

Bioniconema

Paecilomyces lilacinus 1% W.P



Paecilomyces lilacinus 1% W.P. (2 x 10¹⁰ cfu/gm. minimum) (Mother culture: Indian Institute of Horticultural Research, Bangalore) Talc based Formulation. *Paecilomyces lilacinus* has been one of the principal genera of importance in bio-control studies in recent years. *Paecilomyces lilacinus*, a bio-control fungus, protects the root system against diseases caused by plant parasitic nematodes, specifically root-knot nematodes (*Meloidogyne spp.*), reniform nematodes (*Rotylenchulus reniformis*), burrowing nematodes (*Radopholus similis*) and citrus nematodes (*Tylenchulus semipenetrans*). These nematodes infect agricultural and horticultural crops of economic importance. This bio-agent colonizes the root surface and is an antagonistic fungus, strongly parasitic to eggs and egg-masses of plant parasitic nematodes. Bioniconema can destroy upto 90% of eggs and 75%-80% of eggmasses of nematodes. Therefore, after one or two applications, you observe a plummeting fall in the nematode population. This is because few eggs survive to hatch new generations.

It is particularly effective against the following nematodes:

Root-knot nematode *Meloidogyne spp.*

Golden cyst nematode *Globodera pallida* & *G. rostochiensis*

Cyst nematode *Heterodera spp.*

Citrus nematode *Tylenchulus semipenetrans*

Burrowing nematode *Radopholus similis*

Reniform nematode *Rotylenchulus reniformis*

Dosage :

5 kg per ha. Preferably mixed with 2 tons of any organic matter such as organo blended organic fertilizer / FYM.

Nursery bed treatment :

50 gm/sq.m.

Seed treatment :

Treat the seed with Bioniconema @ 10gm/kg seed.

Packaging:

500gm LDPE bag

1 kg LDPE bag

Application Guidelines :

Apply near the root zone , preferably leaving a 7 day gap on either side before applying chemical fertilizer or pesticide.

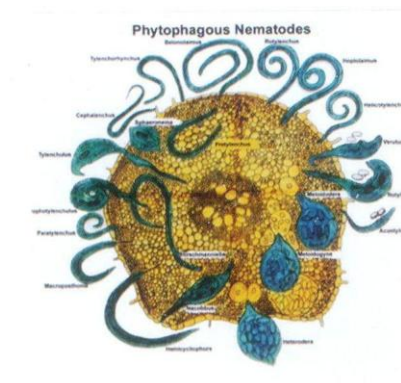
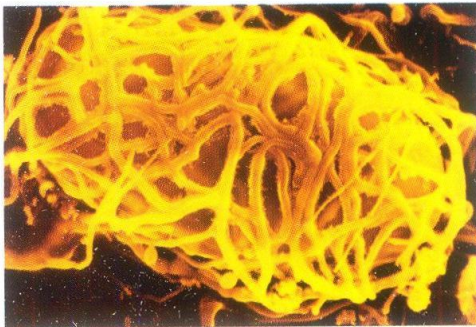


Diagram of Nematodes (microscopic)



Paecilomyces lilacinus
colonized root knot nematode egg
(electron microscope photo)



Nematode infected root

Bioniconema Result in Castor :



With Bioniconema



Without bioniconema

Bioniconema Result in Potato :



Use Bioniconema for crop protection :

Bioniconema (Bio-nematicides) :

Bioniconema is *paecilomyces lilacinus* based bionematicide. It controls all types of plant parasitic nematodes like root-knot , cyst reniform, stunt, lance , lesion etc. It is more effective on root-knot nematodes in tomato, onion cabbage , cauliflower and all other vegetable crops.

Certificate of Analysis
BIONICONEMA

Paecilomyces lilacinus 1% W.P.

Batch No. : 079
Date of analysis : 01/08/2014
Mfg. Date : 01/08/2014
Expiry Date : 01/01/2015

Sr. No.	Characteristic	Requirement	Results Obtained
1	Color	Off white	Complies
2	Physical nature	Free flowing powder.	Complies
3	Count	1.9×10^8 CFU/gm.	Complies

Remark: The above product complies as per specification.

For Nico Orgo Manures

For Nico Orgo Manures

Quality Control Dept.

Partner

Microbiologist

Material Safety Data Sheet

NICO ORGO MANURES

1. Chemical Products and Company Identification

Product Name : Bioniconema
Produce Code : Paecilomyces lilacinus (2×10^6 cfu/gm) 1% w.p.
Chemical Formula : Mixture
Other Designations : Powdered Formulation Containing Agriculturally
beneficial microorganisms.

