

Steinernema feltiae

for the control of Leatherjackets



Basic Biology of Nematodes

Predatory nematodes are one of the more unusual tools available to producers to help control pests of food and ornamental crops. With the steady advance of scientific research, these beneficial nematodes are becoming both more common and less expensive. Of the more than 80,000 species of nematodes known to exist, only a few are insect-parasitic (entomopathogenic). We can and do use them to our benefit, and there are several commercially developed and produced species available for several situations.

How to Use Nematodes Against Leatherjackets

Leatherjackets are larvae of the European Crane Fly, *Tipula paludosa*. They feed on the roots of turf and pasture grasses, as well as nursery plants, and some fruit and vegetables. The adult flies lay eggs in the early fall, and the larvae overwinter, pupating again the next August. It completes one full generation per year. Extensive damage can be caused in the form of dead, bare patches. A second species arrived in the Fraser Valley over a decade ago, *Tipula oleraceae* or Common Crane Fly. It cycles two generations per year, the second almost simultaneous to the European Crane Fly.

The young larvae of both species of crane fly are in the soil at roughly the same time every fall. The larvae are easiest to kill at this time using entomopathogenic nematodes. Apply *S. feltiae* at about 3 billion nematodes per acre, or about 1 million nematodes per square meter. It is best that the soil temperature be no lower than 10 degrees C for a couple of weeks following application. Repeat application in 10 days. Irrigation or rainfall of about an eighth of an inch of water should follow to rinse the nematodes off the grass foliage and into the thatch layer. Cloudy, cool air conditions are best, again to avoid drying the nematodes out.

- Entomopathogenic nematodes are best when used as preventative practice.
- Know your pests and always monitor populations.
- Results may not be noticeable immediately. Nematodes and other bio-controls are not pesticides and do not act instantaneously.

How to Order

S. feltiae is available in units of 50 million, 250 million, 500 million or a case of 5 x 250 million.

Please order by the end of the day every Wednesday for delivery the following Tuesday. For large amounts, please inquire with the TerraLink Sales Desk at 1-800-661-4559.

For tech sheets on other nematodes offered by TerraLink, or more information in general, type "nematode" into the search bar on the front page of our website, www.tlhort.com.

Beneficial Nematodes

for Turf & Landscaping



TerraLink: Now a distributor of Beneficial Nematodes!

TerraLink has become a primary distributor for beneficial nematodes to the turf and landscaping industries in BC. Insect-parasitic nematodes have been used for many years as bio-control alternatives to chemical applications. We can supply the following beneficial species:

Beneficial Nematode	Target Pests
<i>Steinernema feltiae</i>	Leatherjacket, Western Flower Thrips, Fungus Gnat
<i>Heterorhabditis bacteriophora</i>	European Chafer Beetle, Leatherjacket
<i>Steinernema carpocapsae</i>	Black Vine Weevil, Sod Webworm, Cutworm

General Guidelines on How to Use Beneficial Nematodes:

- As with any biological control, beneficial nematodes are best used as a preventative practice. Large pest infestations may take some time to control with repeated applications.
- Use a spray application system with filters no smaller than 50 mesh, nozzle apertures larger than 0.5 mm, and lower than 300 psi pump pressure.
- Make sure to use a spray adjuvant in your nematode solution.
- Upon mixing your nematodes into solution, use it within 2 hours for best results.
- Agitate the solution, preferably with an air circulation system.
- Apply in early morning or the evening, to avoid drying and exposure to UV light.
- Beneficial nematodes have a storage shelf life of about two months, provided they are kept at 2-5 degrees and moist, but not frozen.

For more information please contact your TerraLink Sales Representative or the TerraLink Sales Desk at 1-800-661-4559 or by email at info@tlhort.com.