

NEMASAN

NEMATODE SUPPRESSION / CONTROL



BIOLOGICAL NEMATOCIDE

For effective control / suppression of plant-parasitic nematodes in the soil.

For application to turf, fruit, vegetables, ornamentals, and row crops.

Active Ingredients:

Quillaja Extract.....8.0%

Chitosan.....2.0%

Other Ingredients:90.0%

Total:100.0%

KEEP OUT OF REACH OF CHILDREN CAUTION

FIRST AID

**If in
eyes:**

- Hold eye open and rinse slowly and gently with water for 15–20 minutes.
- Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.
- Call a poison control center or doctor for treatment advice.

HOT LINE NUMBER

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact **1-800-222-1222** for emergency medical treatment information.

See Booklet Insert for Additional Information

Manufactured exclusively for:

Organisan
corporation

P.O. Box 2085

Carrollton, GA 30112

EPA Reg. No. 92032-1

EPA Establishment No. 91888-LA-2

Net Contents: 2.5 GAL / 9.464 L

Not for sale (or use) in California

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS - CAUTION. Avoid contact with eyes or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. For any requirements specific to your State or Tribe, consult the State or Tribal agency responsible for pesticide regulation. Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application.

Agricultural Use Requirements

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 4 hours.

PPE required for early entry to treated areas (that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil or water), is:

- Long-sleeved shirt and long pants
- Shoes plus socks

GENERAL USE INSTRUCTIONS

Nemasan is a nematicide for use on agricultural crops against the pests listed in the Directions for Use section.

Apply Nemasan to the soil as a pre-plant, at planting or post-plant soil treatment on annual and perennial crops (refer to Directions for Use Table) alone, or applied through drip or border irrigation systems. Best results will be obtained from Pre-plant applications close to the actual planting times. The optimal application time must be determined based on the cultural practices and the nematode population dynamics. For perennial crops, apply Nemasan just prior to a root flush to protect young roots. Multiple applications may be required for crops with multiple root flushes. Nemasan must be applied to and incorporated into the soil. Incorporation may be accomplished by mechanical equipment, irrigation or rainfall. For soil applications made at planting, the action of some planters may provide sufficient incorporation. When using planters which do not provide adequate incorporation of Nemasan into the soil, equipment designed for incorporation may be used behind the planter. Close scouting and early attention to infestations is highly recommended. Proper timing of application targeting newly hatched larvae, eggs or immature pests is important for optimal results.

Mixing Directions

Follow manufacturer's guidelines for cleaning spray equipment prior to mixing. Fill tank to desired amount with water, add all other spray components and agitate as directed. Buffer the mixture to pH to 5.0 or below before adding Nemasan. Start the mechanical or hydraulic agitation to provide moderate circulation before adding Nemasan. Add the desired volume of Nemasan to the mix tank and the remaining volume of water and continue circulation. Maintain circulation while loading and spraying. (Excessive agitation may lead to foaming of spray solution.) Do not mix more Nemasan than can be used in 24 hours.

Tank Mixing

Do not combine Nemasan in the spray tank with other pesticides, surfactants, adjuvants, or fertilizers if there has been no previous experience or use of the combination to show it is physically compatible, effective, or non-injurious under your use conditions.

To ensure compatibility of tank-mix combinations they must be evaluated prior to use. To determine the physical compatibility of this product with other products use a jar test. Using a quart jar, add the proportionate amounts of the products to one quart of water with agitation. Add dry formulations first, then flowables second, then emulsifiable concentrates last. After thoroughly mixing, let this mixture stand for 5 minutes. If the combination remains mixed or can readily be remixed, it is physically compatible. Once compatibility has been proven, use the same procedure for adding required ingredients to the spray tank.

Application Instructions

Nemasan can be applied to bare soil alone or with most types of pesticides and nutrients prior to planting, at planting, at transplant, in-season, pre- and post-harvest. Apply with a minimum of 10-30 gallons of water per acre to ensure complete coverage. Use a jar test to confirm physical compatibility prior to application.

Application to Field Soils Before Planting: Apply 1-2 pints of Nemasan per acre. Applications can be made by following methods:

- Drenching, drip (trickle) or sprinkler application.
- Surface spray on moist soil with 40-100 gallons water per acre.
- Surface spray with 20-40 gallons water per acre followed by overhead irrigation. Use enough irrigation water to wet the soil into the root zone.
- Direct injection to anticipated root depth using shank or other soil injection equipment. Apply with 30-40 gallons water per acre.

