Biorational Control:
Biorational insecticides are less harmful for people and the environment. They are often target-specific, meaning they control select pests with minimal harm to non-target organisms like people, pets, or beneficial insects. The correct identification of the pest and proper timing of the biorational is necessary for effective control.

Halofenozide is an Insect Growth Regulator (IGR) that inhibits development of grubs. IGRs must be applied when grubs are small – the best time is July to August.

Nematodes like Steinernema or Heterorhabditis are microscopic roundworms that will feed on grubs in the soil. They require a moist environment, so water soil before and after application in early evening or on a cool, overcast day. Nematodes can be ordered online from insectaries.

Acephryn (chlorantraniliprole) is a reduced-risk insecticide that will kill grubs without harming most beneficial insects. Acelepryn is currently sold at nursery supply stores and is recommended for professional lawn care specialists.

Bacillus thuringiensis galleriae (BTG) has recently joined the market, and can control all stages and sizes of grubs unlike some of the other options. This beneficial bacteria targets beetle grubs only, and is effective anytime the grubs feed. It must be watered into the turf to reach the grubs.

Conventional Control:
When using any pest control products, it is important to carefully read and follow the product label directions for use. Always be sure that the pest you want to control and the plant you are spraying are listed on the label. Be aware of potential risks to bees and to aquatic organisms.

For more information, search “Japanese beetle” at www.extension.umn.edu

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Japanese Beetle

Genus and species: Popillia japonica
Family: Scarabaeidae
Order: Coleoptera

Japanese beetles likely arrived in Eastern United States as early as 1900 and have been moving relentlessly westward ever since. Recognizing this pest’s two life stages and knowledge of safe and effective management is essential for homeowners to protect their landscapes. This pest is doubly troublesome: the grubs feed on roots of grasses while adult beetles feed on leaves and flowers of many species of ornamental plants.

Protect Your Ornaments From ADULTS

Adult Japanese beetles have metallic green heads, coppery wings, and five white hair tufts along each side.

Adults emerge from the soil in early July, and live for 30-45 days. They feed on many ornamental and edible plants during the mating cycle before laying eggs in nearby soil.

Cultural Control
Knock adult beetles into soapy water, and let them sit for 24 hours to ensure death. This will reduce the number of eggs laid in turf, and should reduce numbers next year.

Traps and lures do not reduce numbers. If anything, they attract more adults to your yard.

Conventional Control
While Japanese Beetle adults rarely cause plant death, you may choose to protect high-value plants.

Foliar sprays of contact insecticides such as acephate and carbaryl or pyrethroids such as bifenthrin, cyhalothrin, or cyfluthrin can also be used. These insecticides kill beetles as they walk on treated leaves.

Arboretum staff and volunteers have found some success with neem oil and insecticidal soaps. For best results, these products must be applied every three to four days.

In Minnesota, use insecticides from July through August when adults feed and lay eggs.

Protect Your Lawn From GRUBS

Grubs are the larval or immature form that feed on grass roots. They curl in a C-shape and grow an inch long.

Grubs hatch in July and begin feeding on grass roots. The following May grubs resume feeding. In mid-June, grubs form a pupa to transform into adults. Adults emerge from soil around July 4th in Minnesota and fly to grapes, ivy, and lindens to feed.

Before treating your turf, dig under damaged patches to check for grubs. Many brown patches can be caused by fungi or bacteria.

Cultural Control:
Japanese Beetle grubs cannot survive in dry soils. If you can avoid watering your lawns, you may reduce grub populations.