

# SUPER NEMOS

## BIO-INSECTICIDE

Patent pending.

### What is SuperNemos?

**SuperNemos is a Biological Control product containing microscopic beneficial nematodes (found in healthy soil), which are specially formulated to aggressively pursue several or different groups of insect pests. When applied in specific soil, SuperNemos will attack its target insect pest species: Nematodes enter the host through body openings or by penetration of the body wall. Once inside they kill the host pest within 48 hours. And all in just one application.**

**SuperNemos** are capable of controlling several target pest species: Wireworms, Vine Weevils, Strawberry Root Weevils, Carrot Weevils, Chafer Grubs, Caterpillars, Cutworms, Leatherjackets, Cabbage Worm, Fungus Gnats Larvae. Also effective against Beetle Larvae which feeds on Cucumber, Tomatoes and Potatoes plants. And more!

**SuperNemos** is UNLIKE ANY OTHER Bio-Control (beneficial nematodes) product sold on the market: Which contain only one single beneficial nematode species, and can target only one group of pests.

**SuperNemos** is an environmentally friendly product that is harmless to wildlife, earthworms, bees, bumblebee, pets and children. **SuperNemos** only attack specific target insect pests. There is no need for masks or specialized safety equipment.

### General Usages

SuperNemos product use to control soil insect pest species in:

- The Garden – *Indoor or outdoor pot plants or 'gro bag' suffering from soil insect pests attacks*
- Planted Herbs
- Nursery stocks
- Turf grass
- Strawberries, raspberries and other soft fruits
- Mushrooms

### Anything 'bug'ging you?

#### Not all Bugs are Pests

It is important to note that not all insects are pests. Actually most are beneficial because they pollinate our crops, recycle dead things or prey on pest insects. It is in our own best interest to let these creatures do their job and even attract and help them exist in our environment.

The statement 'A Good Bug is a Dead Bug' is definitely wrong. True, some insects are pests. But we could try and let Bugs eat Bugs and have the 'good' Bugs help us control the 'bad' ones.

So it is better to look a little closer at nature before you act?

- **Beneficial insects feed on slugs and snails**
- **Beneficial insects pollinate flowers**
- **Beneficial insects help control caterpillars and beetles**

Beneficial Bugs can be classified as Predators or Parasites. Predators feed on other insects, while Parasites use other insects for their home or as food for their offspring.

### What is a pesticide?

#### Human Control of Nature!

As the word implies, a pesticide is a 'pest killer'. Many insect pests damage crops and gardens. Pesticide used to reduce crop loss from disease and pests (weeds and insects) attack, both before and after harvest. However, in recent years it has been established that many pest populations have developed resistance to most insecticides. Unfortunately, the same cannot be said for innumerable other species. Pesticide has caused the extinction of many beneficial insects, as well as poisoning the water and the birds and reptiles that may have fed on the poisoned insects. Pesticides do not differentiate; they will kill the good as well as the bad. Beneficial insects are often more susceptible to chemicals than insect pests. And the pests tend to build up immunity to many pesticides, which may result in heavier applications of the poisons, causing even more harm to the environment.

### What is biological control?

#### Nature Controlling Nature

Biological Control is the use of one living organism to control another. Biological Control is also defined as the reduction of pest populations by natural enemies and typically involves an active human role.

The introduced organisms usually range from predatory insects to much smaller single cell (an organism which invades another causing it harm or leading to its death by extracting nutrients, damaging cells or producing toxic by-products). Biological control of pests and diseases is a method of controlling pests (including weeds and diseases) in agriculture that relies on natural predation, parasitism or other natural mechanism, rather than applying chemicals. Natural enemies of insect pests, also known as biological control agents, include predators, parasitoids, and pathogens.

Bio-control seldom means complete eradication of the unwanted organism, but rather maintaining its population at a lower than average population density than would occur in the absence of the bio-control agent.



