

Nemasys® H

Advanced Biocontrol for Horticulture

For control of the larval stages of black vine weevil (*Otiorhynchus sulcatus*) present in soil or container-grown crops

Contains the beneficial nematode *Heterorhabditis bacteriophora* (82%) and an inert carrier with water (18%)

Product suitable in organic farming according to RCE n° 834/2007

RECOMMENDED RATES

| Application method | Application volume | Dose | Pack size 50 million | Pack size 250 million |
|--------------------|-------------------------|--------------------------|----------------------|-----------------------|
| Open soil | 4 litres/m ² | 1,000,000/m ² | 50m ² | 250m ² |
| Pots / Containers | 4 litres/m ² | 500,000/m ² | 100m ² | 500m ² |
| Strawberry | 100 ml/plant | 25,000/plant | 2,000 plants | 10,000 plants |

The table below gives volumes of diluted Nemasys® H required for individual pots of different sizes, using the recommended pot rate of 125,000 nematodes / litre of water. Note that the nematode volume per pot (ml/pot) decreases as the pot volume increases. The dose rate is related to the surface area.

| Pot volume (L) | Drench (ml) / pot | Nematodes/ pot | Pots treated / 50 million pack | Pots treated / 250 million pack |
|----------------|-------------------|----------------|--------------------------------|---------------------------------|
| 1 | 46 | 5,750 | 8,708 | 43,542 |
| 2 | 81 | 10,125 | 4,940 | 24,702 |
| 5 | 166 | 20,750 | 2,404 | 12,020 |
| 7.5 | 226 | 28,250 | 1,773 | 8,863 |
| 10 | 278 | 34,750 | 1,437 | 7,187 |
| 12 | 317 | 39,625 | 1,263 | 6,315 |
| 14 | 353 | 44,125 | 1,135 | 5,673 |
| 16 | 386 | 48,250 | 1,036 | 5,180 |
| 18 | 418 | 52,250 | 958 | 4,788 |
| 20 | 448 | 56,000 | 894 | 4,469 |
| 22 | 476 | 59,500 | 841 | 4,203 |
| 25 | 516 | 64,500 | 776 | 3,879 |
| 30 | 576 | 72,000 | 695 | 3,474 |
| 35 | 629 | 78,625 | 636 | 3,179 |
| 40 | 677 | 84,625 | 591 | 2,954 |
| 45 | 720 | 90,000 | 556 | 2,778 |

DIRECTIONS FOR USE

- Remove all fine filters (10 mesh or smaller) from the application equipment.
- Partly fill the tank with cool (10-20°C), clean water.
- Empty one tray into a bucket and add a small volume of water to form a thick suspension.
- Stir the contents thoroughly making sure all lumps are fully dispersed before adding more water (normally a minimum of 10 litres).
- Add the nematode suspension to the tank and fill with water up to the required level.
- Start the agitator and keep running until the application is completed. If a propeller is used, ensure it does not run at high revolutions (below 150 rpm).
- Apply dose immediately to the whole crop at the appropriate rate.
- Irrigate immediately after soil application to disperse nematodes into soil.

Knapsack sprayer (20L capacity) application instructions (suitable for 50 million packs only):

Open soil application (50 m²)

- Disperse the entire contents of the pack in a bucket containing 10 litres of water to create a stock solution.
- Stir vigorously, immediately take 1 litre of the stock solution and add to knapsack fitted with a coarse spray nozzle and fill with cool, clean water.
- Apply the suspension to a tenth of the area to be treated. Keep the nematode suspension agitated as nematodes settle out quickly.
- Repeat steps 2 and 3 until the whole area is treated.
- Immediately after application water the treated area thoroughly to ensure nematodes are washed into the soil.

Dosing unit application:

- Set injection rate on dosing unit (normally 1%)
- Considering the pack size, injection rate, area to treat and recommended rates, calculate number of nematodes and volume of water required for a stock solution.
- Make up the stock solution and mix thoroughly to ensure that the nematodes are well dispersed. NOTE: If the suspension is too viscous add an additional known volume of water and adjust the injection rate accordingly.
- Place inlet tube into the stock solution and start the flow of water, so the dosing unit can start injecting nematodes into the outlet pipe.
- Start application ensuring the correct volume of water is being applied per unit area. Throughout application ensure that the nematode suspension remains agitated.
- Apply evenly to the whole area via lance, boom sprayer, sprinklers or drip irrigation system.
- For container applications, avoid overwatering as nematodes can be lost during pot leaking.

Drip irrigation application:

- Allow enough time for nematodes to reach intended area of crop.
- Inject nematodes in the first half of the irrigation cycle and immediately flush the system with enough water to wash nematodes out of irrigation pipes in the second half.
- If multiple blocks are treated, use short irrigation cycles between blocks to ensure an even application of nematodes. Consider spot treatments of drop off zones at the end of drip lines with a lance or knapsack.
- Position irrigation drippers close to the base of the plant. When more than one dripper is used per pot, these should be distributed evenly around the base of the plant.
- Consult your supplier to determine suitability of your drip irrigation system.

APPLICATION CONDITIONS

For optimum results:

- Treatment should be applied when black vine weevil larvae and pupae are present.
- Soil should be moist and between 12°C and 30°C during application and for at least 2 weeks after.
- Avoid applications in direct sunlight; evening applications are recommended.
- Routinely treat new material coming onto the nursery that may contain black vine weevil larvae.
- If product is applied over foliage, irrigate immediately with water to wash the nematodes into the soil.
- Strawberry application: drench each plant individually, around the base of stems. Avoid run off.

PRECAUTIONS

- Agitate nematodes constantly during application.
- Do not use product if past expiry date or incorrectly stored.
- For information relating to which chemicals are compatible with Nemasys® H ask your distributor.
- Once opened, use each entire tray immediately (do not sub-divide or store opened packs or mixed suspension).
- Nemasys® H persists for approximately four weeks; larvae emerging from eggs laid after this time may not be controlled.
- Do not exceed 300 psi/20 bar/2000 kPa pump pressure.
- Nozzle aperture should be greater than 0.5 mm
- Suitable nozzles should produce a coarse spray at the intended application pressure.

Safety Precautions

If medical advice is needed, have product container or label at hand.
Keep out of reach of children.
Read label before use.

STORAGE AND DISPOSAL

Storage: Upon receipt, use immediately or store in a refrigerator at or under 5°C. DO NOT FREEZE. Avoid the constant opening of the fridge to minimize temperature fluctuations and do not overfill to allow the movement of cold air. Use entire contents of pack at one time. Do not split or subdivide individual packs as each contains a measured dose of nematodes. Do not store diluted product. KEEP OUT OF REACH OF CHILDREN. THESE PRODUCTS CONTAIN LIVING ORGANISMS THAT REQUIRE SPECIAL HANDLING AND APPLICATION PROCEDURES. FOLLOW THESE INSTRUCTIONS CAREFULLY TO OBTAIN MAXIMUM ACTIVITY.

Disposal: Product and packaging waste resulting from the use of this product, or unused, outdated product, may be disposed of on site or at any approved waste disposal facility in accordance with local regulations.

WARRANTY DISCLAIMER

BASF plc warrants that this product conforms to the description on the label and is reasonably fit for the purpose stated on the label when used in accordance with the directions. BASF PLC DISCLAIMS ALL OTHER WARRANTIES, EITHER EXPRESS OR IMPLIED INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

REMEDIES

The remedy for injury or damage for this product is limited to, in BASF plc sole discretion, replacement of the product or refund of the purchase price paid. Under no circumstance shall BASF plc be liable for incidental, consequential or special damages.

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