Cornell University
Cooperative Extension
Monroe County

2449 St. Paul Blvd.
Rochester, NY 14617
p. 585.753.2555
f. 585.753.2560
http://monroe.cce.cornell.edu/

CONTROLLING TURFGRASS GRUBS

Grubs are the immature or larval stage of beetles and chafers that have caused major economic losses to turfgrass in this area. Turf is damaged by the grubs chewing off the roots of the grass.

IDENTIFICATION OF TURFGRASS GRUBS: Grubs are 1/2 - 1-inch long and usually lie in a C-shaped position. They are dull white in color with a brown head, the posterior part of their body may be darkened, but that is totally dependent on whether the insect has recently been feeding - the darkened area is the contents of the intestine. Grubs can be further identified by the rastral pattern (arrangement of spines) on the bottom side of its last segment.

White Grub

DAMAGE FROM TURFGRASS GRUBS: Damage occurs whenever larger grubs are feeding on turf roots near the surface during the early fall and spring. Turfgrass areas heavily infested with grubs can be rolled up like a carpet, for in the process of feeding, the grubs have severed the roots from the grass plants. Lawns and other turf areas that are infested with turfgrass grubs can be completely killed.

DETERMINING IF GRUBS ARE PRESENT: To check for grubs, choose an area that is just outside of a dead or thinning patch of grass, pull up a piece of the turf and examine the root zone for the presence of grubs. Remember that grub-injured turf will pull up very easily.

LIFE CYCLE: White grubs are the immature stage of Japanese beetles, Oriental beetles, European chafers, Asiatic Garden beetles and others. Those mentioned generally complete their life cycle in one year. The adult Japanese beetle lays its eggs in early to mid-summer, and by August, the young larvae are feeding on turfgrass roots. In the fall, the larvae move deeper in the soil (2-6") where they stay for the winter. When the soil temperatures begin to rise, in early spring, the grubs move toward the surface where they feed on actively growing turf roots in the upper two inches of soil. When feeding is completed, the grubs pupate and finally emerge as adult Japanese beetles that feed on foliage and fruit of a wide variety of plants in the garden.

PEST MANAGEMENT OPTIONS

Before treatment, ask yourself: (1) Am I sure I have grub damage? (2) Are the grubs still there? (3) What species is causing the damage? (4) what is best time to treat for grubs? (Treat when grubs are young and close to the soil surface: mid-August to late actively feeding September upstate, early August to mid-September in southeastern New York State.) (5) Are there enough grubs to warrant treatment? (Rule of thumb: If more than

Cornell Cooperative Extension in Monroe County provides equal program and employment opportunities

eight grubs per square foot, soil should be treated.) (6) Are alternatives to synthetic soil insecticides available? Registered insecticides to control grubs after they are noticed include carbaryl, and trichlorfon: use preferably from early August to mid-September. Treat when soil is moist and water in immediately following treatments. Parasitic nematodes may be useful for controlling grubs, billbugs, sod webworms, and cutworms. Commercial products tested have been inconsistent, especially for grub control. May be useful for spot treatments or to control black vine weevil larvae in ornamentals. Should be applied in evening as directed on label.

For control of only Japanese beetle larvae: Milky disease spore powder: grubs must be present to spread and maintain the disease. Moist, warm soil (70^{o}F. plus) is necessary for sufficient disease development to be of value. Useful on large, marginal, or low-value turf areas. Not effective against other types of grubs. May take several years to become effective. **Monroe County winters may be too cold for this to be effective**.

Revised 06/97; 7/00, 10/02, 8/12

FS 1004.1

This publication contains pesticide recommendations. Changes in pesticide regulations occur constantly and human errors are still possible. Some materials mentioned may no longer be available, and some uses may no longer be legal. All pesticides distributed, sold, or applied in New York State must be registered with the New York State Department of Environmental Conservation (DEC). Questions concerning the legality and/or registration status for pesticide use in New York State should be directed to the appropriate Cornell Cooperative Extension specialist or your regional DEC office.