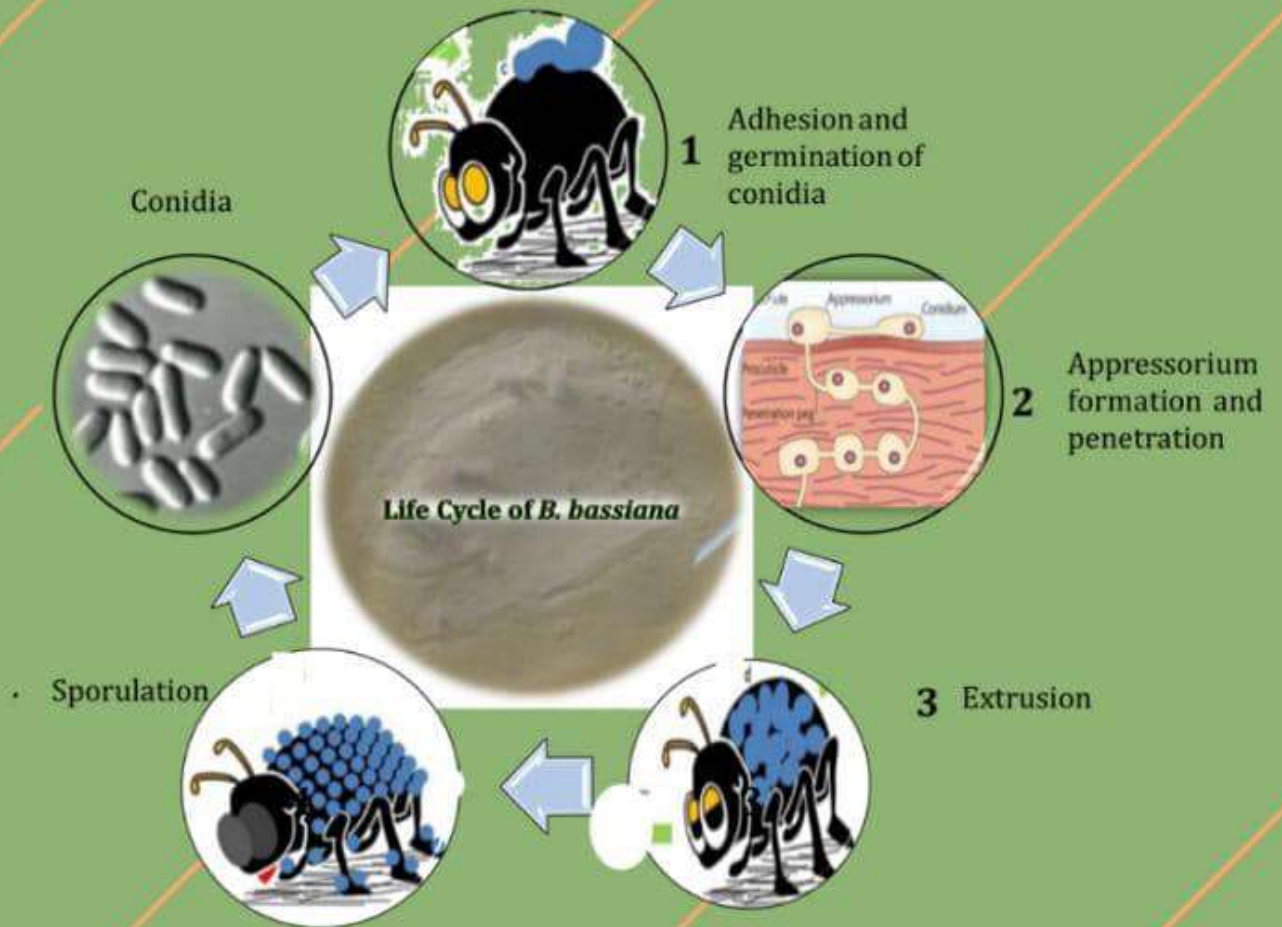
 (8)-236-0598



BIOLOGY

- ☀ *Beauveria bassiana* is a facultative universal entomopathogen with an extremely broad host range. It was first discovered by Agostino Bassi de Lodi in larvae of silkworms (Keswani et al. 2013).
- ☀ *Beauveria* is a genus of asexually reproducing fungi allied with the Ascomycete family Cordycipitaceae.
- ☀ An entomopathogenic fungus that causes white muscardine disease in a range of insects including whiteflies, aphids, thrips, grasshoppers and certain types of beetles.
- ☀ Once the host insect is infected, the fungus rapidly grows inside the insect, feeding on the nutrients present in the host's body and producing toxins in the process.
- ☀ When the host dies, the *B. bassiana* covers the carcass in a layer of cottony white mold that produces more infective spores.

LIFE CYCLE



THE SAPROGENESIS LIFE CYCLE RANGES BETWEEN 4.1-9.9 DAYS AND 49% OF THE PATHOGENICITY STAGE IN LESS THAN 4 DAYS.



Infected arthropods



Infected larva



Mummified larva

BENEFITS

WIDE SPECTRUM

B. bassiana can parasitize more than 700 species of insects and mites of 15 orders and 149 families, such as Lepidoptera, Hymenoptera, Homoptera, and Orthoptera.

SAFE TO USE

B. bassiana is a microbial fungus that only acts on host pests. No matter how much concentration is used in production, there will be no drug damage.

REGENERATION

B. bassiana, biological pesticide contains live fungi and spores. After applying in the field, with the help of appropriate temperature and humidity, it can continue to reproduce and grow, and enhance the insecticidal effect.

NON-RESISTANCE

B. bassiana is a microbial fungicide, which mainly kills pests through parasitic reproduction. Therefore, it can be used continuously for many years without drug resistance.

NON-TOXICITY AND NO POLLUTION

B. bassiana is a preparation produced by fermentation. It has no chemical components and is a green, safe, and reliable biological pesticide. It has no pollution effect to the environment and can improve soil conditions.

HIGH SELECTIVITY

B. bassiana is highly specific and has little effect on non-target organisms such as ladybird, lacewing, and aphid fly. Therefore, the overall field control effect is better.

FIELD APPLICATION

1

Make a soap solution by adding 0.5 gram detergent powder per liter of water.

2

Prepare suspension by putting 3 bags inoculated *Beauveria bassiana* bags into water pail containing four (4) liters of water.

3

Mix thoroughly until the fungus is totally washed-off, strain the *B. bassiana* solution to avoid clogging of the sprayer.

4

Add the four (4) liters strained *B. bassiana* solution into 12 liters of water to make 1 spray load.

5

Spray the suspension to the infested crops.



***Beauveria bassiana* is available free of charge at the BPI-Crop Pest Management Division, located on San Andres Street, Malate, Manila. Simply send a request letter or visit our office during working days.**

REFERENCE

- Biological Control Agents Mass Production and Utilization Technology Handbook, 1st edition, Bureau of Plant Industry, Crop Pest Management Division

PHOTO REFERENCE

- Bureau of Plant Industry, Crop Pest Management Division
- <https://plantwiseplusknowledgebank.org/doi/10.1079/PWKB.Species.21834>
- https://www.researchgate.net/publication/308172345_The_production_and_uses_of_Beauveria_bassiana_as_a_microbial_insecticide