

The Japanese Beetle

The Japanese beetle is a major pest of lawns and ornamental plants in Maryland. Adult beetles feed on more than 275 species of plants, but especially like plants in the rose family. Grubs (larvae) feed on the roots of turfgrasses such as Kentucky bluegrass, fine fescues, ryegrasses, or bentgrasses.

Life Cycle and Habits

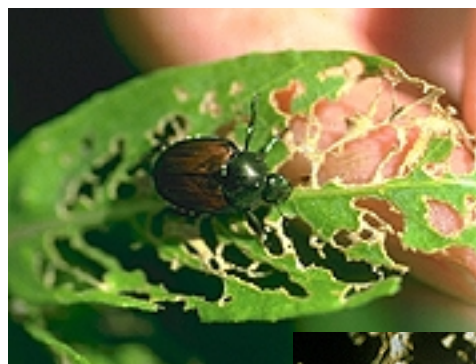
The entire life cycle requires about one year. Japanese beetles are metallic green with coppery-brown elytra (hardened front wings), and are just under ½ inch long. Beetle emergence begins in mid June and peaks in early July in central Maryland. Beetles will remain active for about 4-6 weeks. Most of the egg laying occurs in July and tapers off rapidly by the first week in August. Generally, the amount of daily beetle activity will give some indication of grub populations that can be expected later in the summer. Most beetles remain close to the emergence area, and adult females lay 40-60 eggs near the adult feeding site.

Beetle eggs hatch in about 10 days and grubs begin feeding on grass roots. Grubs are “C-shaped”, creamy colored, with brown heads, 3 pairs of legs and are about 1 inch long when mature. Root loss from grub feeding during August and early September may be so extensive that the turf can be rolled back from the soil like a rug. By mid October the grubs move down into the soil 6-18 inches and remain inactive until spring. In late March or early April, they return to the surface and briefly feed on roots. During late May they stop feeding, pupate and emerge as adults in June.

Controlling Adult Beetles

Although several species of birds feed on adult beetles, their efforts are insufficient to prevent injury to ornamental plants, and even the best insecticides will only provide temporary relief when adult populations are heavy. Unfortunately, most pesticides remain toxic only for a few days and any new plant growth will not be protected. Due to the continuous migration of beetles, 2 or 3 spray applications may be needed to prevent serious in-

jury to plants like roses and grapes. Fortunately, many foliage plants will tolerate moderate defoliation.



*Japanese
Beetle*



Grub

Beetle Control Options:

- Hand pick beetles and drop them into soapy water.
- Plant non-favored host plants.
- Currently registered insecticides (e.g. commercially available insecticidal soap/pyrethrin blends). Check with local garden centers for available insecticides.

Trapping Beetles

The commercially available yellow Japanese beetle traps are baited with a feeding attractant and capture large numbers of adults. However, randomly spaced, single traps cannot provide effective control. Frequently, a single trap attracts beetles from the entire neighborhood and concentrates the damage in a small

area close to the trap site. Research has demonstrated a 31-40% increase in adjacent plant damage when traps were used close to susceptible plant species.

Grub Control in Turfgrass

Early August is the best time to inspect lawns for high grub populations. Most of the eggs have hatched and grubs will measure about ¼ to ½ inch long. **Chemical control should only be contemplated if grub counts exceed 6-8 per square foot. Grub populations of 8-15 per square foot may not cause damage if lawns receive adequate water.** If lawns are drought stressed in August or September, the turfgrass may turn brown within a few days.

Grub Control Options:

- **Resistant/tolerant turf varieties:** Select turf-type tall fescues, zoysia or Bermuda grass.
- **Chemical controls:** Look for lawn insecticides containing either imidacloprid or halofenozide as the active ingredient. Follow label directions carefully for application rates, timing, and safety.

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Adapted from: The Japanese Beetle, Home and Garden Mimeo #HG78, 1992. J.L. Hellman, Extension Entomologist, Department of Entomology, University of Maryland, College Park, MD. 1992.

**USE INSECTICIDES WITH CARE.
READ LABEL DIRECTIONS.
FOLLOW ALL SAFETY PRECAUTIONS.
PROTECT THE BAY.**

USE PESTICIDES AND FERTILIZERS WISELY.

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