Pre-plant applications may be either broadcast over an entire field or concentrated (banded) into planting rows. Apply when soil temperature at 4-inch depth is 60°F or higher. Bioactivity of Nemasan is greatest at soil temperatures between 70° and 90°F. Apply to nematode-infested (non-fumigated) soil up to 14 days before planting or transplanting.

Application to Field Soils at Planting: Apply 1-2 pints of Nemasan per acre. Applications can be made by following methods:

- Drenching, drip (trickle) or sprinkler application.
- Surface spray on moist soil with 40-100 gallons water per acre.
- Surface spray with 20-40 gallons water per acre followed by overhead irrigation. Use enough irrigation water to wet the soil into the root zone.
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Application to Field Soils at Transplanting: Apply 1-2 pints of Nemasan per acre. Applications can be made by following methods:

- Drenching, drip (trickle) or sprinkler application.
- Surface spray on moist soil with 40-100 gallons water per acre.
- Surface spray with 20-40 gallons water per acre followed by overhead irrigation. Use enough irrigation water to wet the soil into the root zone.
- Direct injection to anticipated root depth using shank or other soil injection equipment. Apply with 30-40 gallons water per acre.

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Application to Field Soils in Season: Apply 1-2 pints of Nemasen per acre. Applications can be made by following methods:

- Drenching, drip (trickle) or sprinkler application.
- Surface spray on moist soil with 40-100 gallons water per acre.
- Surface spray with 20-40 gallons water per acre followed by overhead irrigation. Use enough irrigation water to wet the soil into the root zone.
- Direct injection to anticipated root depth using shank or other soil injection equipment. Apply with 30-40 gallons water per acre.

Pre-plant applications may be either broadcast over an entire field or concentrated (banded) into planting rows. Apply when soil temperature at 4-inch depth is 60°F or higher. Bioactivity of Nemasen is greatest at soil temperatures between 70° and 90°F. Apply to nematode-infested (non-fumigated) soil up to 14 days before planting or transplanting.

Application to Field Soils Pre-Harvest: Apply 1-2 pints of Nemasen per acre. Applications can be made by following methods:

- Drenching, drip (trickle) or sprinkler application.
- Surface spray on moist soil with 40-100 gallons water per acre.
- Surface spray with 20-40 gallons water per acre followed by overhead irrigation. Use enough irrigation water to wet the soil into the root zone.
- Direct injection to anticipated root depth using shank or other soil injection equipment. Apply with 30-40 gallons water per acre.

Pre-plant applications may be either broadcast over an entire field or concentrated (banded) into planting rows. Apply when soil temperature at 4-inch depth is 60°F or higher. Bioactivity of Nemasen is greatest at soil temperatures between 70° and 90°F. Apply to nematode-infested (non-fumigated) soil up to 14 days before planting or transplanting.

Application to Field Soils Post-Harvest: Apply 1-2 pints of Nemasen per acre. Applications can be made by following methods:

- Drenching, drip (trickle) or sprinkler application.
- Surface spray on moist soil with 40-100 gallons water per acre.
- Surface spray with 20-40 gallons water per acre followed by overhead irrigation. Use enough irrigation water to wet the soil into the root zone.
- Direct injection to anticipated root depth using shank or other soil injection equipment. Apply with 30-40 gallons water per acre.

Pre-plant applications may be either broadcast over an entire field or concentrated (banded) into planting rows. Apply when soil temperature at 4-inch depth is 60°F or higher. Bioactivity of Nemasen is greatest at soil temperatures between 70° and 90°F. Apply to nematode-infested (non-fumigated) soil up to 14 days before planting or transplanting.

