How EN’s Work?

Entomopathogenic (Insect Killing) Nematodes – EN’s

Once applied, the nematodes follow the carbon dioxide gradient released by the insect and then infest. Inside the insect they release their symbiotic bacteria. It kills the host and breaks down its tissue into food. The EN’s reproduce every 10-14 days and as many as 100,000 will break out of a scarab larvae, seeking new targets. The reinfection will continue whilst a food source exists and a level of around 90% + control can be expected. With the reduced infestation, the turf will be able to recover and re-initiation of new roots will begin to occur. Bird damage will also cease.

The nematodes are naturally occurring and mass reared so pose no threat to humans and pets and eventually revert back to natural numbers in the soil. EN’s are also very host specific.

The graph shows nematodes applied at 200,000 per m² and the exponential increase to well over 1,000,000 per m² once the cadavers begin to release circa 100,000 nematodes each.

Handling & Application Guide

Handling

Ideally EN’s should be applied during the evening on the day of delivery. However, with care they can be stored for a limited period. Less than 7 days is recommended. Store flat and unopened at room temperature. Laundry is ideal. DO NOT REFRIGERATE.

Application

• Water the turf prior to the application. (Pre irrigate).
• Remove any filters in equipment finer than 0.3mm.
• Only apply EN’s at dusk (extended UV exposure can damage them).
• Do not apply when the ambient temperature exceeds 35°C. (Soil temp of 15°C - 30°C is recommended).
• Avoid high or drying winds.
• Apply EN’s as evenly as possible (their lateral movement through the soil is limited).
• Water the turf after treatment. (Post irrigate - within 30 minutes).
• Maintain moist soil conditions for at least 7 days after application.

EN’s

• Completely non – toxic
• Safe for the environment & the family
• Easy to apply
• Effective Treatment
• Cost Effective

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ABN 34 134 588 346
What are Lawn Grubs?

Lawn grub or Cockchafer is the common name of the Scarab Beetle Larvae. While there are a number of different types of larvae that attack lawns, the African Black Beetle and Argentine Scarab are by far the most common.

Every year lawn grubs infest thousands of lawns, resulting in the loss of part or all of a lawn. The grubs hatch in spring and feed on the grass roots during spring and summer. Damage becomes visible when the roots can no longer provide water to the grass or when birds start to dig up the lawn in search of the grubs.

What are EN’s?

EN is short for Entomopathogenic Nematode. They are tiny microscopic worms, barely visible to the naked eye. As the name suggests they are insect killing (entomopathogenic). They are natural predators of the lawn grub.

They were first identified by Dr Robin Bedding (CSIRO Entomology), and developed over a 30 year period and have proven to be the safest and most effective way of controlling lawn grubs. Naturally occurring and mass reared, they are safe to use and will not harm pets or the environment.

How are EN’s applied to the lawn?

EN’s are applied like any conventional spray application via a back-pack sprayer, boom spray, watering can or venturi hose end sprayer. Just remove any fine filters (less than 0.3mm). There is no need for any protective equipment as required for chemical applications. While the application of EN’s is easy, the correct handling of the product and timing of the application is critical to its success. Please read and follow the shipping instructions carefully.

How often will I need to apply EN’s?

If applied correctly, one application will control an entire generation of lawn grub. This means only one annual application is required.

When should EN’s be applied?

Apply anytime when larvae are present and soil temperatures exceed 15C at the time of application as a curative treatment. As a guide, apply mid October to mid April in the Southern States of Australia, as a preventative control strategy. Please call us for expert advice anytime.

Will EN’s damage beneficial soil organisms?

Definitely not! EN’s are naturally occurring organisms that are mass reared. They will not affect earthworms, microbes or any other beneficial organisms. No collateral damage to the environment. And unlike chemicals, will not affect biodiversity. EN’s are also very host specific.

SCIENTIFIC NAME & TARGET PESTS

<table>
<thead>
<tr>
<th>Scientific Name</th>
<th>Target Pests</th>
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<tbody>
<tr>
<td>Heterorhabditis zealandica</td>
<td>Scarab Control, Argentine Scarab, Argentine Stem Weevil, Red-headed Cockchafer, Black-headed Cockchafer</td>
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<tr>
<td>Steinerema carpocapsae</td>
<td>Army Worm/Cut Worm, Caterpillars are mobile so a Re application may be necessary</td>
</tr>
<tr>
<td>Steinerema feltiae</td>
<td>Termite Control, Re applications may be necessary. Flea Control, Re applications may be necessary. Larvae control only.</td>
</tr>
<tr>
<td>Heterorhabditis bacteriophora</td>
<td>Black Vine Weevil, Soil temps over 12C only.</td>
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<tr>
<td>Beddingia siricidicola</td>
<td>Sirex Wasp, control for Forestry.</td>
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