

How to Use Beneficial Nematodes against Pest Mole Crickets in Home Lawns ¹

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Mole crickets can damage home lawns in Florida severely, especially in areas with bermudagrass or bahiagrass lawns, but long-term, effective, and safe control can be achieved by applying beneficial nematodes. Nematodes are tiny worms and one of them, *Steinernema scapterisci*, attacks only pest mole crickets. This nematode is patented by the University of Florida for use against mole crickets and licensed exclusively to Becker Underwood for production and distribution as a biopesticide. It only infects adult and large immature mole crickets (1 – 1 1/2 inches long) that are most abundant in September through November and February through April in Florida. The nematodes cannot harm children, pets, wildlife, or plants.

These beneficial nematodes can be purchased and kept chilled (not frozen) for a few weeks until they are used.

They must be applied to moist soil and protected from sunlight. Once in the soil, they enter the mouth or breathing pores of a mole cricket, break into the body cavity, and release a highly specialized bacterium. Bacterial infection kills the mole cricket within a few days as the nematodes reproduce in large



Figure 1. Mole cricket damage to the turfgrass industry exceeds \$100 million per year in the Southeast United States.

numbers. Offspring of the nematodes are spread by the dying mole cricket and are ultimately released back into the soil to repeat the cycle again and again. The nematodes can survive, multiply, and spread as long as some mole crickets are present.

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Figure 2. Tunnels at the soil surface are a sign of mole cricket infestation.

What You Need to Do

1. Check your lawn to determine if it is infested with mole crickets.

Signs include patches of dead grass and tunnels visible on the soil surface. In the early morning find a 2 sq. ft. area of grass where you suspect mole crickets are present. Pour over the area a solution made of 1 – 2 tablespoons of liquid dishwashing detergent in 1 gallon of water. Control is justified if two to four large mole crickets come to the surface within three minutes.

2. Purchase mole cricket nematodes.

The nematodes do not infect small mole crickets, so make sure that they are large (1 – 1 1/2 inches long) before placing an order. In Florida, adult mole crickets are most abundant in September through November and February through April. The “mole cricket nematode” is supplied only by Gardens Alive (www.GardensAlive.com, 513-354-1482) for home use in packets to treat 200, 400, or 1,000 sq. ft. areas. Nematode packets should be stored in the refrigerator, but for no more than a few weeks.

3. Apply the nematodes.

Apply the nematodes at dawn or dusk, when the area to be treated is not in direct sunlight and is moist from rain or irrigation. Use the entire packet. Mix the

nematodes with water in a sprinkling can, shake continuously, and apply immediately over the area to be treated. Irrigate again to wash the nematodes into the soil (about 1/4 inch of water).

For more mole cricket control options see: <http://ipm.ifas.ufl.edu/success-stories/molecrickets.htm>

For IPM information on different pests see: <http://ipm.ifas.ufl.edu/>

For everyday solutions for your life see: <http://solutionsforyourlife.ufl.edu/>.

References

<http://edis.ifas.ufl.edu/IN249>

<http://edis.ifas.ufl.edu/IN391>