



May Newsletter 2009

Prepare for Japanese Beetles Now

This newsletter will be exclusively on that nasty, shiny, metallic green, hungry little bug...

The Japanese Beetle.

This is the time to apply some type of treatment for them before they hatch out. In this newsletter I will give you tips on how to control these devastating beetles before they have destroyed your entire garden or landscape. I will tell you about their habits, life cycle, safe removal, what I

think about traps and even give a list of plants they like or dislike. It would be wonderful if everyone would treat for them before the grub turns into the beetle. Then all our hard work and beautiful gardens will shine instead of this beetle. We can't let them win.



Description and Habits of Adult Beetles

Adult Japanese beetles are 7/16-inch long metallic green beetles with copper-brown wing covers.

The beetles emerge from the ground and begin feeding on plants in June. Most of their intense activity is over a 4 to 6 week period beginning in late June, after which the beetles gradually die off. Individual beetles live about 30 to 45 days.

Japanese beetles feed on about 300 species of plants, devouring leaves, flowers, and overripe or wounded fruit.



They usually feed in groups. These groups are what causes the most damage. One single beetle doesn't eat that much. They starting at the top of a plant and work their way down. The beetles are most active on warm, sunny days, and prefer plants that are in direct sunlight.

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Japanese beetles were first found in this country in 1916, after being accidentally introduced into New Jersey. Until that time, this insect was known to occur only in Japan where it is not a major pest.

Life Cycle

The minute the beetles hatch out of the ground mid to late-June, they start mating and the female lays her eggs immediately after. Their peak adult activity occurs in mid-July in Wisconsin. The females leave plants in the afternoon, burrow 2 to 3 inches into the soil in a suitable area, and lay their eggs--a total of 40 to 60 during their life. The developing beetles spend the next 10 months in the soil as white grubs. The grubs grow pretty fast so by late August are almost full-sized (about 1 inch long). Mid-summer rainfall and moist soil are needed to keep eggs and newly-hatched grubs from drying out. Females are attracted to moist, grassy areas to lay their eggs so if you water your lawn a lot in drought conditions you may have more damage. Golf courses sometimes have higher grub populations, especially during dry summers because they irrigate. Older grubs are relatively drought resistant and will move deeper into the soil if conditions become very dry. Japanese beetle grubs can withstand high soil moisture, so excess beetles overwinter in the grub stage. When the soil cools to about 60°

F in the fall, the grubs begin to move deeper. Most pass the winter 2 to 6 inches below the surface, although some may go as deep as 8 to 10 inches. They become inactive when soil temperature falls to about 50°F.

When soil temperature climbs above 50°F in the spring, the grubs begin to move up into the root zone. Following a feeding period of 4-6 weeks, the grubs pupate in an earthen cell and remain there until emerging as adults.



Beetle life cycle diagram: J. Kalisch



Grub Damage

The beetle grubs feed below ground on the roots of grass and can eliminate a plant's entire root system. Your grass may have a patch of pale, discolored and dying grass that may look a little like drought stress. These small damaged areas grow larger as the grubs expand their feeding range. Your grass will feel "spongy" when you walk on it and you can easily lift it off. The sighting of raccoons, moles and skunks or lots of birds in the yard, especially starlings, are strong indicators you

might have a grub infestation.



Hand Picking the Beetles

One of the easiest ways to rid your plants of the beetles is to hand pick them. I personally have a hard time doing this as I really don't like any bugs but I put on my gloves and start picking. (I also have been seen pruning them in half.) Anyway, this is all best done before they start getting to numerous. If there is just one beetle on a plant the other beetles will follow. Plants will be less attractive to others if they are not

full of their own kind.

You can shake them off early in the morning when the insects are sluggish. The beetles may be killed by shaking them into a bucket of soapy water. Your favorite plants such as roses can be protected by covering them with cheesecloth or other fine garden cloth during the peak of beetle season.

About Milky Spore

The active ingredient *Bacillus popilliae*, in Milky Spore Powder is a naturally occurring host specific bacterium that kills Japanese Beetles in the larval (grub) stage. Once grubs ingest Milky Spore, they die within 7 to 21 days. The spores in the area are swallowed by grubs during their normal pattern of feeding on roots. When ingested, the spore is activated, as the grub decomposes, billions of new spores are released into the soil.



Milky Spore in the soil is not harmful to beneficial insects, birds, bees, pets or man; and Milky Spore like other bacteria is highly survivable in cold and drought conditions.

The *Bacillus popilliae* spores continue to

reproduce and spread naturally to control larvae in the area for 15 to 20 years. A ten-ounce canister treats 2500 square feet and can be used any time the ground is not frozen. Because Japanese beetle grubs are a preferred food source for moles, Milky Spore may also be an effective method of mole control.



With all that said, you may still need to hand pick or use a natural and organic insecticide to spray on the pests that come from your neighbors yard.

Veggie Pharm is an effective and essential part of an environmentally-conscious gardener's pest control arsenal! Made with a mix of natural ingredients like cottonseed oil, garlic and peppermint, Veggie Pharm protects fruit and vegetables from powdery mildew, fungus and garden insects like adult **Japanese beetles**, thrips, aphids, spider mites, whiteflies and scales, but won't hurt the environment or food. I have used this on my pole bean plants, porcelain vine, wild grape vines and it worked great. You do need to be careful that you spray early in the morning or late afternoon when the beneficial insects have either not woken up yet or have gone to sleep. Do not spray on delicate leafed plants like impatiens. Never spray on hot sunny days, it can burn the leaves of any plants.



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Japanese Beetle Traps



Japanese beetle traps are sold in many garden centers. Commercially available traps attract the beetles with two types of baits. One mimics the scent of virgin female beetles and is highly attractive to males. The other bait is a sweet-smelling food-type lure that attracts both sexes. This combination of ingredients is such a powerful attractant that traps can draw in thousands of beetles in a day.

Unfortunately, research has showed that the traps attract many more beetles than are actually caught. Susceptible plants along the flight path of the beetles and in the area of the traps are likely to suffer much more damage than if no traps are used at all.

In most landscape situations, the use of Japanese beetle traps probably will do more harm than good. If you experiment with traps, be sure to place them well away from gardens and landscape plants.

Landscape Plants Likely to be Attacked by Adult Japanese Beetles.

Japanese maple
Norway maple
Horsechestnut
Hibiscus-perennial and tropical
Hollyhock
Birch
American chestnut
Rose-of-Sharon, Shrub Althea
Flowering crabapple1, apple
Lombardy poplar
Cherry, black cherry, plum, peach
Roses
American mountain ash
American linden2
American elm
Grape vines
Mallow

Landscape Plants Seldom Damaged by Adult Japanese Beetles.

Boxelder*
Red maple
Silver maple
Boxwood
Shagbark hickory*
Flowering dogwood
Euonymus (all species)
White ash
Green asHolly (all species)
Tuliptree
American sweetgum*
Magnolia (all species)
Red Mulberry
White poplar
Common pear*
White oak*
Scarlet oak*Red oak*
Black oak*
American elder
Common lilac*

Species marked with an asterisk may suffer occasional light feeding.