



BIOINSECTICIDE

Metarhizium brunneum strain Ma 43

LALGUARD M52^{OD}

Broad spectrum bioinsecticide

Effectively protect your crops against pests

LALGUARD M52 OD is a bioinsecticide formulated with a high concentration of *Metarhizium brunneum* strain Ma 43. The technology of encapsulating the spores with oil microdroplets promotes the viability of the entomopathogenic fungus. LALGUARD M52 OD is applied by foliar spray for effective control of crop pests under glasshouse and in open field conditions.



LIQUID

MODES OF ACTION

1 ADHESION

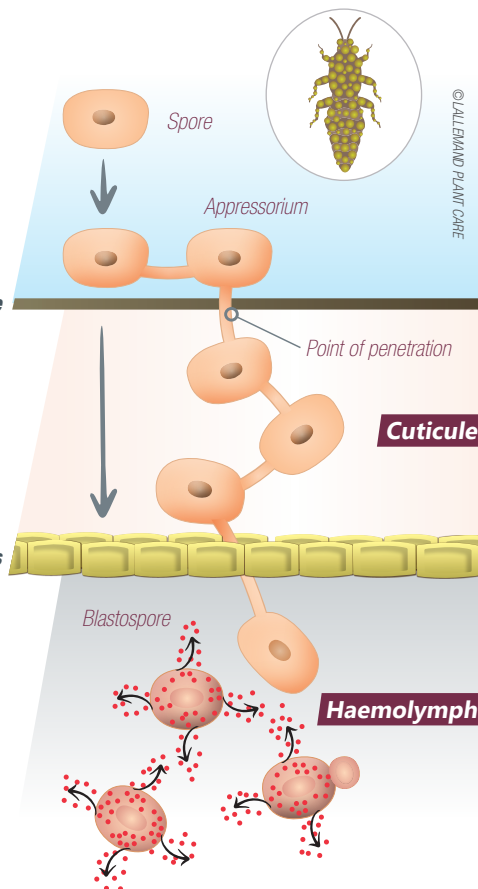
When applied, the fungal spores adhere to the insect cuticle. A germ tube rapidly develops at the point of contact.

2 PENETRATION

The germ tube produces a large variety of enzymes in order to perforate the insect's cuticle completely and gain access to the haemolymph.

3 COLONISATION

The fungus then multiplies in the form of a large number of blastospores, causing progressive necrosis and death within 3 to 7 days.



BENEFITS

- **Proven effectiveness against a broad spectrum of pests:** Thrips (*Thysanoptera*), Whiteflies (*Trialeurodes vaporariorum*, *Bemisia tabaci*), Spider mites (*Tetranychidae*)
- **Formulation suitable for use in glasshouse and open-field conditions**
- **Can be used on a wide range of crops:** strawberry, cucumber, courgette, melon, pumpkin, tomato, pepper, chilli, onion, shallot, garlic, leek and ornamental plants

ADVANTAGES

- **Management of resistance risk**
- **Compatible with Integrated Pest Management (IPM)**
- **No pesticide residues**
- **Can be used in organic farming**

LALGUARD M52^{OD}

↓ ↓ AUTHORIZED USES

CROPS	TARGETS	DOSE under protection	DOSE open field	RISK REDUCTION MEASURES
Strawberries	Spider mites (<i>Tetranychidae</i>)	1.25 L/ha	–	–
Cucumbers (vertical or horizontal crop)	Thrips (<i>Thysanoptera</i>) Whiteflies (<i>Trialeurodes vaporariorum</i> / <i>Bemisia tabaci</i>)	1.25 L/ha hedgerow crop	–	–
Gherkins (vertical or horizontal crop)				
Zucchini/Squashes (vertical or horizontal crop)				
Melons (vertical or horizontal crop)				
Pumpkins	Thrips (<i>Thysanoptera</i>) Whiteflies (<i>Trialeurodes vaporariorum</i> / <i>Bemisia tabaci</i>)	1.25 L/ha	–	–
Tomatoes	Thrips (<i>Thysanoptera</i>)	1.25 L/ha hedgerow crop	–	–
Peppers/Chillies				
Onions (harvested dry)	Thrips (<i>Thysanoptera</i>)	–	1.25 L/ha	Buffer zone
Shallots				
Garlic				
Leeks				
Ornamental plants* (not intended for consumption))				

* The species and varieties of ornamental plants that may be treated with this product are listed on the label under the responsibility of the authorisation/permit holder.

Use in ornamental plants granted on the basis of trials carried out on the following species: Gerbera.

For use on protected crops, LALGUARD M52 OD can be applied up to 10 times per crop cycle, with a minimum interval of 3 days between applications.

For open field use, LALGUARD M52 OD can be applied up to 6 times per crop cycle, with a minimum interval of 7 days between applications.

The pre-harvest interval is 4 hours for all uses.

🔗 COMPATIBILITY:

LALGUARD M52 OD is compatible with many fungicides, insecticides and auxiliary insects and can be used in Integrated Biological Protection (IBP). Please refer to the compatibility table.




Authorisation holder: DANSTAR FERMENT AG/ LALLEMAND PLANT CARE

Poststrasse 30,
CH-6300 Zug
SWITZERLAND

CHARACTERISTICS

- **ACTIVE INGREDIENT:** *Metarhizium brunneum* strain Ma 43 2.10¹² CFU*/L
*CFU: colony forming unit. Enumeration of living micro-organisms capable of multiplying
- **FORMULATION:** oil dispersion (OD)
- **PACKAGING:** 1 L
- **STORAGE:** 24 months between +4°C and +20°C
- **AUTHORISATION N°:** 10404P/B
- **Can be used in organic farming**

📅 RECOMMENDATIONS BEFORE USE

	TIMING	SITUATION	APPLICATION	BENEFIT
PREVENTION	Start of the cycle	 Appearance of first individuals	LALGUARD M52 OD every 3 to 7 days	Retards population growth
	Middle of the cycle	 Explosion of the population	Alternate applications of LALGUARD M52 OD with conventional shock-effect insecticides	Reduces risk of resistance
ALTERNATION	Harvest	 Population management	Alternate applications of LALGUARD M52 OD with conventional insecticides	Lowers pesticide residues at harvest

Shake bottle well before use. After opening, keep refrigerated and use within 3 weeks.

Use a minimum water volume of 500 L/ha.

The spray mixture must be used within 24 hours.

Aim for maximum coverage of the leaf surface (upper and lower sides of the leaves).

Applications should ideally be made between +15°C and +35°C with relative humidity >50%. Prefer applications in the morning or evening.

Do not use spray pressures above 1380 KPa (200 psi) or hot foggers.

Microbial by nature

LALLEMAND