

# vegalab

## Nematode Study



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# Nematode Control™

## Nematicide

### Powerful Natural Control of Parasitic Nematodes

**Nematode Control** is our next generation nematicide built around our patented, proprietary micronization technology. **Nematode Control** has been proven to significantly impact the population of parasitic species and and promote plant growth.

#### Active Ingredients:

- **Nematode Control** uses natural extracts of Geraniol to combat and prevent nematode infestations.

#### Mode of Action:

- Repels and kills nematode juveniles, disrupts feeding and reproduction, inhibits eggs from hatching, reinforces the root cell walls, and increases metabolism in roots.

#### Directions for Use:

- For prevention and low infestation apply 3 oz / 1,000 ft<sup>2</sup>, spray with at least 50 gpa of water as a carrier. Water in lightly immediately afterwards.
- For curative and high infestation apply 6 oz / 1,000 ft<sup>2</sup>, spray with at least 50 gpa of water as a carrier. Water in lightly immediately afterwards.
- Area Applications - Use 0.55 to 1.1 gallons per acre of land via soil irrigation depending on rate of infestation.
- Frequency of Application - Apply every 2 weeks for a total of 3 applications. Then apply monthly thereafter as needed.

#### Effective Against:

- Lance Nematode
- Stunt Nematode
- Sting Nematode
- Burrowing Nematode
- Root-Knot Nematode
- Reniform Nematode
- Lesion Nematode
- Foliage Nematode

#### Features:

- Effective, easy to use formula
- Fast-acting
- Non-toxic and biodegradable
- Beneficial insects unharmed

#### Used on All Kinds of:

- Ornamental Plants (Trees & Shrubs)
- Annual & Perennial Flowers
- Turf Grass

## Vegalab's Nematode Control – Golf Course with High Nematode Infestation



3 Applications in 6 weeks at 1 Gallon Per Acre –  
No Other Fertility or Chemical Inputs



**Nematode Control** inhibits harmful microbes and phytonematodes, reduces the size of root knots, and destroys nematode eggs; thereby enhancing plant growth, by allowing plant cells and roots to revitalize.

## Evaluation of Nematicide Nematode Control Product Against Columbia Root-knot Nematode on Potato in Micro-plot Condition.

A microplot study on efficacy of Nematode Control product against Columbia root-knot nematodes on potato has been conducted at University of Idaho Parma Research and Extension Center, Parma, Idaho. Experiment was carried out in bucket (20,000 cc soil) containing field soil with pure population of Columbia root-knot nematode with an average of 718 eggs & larvae per 500 cc soil. Potato cv Ranger Russet was planted to bucket on 6 Jun 2013. Mocap 6EC @ 2 gal/A was pre-plant incorporated on 5 Jun as a standard treatment.

Nematode Control product was applied via soil drench at 1 and 2 gal/A; 50%, 100%, of recommended rates, respectively. Potatoes were harvested on 24 Oct 2013. Final nematode population densities were significantly reduced at application of Vegalab product (2 gal/A) as compared to untreated control and standard Mocap. The potato yield was significantly higher in Vegalab product applied @ 1 or 2 gal/A (50 or 100% of recommended rate) and Mocap standard as compared to all other treatments and untreated control.

## Nematicidal Activity of Monoterpenoids Against the Root-knot Nematode *Meloidogyne Incognita*.

**Abstract:** Nematicidal activity of 22 monoterpenoids were evaluated in vitro and in micro-plot experiments. Twenty of the twenty-two monoterpenoids significantly reduced hatching, and 11 reduced J2 (juvenile) mobility of the root-knot nematode *Meloidogyne incognita* at a concentration of 250 mg/liter. Borneol, carveol, citral, **geraniol**, and alpha-terpineol showed the highest nematicidal activity among the in vitro tested monoterpenoids. These compounds exhibited a dose dependent effect, and drastically reduced eggs hatching and J2 viability at low concentrations. These monoterpenoids, at 100 and 250 mg/kg concentration, diminished root galling of tomato plants in micro-plot experiments. The results suggest that the selected monoterpenoids, and essential oils with high concentration of these compounds, are potential nematicides against Root-knot nematode.

## Effect of Plant Extracts and Essential Oils on Root-knot Nematode.

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**Summary:** The nematicidal activity of methanolic extracts (20 µg ml<sup>-1</sup>) from twenty Jordanian plant species against two species of root-knot nematodes in vitro was evaluated. Whole-plant extract of *Hypericum androsaemum* showed the highest activity (11% mortality) against *Meloidogyne javanica* after 24 h of incubation. With a tenfold concentration (200 µg ml<sup>-1</sup>) of those plant extracts thought to contain volatile oils, the second stage juveniles (J2) mortality of both nematodes increased after 24 and 72 h of incubation.

Nematicidal tests of some volatile oils that are active ingredients of the plants tested revealed that **geraniol**, thymol, and camphor were the most effective against *M. javanica* J2s, with 91, 60, 56% mortality respectively after 72 h of exposure. Against *M. incognita* J2s, the most effective oil components were carvacol, thymol, and **geraniol**, with mortalities of 100, 90, and 74% respectively after 72 h of exposure. Cineole was the least effective against *M. incognita*.

## Nematicidal Activity of Essential Oil of Geraniums Against the Root-Knot Nematode *Meloidogyne Incognita*.

Indian Institute of Horticultural Research, Bangalore, India

**Summary:** Nematicidal activity of essential oil of Geraniums (*Pelargonium graveolens*) and its major constituents namely citronellol, **geraniol** and linalool was determined against the root-knot nematode *Meloidogyne incognita*. **Geraniol** was found to be the most effective component which was followed by citronellol and linalool.

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