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### APPLICATION AND SPECIFICATIONS

**One pack of 12 million to treat 30m<sup>2</sup> to 40m<sup>2</sup> (depending on the pests level) or may treat up 200 pot plants.**

#### Application

**BEFORE APPLICATION A SET OF ENVIRONMENTAL CONDITIONS MUST BE OBSERVED:**

Outdoor Applications:

- 1 Avoid applications in direct sunlight, as the nematodes are very susceptible to ultraviolet light (UV). Apply late evening (at dusk), in shaded area or on overcast days.
- 2 Nematodes need moisture in the soil for movement (if the soil is too dry or compact, they may not be able to search out the target pest). Water the area one day before application (if the soil is too dry) and lightly watered immediately after application.
- 3 Regular watering of the treated area will provide sufficient moisture, and helps the juvenile nematodes to move deeper into the soil. Care should be taken not to soak the area, because nematodes in too much water (soggy soils), cannot infect the host pest.
- 4 The soil temperature must be above 10°C.
- 5 Do not apply prior to, or during, periods of heavy rain, as nematodes may be washed away from the base of the plants.
- 6 To assure maximum effectiveness, use all of the mixture of the nematodes within 2-3 hours of preparation (after which time they start to deteriorate if not applied to the soil).
- 7 Nematodes must be applied directly to the soil around the target plant or in the target area. Do not spray nematodes on the leaves, branches or stalks of plants unless specific insect pests in a particular area have been identified.

#### Soil Application

##### Apply by watering can:

For the first application it is advisable to use a maximum strength (one pack should treat 30m<sup>2</sup> to 40m<sup>2</sup>).

You will need: tap water, large container or bucket 8-10 litres sprinkling can or sprayer. Pour a small amount of water (1-2 litres) into the container or bucket.

Empty the entire contents of the SuperNemos and **rinse all residue into the container or bucket** (often a large quantity of Nematodes will cling to the packaging surface).

Stir well and let stand for at least 30-minutes.

Adjust the water to 8 litres, stir well, take 2 litres of the mix (use a measuring jug) and pour it into the watering can and adjust the water to 8-10 litres.

One watering can of 8-10 litres, should cover 10-12m, repeat the procedure until you cover your 40m. Always stir the solution before use.

#### Helping Tips

To achieve a uniform application you may use the following tips: If you have a back sprayer or a watering can, first you need to water the targeted area (plants or pot plants or both) before the application. This will give an idea to how many times you need to use your watering equipment (back sprayer or a watering can). Divide the nematode solution accordingly; where a volume of 3 watering cans are required, divide the solution by 3 or 4 watering cans, and so on. Adjust the water level in the watering can to 8-10 liters, each time before applying it. Make sure to mix the nematode solution before dividing it.

#### Treatment in pots or 'gro bags'

To assure maximum effectiveness and best uniformity: Measure your nematode mixture, using a measuring jug and divide that amount by 200; that will give the amount to treat each pot plant, or divide by 50 which will give the amount to treat each 'gro bags' (mix well before each application).

#### Mix with Compost

For best results try the following this techniques;

Empty the entire contents of the SuperNemos container in a large bucket containing 1 gallon of water (5 litres) and rinse the container in the bucket. Stir well and let stand for at least hour. Add 5 litres (or 9 pints) of vermiculite, peat moss or compost, and stir again to make a 'slurry'. The 'slurry' may be;

A- Mixed with 200 litres of loose compost and use in a base dressing or in a top dressing.

Or

B- The slurry may be applied directly to the affected areas using 1 cup for each plant. For new plants or transplants, apply around roots (stir well before each application). Always apply in shaded areas, on overcast days or after sundown. Sunlight will kill the Beneficial Nematodes. Water lightly after application as Beneficial Nematodes travel best in moisture.

Chemical Fertilizers should be avoided for at least two weeks prior to and after nematode application, because they may be adversely affected by high nitrogen content.

Organic Fertilizers may applied 3-4 days prior to or after nematode application.

#### Active ingredients

SuperNemos contains a mixture of 12 million (or see the package specification) beneficial infective juvenile nematodes in an inert vermiculite carrier.

#### Storage and handling

In general, store SuperNemos product in a cool (refrigerator 2-5°C) dry place out of direct sunlight. Do not allow them to freeze or be exposed to extreme temperature.

#### Guarantees

As our products are composed of living organisms **we cannot completely guarantee that they will suppress the pest population in your particular environment.** We can only guarantee to (i) check that they are in good condition prior to dispatch, and (ii) advise on the correct application. Should difficulties persist, please contact our technical support.

#### NOTIFICATION

This product has been Notified to:

The Department of Agriculture & Food, Pesticides Registration Division, Backweston Campus, Young's Cross, Celbridge, Co. Kildare.

Notification Number: PCS No. 92360

#### Technical assistance

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#### Contact Details

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