



NEMGUARD®

Best practice application guide



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USE PLANT PROTECTION PRODUCTS SAFELY. ALWAYS READ THE LABEL AND PRODUCT INFORMATION BEFORE USE.
 For further information with regard to the warning phrases and symbols for this product please refer to the product label
 NEMguard® is a registered trademark of Ecospray Ltd. NEMguard® DE contains garlic extract (CLAIL 0021) MAPP no. 16749

NEMGUARD DE - THE BASICS

1. Polysulphides extracted from garlic

The active ingredients contained in NEMguard DE are polysulphides. These polysulphides are formulated from Garlic (*Allium sativum*) using patented polysulphide production technology and high levels of quality control to ensure the right balance of polysulphides for excellent efficacy.

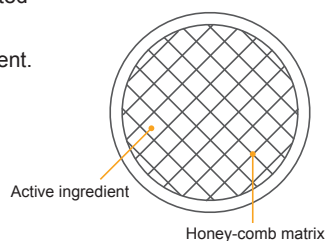
2. Diatomaceous earth

NEMguard DE is a slow release granule formed from specially selected Diatomaceous Earth (DE). The DE granule contains a honey-comb structure and acts as an effective carrier matrix for the active ingredient.

The new DE formulation offers the following improvements over the previous wood flour formulation:

- Improved release of polysulphides immediately after application
- Low dust for improved operator safety
- Release of the polysulphides occurs over a period of 4 to 6 weeks depending on weather conditions and soil factors, offering protection to crops during this important time

Structure of a NEMguard DE granule



3. Nematodes

NEMguard DE is effective on several key nematode species*

Order	Family	Common name
<i>Dorylaimina</i>	<i>Longidoridae</i>	Free Living Nematodes
	<i>Trichodoridae</i>	
<i>Tylenchina</i>	<i>Pratylenchidae</i>	Root Lesion Nematodes
	<i>Meloidogynidae</i>	Root Knot Nematodes

*NEMguard DE is effective on other nematode species not named

NEMguard DE - Preferred soil type for maximum efficacy

Sandy soils - various trials have shown improved efficacy in sandy soils due to percolation of the active ingredient. Active movement of water assists with release of polysulphides resulting in a protective zone.

Organic soils - there is limited data available, but effective control has been seen in this soil type.

Silty soils - these soils should be avoided as they stop the effective movement of the polysulphides around the seed resulting in poor control. (Certis will not support its use on silty soil).

NEMGUARD DE - APPLICATION

1. Machinery

There are several machinery manufacturers available who produce equipment for NEMguard DE application. For optimum results, Certis recommend the use of the Hostine Microband applicator. In general, equipment should have a positive feed to each outlet.

At the beginning of the season, allow adequate time to check equipment (bent outlet tubes, degraded tubing, corrosion damage on cartridges or cassettes) and carry out a thorough calibration with current product.

At the end of the working day, the product left in the hopper should match roughly with the expected calibrated output for the area treated. Where this is not the case, re-visit calibration calculation records and consider recalibration if required.

Where long-term seasonal drilling takes place, consider calibration during the season at regular intervals to ensure compliance with usage rates.

2. Conditions

Best conditions for the application of NEMguard DE has been found to be under dry conditions to minimise absorption of water from the air.

DO NOT LEAVE UNUSED PRODUCT IN THE HOPPER OVERNIGHT.

3. Close to the seed

NEMguard DE should be applied at drilling, as an in furrow treatment, as close to the seed as possible.

4. Irrigation

NEMguard's active ingredients, polysulfides, are held within the honey-comb structure within the DE granule. In order to obtain effective release of the active ingredient into the soil around the carrot/ parsnip seeds, sufficient water is required.

As the water percolates through the soil as a result of rain or irrigation, it activates the release of the polysulfides, which then spread out around the granule creating a zone of action, which will have efficacy on the nematodes.

- Recommended that 20 mm of irrigation be applied soon after granule application if no rain occurs
- Requirement for 80+ mm of water, either rain or irrigation, over the first 4 to 6 weeks in both carrot and parsnip crops