nema-green®

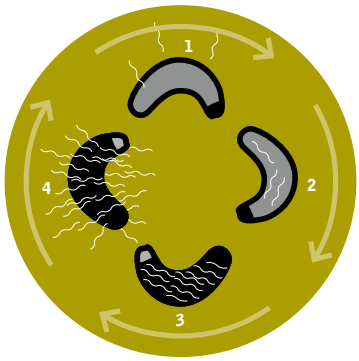
Biological Control of Chafer Grubs with *Heterorhabditis bacteriophora*

AREA OF APPLICATION

nema-green® controls the larval stages (grubs) of chafers (Scarabaeidae), including Garden Chafer (*Phyllopertha horticola*), June Beetle (*Amphimallon solstitiale*) and Welsh Chafer (*Hoplia philanthus)* in turf.

MODE OF ACTION

The product contains entomopathogenic nematodes (*Heterorhabditis bacteriophora*), a naturally occurring antagonist of grubs. The infective juveniles carry cells of their bacterial symbiont. Applied to the soil, nematodes search for the host insect and invade via natural openings. Once inside, they release the symbiotic bacteria, which multiply and cause the death of the grubs within a few days after invasion. While feeding on the bacteria the nematodes reproduce. After two weeks, thousands of new generation nematodes emerge and search for further prey.



After application the nematodes will enter the soil and search for grubs (1). The nematodes enter into the insect larvae (2). The grubs die and the nematodes propagate inside the cadaver (3). Thousands of new nematodes will be released by each cadaver (4) and search for further grubs (1).

APPLICATION

nema-green® is dispersed in water and applied to moist soil with conventional spraying equipment or irrigation systems. Per hectare 5 billion nematodes are applied with 1,000 litres of water. Post-application irrigation washes the nematodes into the soil. The addition of wetting agents improves the distribution and establishment of nematodes in the soil.

EFFICACY

Due to nematode recycling inside the infected grubs, control increases continuously during the weeks after application. When new generation nematodes emerge (2 weeks after application), soil should be moist to guarantee nematode migration. An application at the right time and under ideal soil conditions can reduce the grub population by 90%. Infected grubs turn red and are easy to distinguish from living ones. June Beetle grubs are well controlled in the first larval stage, which is present six weeks after the flight during end of June.

Further information needed?
Please contact us!
We will be happy to answer your questions!

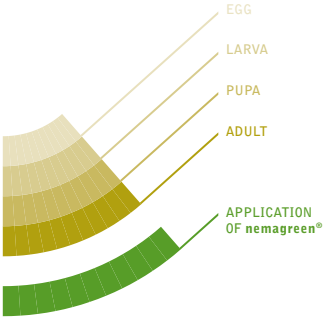
e-nema GmbH
Klausdorfer Str. 28-36
24223 Schwentinental
Germany
T+49 (0)4307-82 95 0
F+49 (0)4307-82 95 14
info@e-nema.de
www.e-nema.de

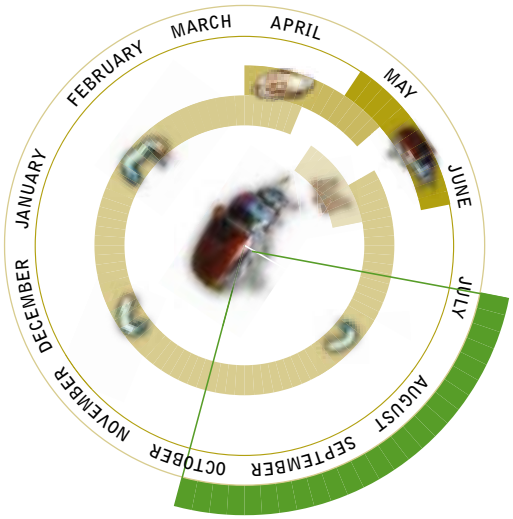
Garden Chafer
(Phyllopertha horticola)
Flies in sunny mornings end of May until beginning of June.

Golf fairway after grub attack
Crows have torn up the lawn while feeding on grubs.

Chafer Grubs
Feed on roots from April until October.

Life Cycle of Garden Chafer





Efficacy of nema-green®