FOR USE ON THE FOLLOWING CROPS FOR CONTROL / SUPPRESSION OF SPECIFIED NEMATODES

Pre-harvest Interval (PHI) = 0 days

Crop Grouping	(including)	Pests	Rate
Cereal Grains	Barley, Buckwheat, Corn (sweet and field), Millet, Oats, Rice, Sorghum, Milo and Wheat	Root-lesion nematode <i>Pratylenchus spp.</i>	Apply 1 pint to 2 pints of Nemasen per acre
Brassica (Cole) Leafy Vegetables	Broccoli, Broccoli Raab, Brussels Sprouts, Cabbage, Chinese Broccoli, Chinese Cabbage (Bok Choy), Chinese Cabbage (Napa), Chinese Mustard Cabbage (Gai Choy), Cauliflower, Cavalo Broccolo, Collards, Kale, Kohlrabi, Mizuna, Mustard Greens, Mustard Spinach, and Rape Greens	Root-knot nematode <i>Meloidogyne spp.</i>	
Bulb Vegetables	Leek, Garlic, Onion (Bulb and Green) and Shallot	Reniform nematode <i>Rotylenchulus spp.</i>	
Cotton		Sting nematode <i>Belonolaimus spp.</i>	
Cucurbit Vegetables	Cucumber, Edible Gourds, Muskmelon, Cantaloupe, Pumpkin, Watermelon, and Winter and Summer Squash	Stem Nematode <i>Anguina spp.</i>	
Fruiting Vegetables	Tomato, Tomatillo, Pepper, Ground Cherry, Pepino, Okra and Eggplant		
Grass Forage, Fodder and Hay	Bermuda Grass; Bluegrass; and Bromegrass or Fescue		
Leafy Vegetables	Arugula, Celery, Corn Salad, Cress, Dandelion, Dock, Edible Chrysanthemum, Endive, Fennel, Head Lettuce, Leaf Lettuce, Parsley, Purslane, Radicchio, Rhubarb, Spinach and Swiss Chard		
Legume Vegetables (Succulent or Dried)	Bean (Lupinus) (includes grain lupin, sweet lupin, white lupin, and white sweet lupin); bean (Phaseolus) (includes field bean, kidney bean, lima bean, navy bean, pinto bean, runner bean, snap bean, tepary bean, wax bean); bean (Vigna) (includes adzuki bean, asparagus bean, blackeyed pea, catjang, Chinese longbean, cowpea, crowder pea, moth bean, mung bean, rice bean, southern pea, urd bean, yardlong bean); broad bean (fava); chickpea (garbanzo); guar; jackbean; lablab bean; lentil; pea (Pisum) (includes dwarf pea, edible-podded pea, English pea, field pea, garden pea, green pea, snowpea, sugar snap pea); pigeon pea; soybean; soybean (immature seed); sword bean		
Ornamentals	Bare root, container bedding and landscape, shade and flowering trees, woody ornamentals		
Peanut			
Root and Tuber Vegetables	Artichoke, Black Salsify, Carrot, Cassava, Celeriac, Chayote Root, Chicory, Chinese Artichoke, Edible Burdock, Garden Beet, Ginger, Ginseng, Horseradish, Jerusalem Artichoke, Oriental Radish, Parsnip, Potatoes, Radish, Rutabaga, Salsify, Skirret, Spanish Salsify, Sugar Beet, Sweet Potatoes, Tumeric, Turnip, Turnip-rooted Chervil, Turnip-rooted Parsley and Yams		
Strawberry			
Tobacco			
Turfgrass	Ornamental Lawns, Golf Courses, Sod Farms		

STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage or disposal.

Pesticide Storage: Store in a cool dry place. Avoid freezing.

Pesticide Disposal: To avoid wastes, use all material in this container by application according to label directions. If wastes cannot be avoided, offer remaining product to a waste disposal facility or pesticide disposal program.

Container Handling:

Nonrefillable container. Do not reuse or refill this container. Triple rinse as follows: Empty the remaining contents into application equipment or mix tank and drain for 10 seconds after the flow begins to drip. Fill the container $\frac{1}{4}$ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling if available, or puncture and dispose of in a sanitary landfill or by incineration. Do not burn unless allowed by state and local ordinances.

NOTICE ON CONDITIONS OF SALE

By using this product, user or buyer accepts the following Conditions, Disclaimer of Warranties and Limitations of Liability.

CONDITIONS: The directions for use of this product are believed to be adequate and must be followed carefully. However, it is impossible to eliminate all risks associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or the manner of use or application, all of which are beyond the control of Seller. All such risks shall be assumed by the user or buyer.

DISCLAIMER OF WARRANTIES: To the extent consistent with applicable law, Seller makes no other warranties, express or implied, of merchantability or of fitness for a particular purpose or otherwise, that extend beyond the statements made on this label. No agent of Seller is authorized to make any warranties beyond those contained herein or to modify the warranties contained herein. To the extent consistent with applicable law, Seller disclaims any liability whatsoever for special, incidental or consequential damages resulting from the use or handling of this product.

LIMITATIONS OF LIABILITY: To the extent consistent with applicable law, the exclusive remedy of the user or buyer for any and all losses, injuries or damages resulting from the use or handling of this product, whether in contract, warranty, tort, negligence, strict liability or otherwise, shall not exceed the purchase price paid or at Seller election, the replacement of product.

