



MEALYCARE

HOW DOES IT WORK?

MEALYCARE is a biological insecticide based on a selected strain of naturally-occurring beneficial entomopathogenic fungus *Lecanicillium lecanii*. *Lecanicillium lecanii* is used as an effective foliar application product. Mealycare infects and kills mealy bugs and sucking insects like thrips, jassids, aphids, white flies, leaf hoppers and mites. Mealycare contains conidiospores of *Lecanicillium lecanii*.

BENEFITS

- Effectively controls economically important sucking pests such as mealy bugs, aphids, thrips, jassids, whitefly and leaf hoppers for a wide range of crops
- Pathogenic pest load reduction improved plant health and thereby increased crop productivity
- Effective component in Integrated Pest Management (IPM) programmes
- Reduce the use of chemical pesticides
- Create a safer environment

COMPOSITION

Active Ingredient	(%) W/W
<i>Verticillium lecanii</i> (spores)	10%, 1 X 10 ⁸ CFU/g
Carrier (Dextrose)	90%

DOSAGE & APPLICATION

5g per liter of water

COMPOSITION

Mealycare contains conidiospores of *Lecanicillium lecanii*. The composition is customised to comply with regulatory guidelines of respective countries. *Lecanicillium lecanii* is a proprietary strain and compliant with National Bio Diversity Authority guidelines and has Access Benefit Sharing (ABS) agreement with the State Bio Diversity Board for payment of royalty to the habitat from where the microbes have been isolated. The strain is under Patent deposit certificate with Budapest Treaty recognised depository.

Mealycare is available in the following formulations:

- Wettable powder – WP (Potency: 1x10⁸ CFU/g)
- Soluble powder – SP (Potency: 1x10⁹ CFU/g)

MODE OF ACTION

Conidial penetration: The microscopic conidial spores of *Lecanicillium lecanii* are slimy and attach to the cuticle of the insect. Hyphae from the germinating spores are produced, penetrating the insect's integument and destroying the internal contents of the insect.

Enzyme production: *Lecanicillium lecanii* mycelia produce an octacyclodepsipeptide toxin called bassianolide, consisting of four molecules each of D-hydroxyisovaleric acid and L-Nmethylleucine, which have insecticidal properties. The fungus also produces other insecticidal toxins such as dipicolinic acid. These toxins weaken the host's immune system (of the insect) and aid in eventually killing it.

Growth: Once inside, *Lecanicillium lecanii* replicates and consumes the insect's internal contents, eventually killing it. The fungus then grows out of the insect's cuticle and starts sporulating. Infected insects appear as white to yellowish cottony particles. *Lecanicillium lecanii* infects the insect on contact and does not need to be consumed by the host to cause infection.