The Black Cutworm is a Nasty Lepidopteran

According to Dan Potter, a professor of landscape entomology at the University of Kentucky and the author of the textbook "Destructive Turfgrass Insects: Biology, Diagnosis and Control," as well as many articles on managing the insect pests of turfgrasses, the black cutworm is one of the worst pests of turfgrass in the order Lepidoptera, the group of insects (moths and butterflies) whose immatures are called caterpillars. Others, such as the bronzed cutworm and the variegated cutworm, are occasional problems, but do not cause the damage that the black cutworm (*Agrostis ipsilon*) does.

Black cutworm burrows can mar the surface of a turf stand, but topdressing is effective in filling the holes.

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The problem is the cutworm larvae, which emerge from the soil at night to chew on blades and stems of grass near the burrows they dig to get to the surface. Besides the damage to the grass, the caterpillar leaves a pockmark at the entrance to the burrow that mars the surface of the turf. In addition, birds that feed on the cutworm do damage to the field or lawn when they dig at the soil.
To identify the culprit, the turfgrass manager should examine the area closely and look for burrow entrances in the soil, which may have grass leaves stuffed into them by the cutworms, or identify the green fecal pellets of the cutworm. Sod webworms leave similar pellets, but they are usually only half as large as those left by the black cutworm. Called the greasy cutworm in older literature, the species is a pest as far away as Asia and Africa. The larval phase is the only destructive phase of the life of the adult moth, Potter says. This caterpillar is usually a dark gray with greenish stripes, but may vary in color from region to region. In colder areas of the country, the cutworm may reproduce up to three overlapping generations during its breeding season, while in the South it can have up as many as seven generations.

Research by Potter, and especially by his former grad student, Chris Williamson, indicate that creeping bentgrass is the favored grass species of the black cutworm, while perennial ryegrass will also be eaten. Kentucky bluegrass is the least palatable meal for the cutworm.

The black cutworm is a damaging pest, primarily to bentgrass, but can be managed with cultural, biological and chemical controls.

Black cutworms can be monitored by pheromone traps and by surveying the number of burrows visible on the soil surface. Potter says the best sampling method is to use a soap flushing strategy, with 1 ounce of lemon-scented dish soap to 2 gallons of water being sufficient to bring the pests to the surface, along with other insects such as billbugs. Within five minutes of a soaking, most cutworms in the soil will emerge. Chemical treatment may be warranted if sufficient numbers of larvae half an inch long are discovered, because these insects can cause significant damage within a couple of weeks of that stage.

“Mowing, clipping removal and topdressing can help alleviate damage to turfgrass,” Potter says. Specifically, mowing infected lawns an hour before sunrise when the cutworms are still feeding on grass can kill a lot of black cutworms. Disposal of grass clippings away from the infested site will help lower the incidence of eggs, which are laid on the grass blades. Topdressing fills in some of the burrows and can interfere with the black cutworms’ daily habits. Aerification, on the other hand, can provide additional burrows for the cutworm to inhabit and may be followed by a spike in cutworm damage around the holes.

There are some effective biological controls for this caterpillar. An entomopathogenic nematode, *Steinernema carpocapsae*, is able to seek out caterpillars and introduce a killer bacterium into them. Grass species that harbor endophytic fungi, those that live inside the grass plants, may also provide some degree of protection. In addition, a naturally occurring baculovirus has been found to suppress black cutworm populations and is being studied as a potential biological insecticide. Consult your local university for information on availability of biological controls.

There are also many insecticides that are effective against black cutworms,
Potter says. Many university trials have been conducted on treatments, with some regional differences in results and, of course, differences in labeling for each state that should be paid attention to.

Those tests indicate that pyrethroids such as Talstar, Scimitar and Tempo are very effective, as is indoxacarb (Provaunt), spinosad (Conserve) and chlorantraniliprole (Acelepryn). In addition, combination products such as Aloft and Allectus are also effective against black cutworms. Liquid formulations often work better than granules because they coat the surface of the grasses where cutworms feed. Natural insecticides containing neem oil, a natural product which can disrupt the molting process, are also effective.

Because they are night feeders, black cutworms should be treated as late in the day as possible. This will ensure that fresh residues will remain on the blades of the grass while feeding is in progress. It is important to withhold watering until the following day to increase the chance that the chemical comes in contact with the cutworms, and to give them time to consume some grass foliage.

Although the black cutworm is the primary cutworm pest of turfgrass, these products and treatments are also effective against other lepidopteran species, such as the bronzed cutworm.

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