

THE GOOD GUYS DOWN UNDER

Beneficial Nematodes Control a Wide Range of Soil-borne Pests

By Katie Lamar Jackson

The word “nematode” can strike fear and loathing in the hearts of many a gardener or farmer, but there are actually some nematodes that should strike relief and admiration in plant lovers’ hearts.

Nematodes are microscopic round worms that live in the soil and infect both plants and animals. Some nematode species infect plants, others infect insects and other animals. The plant-infecting ones, which harm many economically important crops such as tomatoes, cotton, lawn grasses and other agronomic and horticultural plants, are the bad guys of the garden soil. But other beneficial nematode species that attack insects are the good guys because they can be used to protect plants.

Beneficial nematodes can be purchased to treat small garden and landscape areas, and can be used against some 250 soil-related insect pests such as cockroaches, fleas, weevils, grubs, ants, cutworms, armyworms, bagworms, many damaging moths, fruit flies, Colorado potato and Japanese beetles, fungus gnats, mole crickets,



subterranean termites, tobacco bud and cutworms, and a variety of tree and vine borers. In fact, almost any insect pest that spends part of its life in the soil can be controlled with beneficial nematodes.

What’s more, unlike some chemical pest controls, nematodes do not harm beneficial insects (such as ladybugs), humans and other warm-blooded animals, worms, birds, plants or the environment in general. In fact, because nematodes occur naturally in the environment and don’t harm people, other animals or the environment, the U.S. Environmental Protection Agency has exempted beneficial nematodes from pesticide registration.

Here’s how the insect-fighting nematodes work. These nematodes enter an insect host through the insect’s body openings or by boring through its body wall. Once inside the insect, the nematode releases a bacterium that kills

the host within 48 hours. Meanwhile, and after the demise of the host, the nematode feeds off the host’s body and reproduces within the body cavity, bringing into the world more pest-fighting nematodes to populate the soil.

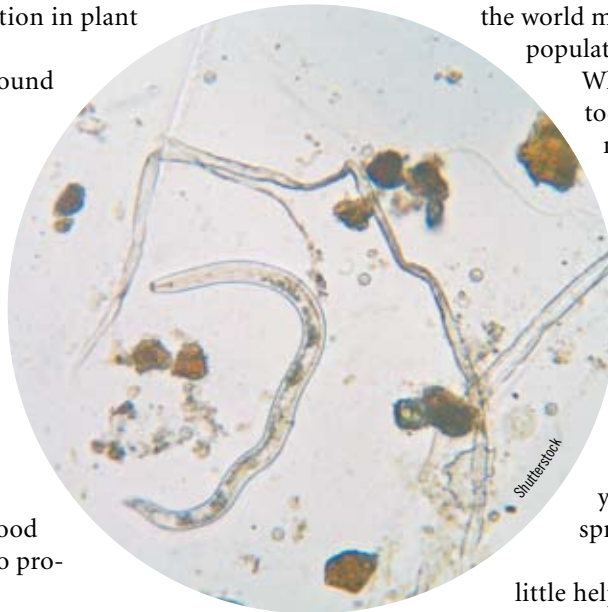
While many pest-fighting nematodes exist naturally in soils, you may need to increase the number of nematodes in your soil or introduce a pest-specific nematode to fight your exact insect problem. Luckily, you can buy them through the Internet, by mail-order and sometimes in local garden stores. They come nicely packaged in a concentrated form, which makes it easy for you to apply them, usually with a sprayer or through a hose nozzle.

Though nematodes are handy little helpers and their commercial availability makes using them quite easy, they are not fool-proof. Make sure you get a nematode treatment that specifically controls your pest, which means you must properly identify the pest before buying beneficial nematode treatments. Your local Cooperative Extension system office should be able to help you identify the pest and the proper nematode treatment.

Try to use purchased nematode treatments as soon after purchase as possible, or refrigerate them if you can’t use them immediately. But don’t freeze them!

Irrigate the application site before and after you apply nematodes, and try to apply them at early morning or early evening when the soil temperature is between 55 and 90 degrees Fahrenheit.

By following these basic rules and making sure you follow the label instructions for use and application, you too can enlist the help of the good guys down under. 🍀



Katie Jackson is a writer, editor and photographer for the Alabama Agricultural Experiment Station and Auburn University College of Agriculture, with more than 25 years of experience reporting on science, agriculture and the environment.

