

## PRECAUTIONS

- Do not use product past expiration date.
- Do not use through drip irrigation or misting systems.
- Do not store Nemasys solution for future use.
- Do not exceed 300 psi pump pressure.
- Never mix fertilizers or pesticides with Nemasys in a concentrate solution.
- Once pests are established, it may take two or three weeks before the number of adults is noticeably reduced.
- Follow best management practices to monitor adult pest populations and to establish appropriate timing of nematode applications for optimal results.

## STORAGE AND DISPOSAL

Upon receipt, remove outer packaging and use immediately or store in a refrigerator (41° F, 5°C).

## DO NOT FREEZE.

- Ensure good air circulation around each tray.
- Use entire tray contents at one time - do not use partial trays.

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

## WARRANTY DISCLAIMER

Becker Underwood, Inc. warrants that this product conforms to the chemical description on the label and is reasonably fit for the purpose stated on the label when used in strict accordance with the directions. BECKER UNDERWOOD 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 from this product is limited to, in Becker Underwood's sole discretion, replacement of the product or refund of the purchase price paid. Under no circumstance shall Becker Underwood, Inc. be liable for incidental, consequential or special damages.

## LIMITATION OF LIABILITY

No one is authorized to change or supplement, whether verbally or in writing, the statements contained on the label. Becker Underwood and the seller are not liable for personal injury or property damage or loss, including crop damage or lack of performance, due to circumstances beyond their control, like a product user's failure to comply with the directions. Buyer and user assume all risks for these events.

Nemasys® is a registered trademark of Becker Underwood.

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# Nemasys®

## Advanced Biocontrol for Horticulture

For control of Fungus Gnats and Sciarids (*Bradysia spp.*), and Western Flower Thrips (*Frankliniella occidentalis*) in greenhouse horticulture production.

Contains infective juveniles of *Steinernema feltiae* nematodes in an inert water-soluble carrier.

KEEP OUT OF REACH OF CHILDREN  
CAUTION

Store at 41°F (5°C)  
DO NOT FREEZE

## GENERAL INFORMATION

Nemasys is a patented formulation of the beneficial nematode *Steinernema feltiae* that aggressively seeks out, enters, and controls the larva of target insect pests often found in greenhouse horticulture production. The nematode is active only against the specified target pests and is not the product of any genetic modification.

Nemasys is compatible with other biological control programs as well as many other chemical control products.

## DIRECTIONS FOR USE

Read and follow all label instructions thoroughly before applying Nemasys.

For optimum results:

- Treat entire house or plant inventory as soon as possible after placement in greenhouse. In propagation areas, treat new plants as they are introduced. Interior plants should be treated prior to placement.
- Soil or media temperature should be between 50° - 86°F (10° - 30°C). The soil or media must be moist prior to, during, and after application.
- Use whole trays during application - do not split or use partial trays.
- Use nematodes immediately after they have been mixed. Use cool water for mixing and keep tank away from heat sources and out of direct sunlight. Agitate nematodes constantly during application.

## APPLICATION RATES - FUNGUS GNAT, SCIARID (*Bradysia spp.*)

Insect Pest	Application	Region*	50 Million	150 Million	250 Million
Fungus Gnat Sciarid ( <i>Bradysia spp.</i> )	Light Infestation	U.S.	50 mil / 1700 sf in 50 gals water	150 mil / 5100 sf in 150 gals water	250 mil / 8500 sf in 250 gals water
		Canada	50 mil / 100 m <sup>2</sup> in 200 liters water	150 mil / 300 m <sup>2</sup> in 600 liters water	250 mil / 500 m <sup>2</sup> in 1000 liters water
	Heavy Infestation	U.S.	50 mil / 1100 sf in 35 gals water	150 mil / 3300 sf in 100 gals water	250 mil / 5500 sf in 175 gals water
		Canada	50 mil / 50 m <sup>2</sup> in 130 liters water	150 mil / 150 m <sup>2</sup> in 390 liters water	250 mil / 250 m <sup>2</sup> in 650 liters water
	On highly susceptible crops & propagation cuttings	U.S.	50 mil / 550 sf in 25 gals water	150 mil / 1650 sf in 75 gals water	250 mil / 2750 sf in 125 gals water
		Canada	50 mil / 32 m <sup>2</sup> in 100 liters water	150 mil / 97 m <sup>2</sup> in 300 liters water	250 mil / 162 m <sup>2</sup> in 500 liters water

\*Recommended application rates are based on the unique cultural and pest control practices specific to a region or country.

### APPLICATION DIRECTIONS

**Light Infestations:** Apply Nemasys at the recommended rate (refer to chart above) and treat the entire house or plant inventory as soon as insect pests appear. Re-apply at 14-21 day intervals.

**Heavy Infestations:** Apply Nemasys at the recommended rate (refer to chart above) and treat the entire house or plant inventory as soon as insect pests appear. Re-apply at the **Light Infestation** rate at 14-21 day intervals.

**Heavy Infestations on highly susceptible crops or newly propagated cuttings:** Apply Nemasys at the recommended rate (refer to chart above) and treat the entire house or plant inventory as soon as insect pests appear. Re-apply at the **Light Infestation** rate when necessary after 5-6 weeks.