Company :

NICO ORGO MANURES

Opp. Railway Station,

Dakor – 388 225.

(Gujarat – India)

Phone : +91-2699-244403, 244611

Fax : +91-2699-244903

2. Composition / Information on Ingredients

No Hazardous Ingredients.

Contains naturally-occurring, non-pathogenic, microorganisms in powdered formulation. This includes Paecilomyces Lilacinus popularly used in agriculture for disease control. See Product label for method of application, dosage and recommendations. Not for food, feed or drug use.

Note: Confidential business information has been omitted.

3. Hazards Identification

Emergency Overview : No known health hazards

Primary Entry Routes : Oral (swallowing), Inhalation

Acute Effects (Signs and Symptoms of Overexposure) :

Eyes : Liquid may cause mechanical irritation of eyes

Skin : No known hazard

Inhalation : Inhalation of large amounts may cause discomfort

Ingestion : No known hazard

Chronic Effects : No known hazard

Medical Conditions Aggravated by Exposure : None known

Target Organs : None

Carcinogenicity : None

HMIS : Health – 0, Flammability – 0, Reactivity – 0

4. First Aid Measures

Eyes : Flush with water for at least 15 minutes. Get medical attention if irritation persists.

Skin : Wash with soap and water

Inhalation : Remove person to fresh air. Get medical attention if discomfort Persists

Ingestion : No treatment necessary

5. Fire Fighting Measures

Flash Point : None

Autoignition Temperature : Not Applicable

Explosive Limits : LEL: Not Applicable
UEL: Not Applicable

Extinguishing Media : Use media suitable for
surrounding fire

Unusual Fire or Explosive Hazards : Not Known

Fire Fighting Instructions : No special requirement

6. Accidental Release Measures

Large Spill / Leak Procedure : Contain spill and recover for use
or disposal

Small Spills : Flush area with water

7. Storage and handling

Storage Requirements : Store in original container in
clean, cool and dry place. Use
before expiration date printed on
package

Handling Precautions : No special handling requirements.
Follow normal hygienic and
housekeeping standards for
agricultural products

8. Exposure Control / Personal Protection

Ventilation	: Special ventilation is not required
Protective Clothing / Equipment	: No special requirement
Respirator	: Not required
Contaminated Equipment	: Clean with soap and water
Comments	: Practice general personal hygiene after using this product. Wash hands with soap and water before eating, drinking or smoking.

9. Physical and Chemical Properties

Physical State	: Powder
Colour	: White to Pale yellow
Odour	: Mild
Water Solubility	: Soluble
% Volatile volume	: Not determined
Specific Gravity	: 1
Vapour Pressure	: Not determined
Vapour Density	: Not determined
pH	: 6.5 – 7.0
Melting Point	: Not Determined
Boiling Point	: N.A.
Freezing Point	: N.A.

10. Stability and Reactivity

Stability	: Stable
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Conditions to avoid : None

Hazardous Polymerization : Will not occur

Chemical Incompatibilities : Avoid contact with any chemical

Hazardous products of decomposition : None

11. Toxicological Information

Eye Effects / Eye Irritation : Non-irritating

Acute Oral Effects : None

Acute Inhalation Effects : None

Acute Dermal Effects : None

Skin Irritation : Non-irritating

Skin Sensitization : Not a skin sensitizer

12. Ecological Information

The product contains non-pathogenic bacterial strains that occur naturally in soil and is biodegradable.

13. Disposal Consideration

Disposal: Small amounts of the product which cannot be used according to the label instructions may be disposed off in a landfill

RCRA Waste Status: This product is not regulated as a hazardous waste. State and local regulation may affect the disposal of this product. Consult your state, local or provincial environmental agency for disposal of waste other than by use according to instructions.

14. Transport Information

Transportation Data : This product is not regulated as a hazardous material for all
modes of transportation

Hazard Class : Not Applicable

ID No. : Not Applicable

15. Regulatory Information

TSCA : All components of this product are
listed on TSCA Inventory

SARA Section 313 : Contains no reportable components

OSHA Hazard Classification : Non Hazardous

Proposition 65 : Contains no components subject to
Warning requirement

WHMIS / Controlled Products Regulations : This products has been classified in accordance with the
hazard criteria of the CPR and this MSDS contains all of the information required by the CPR

16. Other Information

NFPA Ratings

Health : 0

Flammability : 0

Reactivity : 0

Specific Hazard : Not Applicable

Information presented on this Material Safety Data Sheet is believed to be accurate at the time of
publication. No warranty, expressed or implied, is made with regard to this information. This
information may not be adequate for every application, and the user must determine the suitability of
this information due to the manner / conditions of use, storage or local regulations.