### Large capacity sprayers, overhead irrigation and sprinkler systems

1. Remove all in-line and nozzle filters (50 mesh or less),
2. Partly fill the sprayer tank with cool, clean water. Begin and maintain agitation until spraying is completed.
3. Create a pre-mix stock solution by filling a clean bucket with cool water, add the recommended dosage of Nemasys and allow product to hydrate and disperse for at least 5 minutes.
4. Transfer pre-mix stock solution into sprayer tank, begin and maintain agitation.
5. Add the required volume of additional water to the sprayer. Use at least three (3) gallons (11.4 liters) of water per 100 sq ft ( 6 m<sup>2</sup>) of treated area.
6. Irrigate immediately to wash nematodes off plant and onto soil media surface. Do not over irrigate to cause runoff from the tops of the pots/liners.

### For hand-held backpack sprayers

1. Make a concentrated **Stock Solution** by filling a clean bucket with (2) gallons (7.5 liters) cool water, add one (1) 50 million tray of Nemasys and allow product to hydrate and disperse for at least 5 minutes.

Follow the dilution rate chart below:

Application	Add this Volume of Stock Solution	To a Final Volume of
<b>Light Infestation</b>	16 oz (470.6 mL)	3 gals (11.4 liters)
<b>Heavy Infestation</b>	24 oz (705.8 mL)	3 gals (11.4 liters)
<b>Highly susceptible crops or newly propagated cuttings</b>	48 oz (1411.7 mL)	3 gals (11.4 liters)

2. Apply the **Final Volume of Spray Solution** (3 gals or 11.4 liters) to 100 sq ft of moist soil or media. Use all of the **Final Volume of Spray Solution** within one hour of mixing, and agitate while spraying to prevent nematode settlement at bottom of sprayer tank.
3. Repeat step 2 with the remaining **Stock Solution**.
4. Irrigate immediately to wash nematodes off plant and onto soil media surface. Do not over irrigate to cause runoff from the tops of the pots/liners.

## APPLICATION RATES - WESTERN FLOWER THRIP (*Frankliniella occidentalis*.)

Insect Pest	Application	Region*	50 Million	150 Million	250 Million
Western Flower Thrip ( <i>Frankliniella occidentalis</i> )	Light Infestation	U.S.	50 mil / 4400 sf in 11 gals water	150 mil / 12300 sf in 33 gals water	250 mil / 22000 sf in 55 gals water
		Canada	50 mil / 400 m <sup>2</sup> in 40 liters water	150 mil / 1200 m <sup>2</sup> in 120 liters water	250 mil / 2000 m <sup>2</sup> in 200 liters water
	Heavy Infestation	U.S.	50 mil / 2200 sf in 5.5 gals water	150 mil / 6600 sf in 16.5 gals water	250 mil / 11000 sf in 27.5 gals water
		Canada	50 mil / 200 m <sup>2</sup> in 20 liters water	150 mil / 600 m <sup>2</sup> in 60 liters water	250 mil / 1000 m <sup>2</sup> in 100 liters water

\*Recommended application rates are based on the unique cultural and pest control practices specific to a region or country.

### APPLICATION DIRECTIONS

1. Remove all fine filters (1 mm, 50 mesh or finer)
2. Partly fill the sprayer tank with cool, clean water. Start the agitator and keep running until spraying is completed.
3. Create a pre-mix stock solution by filling a clean bucket with at least 3 gals (11.4 liters) of cool water, add one (1) tray of Nemasys and allow product to hydrate and disperse for at least 5 minutes.
4. After Nemasys has fully hydrated, stir contents or pre-mix solution thoroughly to ensure all product is dispersed.
5. Transfer pre-mix solution into the sprayer tank, begin and maintain agitation.
6. Fill sprayer tank to the required final spray volume.
7. Add a wetting agent/surfactant to the mixture.
8. Apply dose to the whole crop at the appropriate treatment rate.

### Optimizing application conditions for Western Flower Thrip treatments

- Nematodes require moist conditions to enhance effectiveness.
- If plants are dry, provide light overhead irrigation prior to nematode application.
- Ensure good foliar coverage of spray mix, and spray-to-wet. Avoid spray run-off.
- Use of a wetting agent/surfactant will enhance the wettability of the spray mix and encourage nematode movement.
- Following application, ensure that the crop remains wet for at least 2 hours. Provide another light overhead irrigation approximately 2 hours after application.
- **DO NOT APPLY IN DIRECT SUNLIGHT** - use blackouts during and for at least 2 hours after application.
- Turn off any artificial lighting during and for at least 2 hours after application.

### Compatibility Table

Some chemicals can be tank-mixed with Nemasys when used for WFT control, however, the following table lists products that have proved to be incompatible with Nemasys when tank-mixed.

Product	Active Ingredient	Trade Name	Waiting Period*
Fungicides	Anilazine	Dyrene	1 week before or after
	Fenarimol	Rubigan	1 week before or after
	Hydrogen dioxide	Zerotol	1 day before, 2 weeks after
	Quaternary amines	Green-Shield	2 weeks before or after
Insecticides	Abamectin	Avid	3 days before or after
	Bendiocarb	Turcam	1 week before or after
	Carbofuran	Furadan	2 weeks before or after
	Chlorpyrifos (EC)	Dursban	1 week before or after
	Diazinon	KnoxOut	1 week before or after
	Ethoprop	Mocap	2 weeks before or after
	Fenamifos	Nemacur	2 weeks before or after
	Methomyl	Lannate	1 week before or after
	Oxamyl	Vydate	2 weeks before or after

\* **Waiting Period:** A product's persistence will determine how long an interval to wait before a Nemasys application should be made. The above table indicates the timing of the pesticide application relative to the application of Nemasys.