

JAPANESE BEETLES

**Information Compiled by Dale Ericson,
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Note: This is a compilation of excerpts from various articles found at the following websites:

<http://www.pueblo.gsa.gov>

<http://www.canr.msu.edu/vanburen/japbet.htm>

<http://hyg.aces.uiuc.edu>

<http://counties.cce.cornell.edu>

The Japanese beetle (*Popillia japonica* Newman) was first found in the United States in a nursery in southern New Jersey in 1916. The beetle entered without its natural enemies and found a favorable climate and abundant food supply. By 1972, beetle infestations had been reported in 22 states east of the Mississippi River and also in Iowa and Missouri. Since then, the pest has continued to disperse south and west with isolated infestations in Wisconsin, Oregon and California. It is a serious plant pest and a threat to American agriculture.

Description: Adult Japanese beetles are slightly less than 1/2 inch long and are brilliant metallic green, with coppery brown fore wings that do not entirely cover the abdomen. There are six pairs of patches of white hairs along the sides and back of the body and under the edges of the wings. Males and females have the same markings, but females are typically slightly larger.

Life Cycle: Japanese beetles have only one generation per year. You are most likely to see the adults in late spring or early summer. During the feeding period, females intermittently leave plants, burrow about 3 inches into the ground (under the turf) and lay eggs. Eggs hatch in about two weeks, after which grubs begin feeding on the roots of turf grass. The grubs grow quickly and by late August are nearly full grown (about one inch long). As soil temperatures cool in the fall and the first meaningful frost occurs, grubs begin to move deeper into the soil where they overwinter two to six inches below the surface or even deeper. In the spring the grubs begin to move up into the root zone to resume feeding for about three to five weeks. Thereafter, the grubs stop feeding and begin creating an earthen cell whereby they transform into adults.

Control of Japanese Beetle Adults:

Physical Removal: Many home gardeners say the most effective treatment is hand-picking and squashing or drowning the beetles. Simply fill a container with soapy water and flick the beetles into the container. Later cover it and dispose of them. This process is easy because the beetles move very slowly and do not hide, and early efforts pay off with a much reduced population.

Insecticides: Sevin and Malathion are recommended insecticides. Unfortunately, in heavy infestations it may be necessary to treat on a 5-7 day schedule.

Traps: The Japanese beetle traps use a pheromone, or sex-attractant, to lure them. You must put the traps far away from your yard or you will be attracting even more beetles in the directions of your plants.

Companion Plants: Another approach is using strong smelling plants like chives, garlic or white geraniums as companion plants which repel the beetle. This has not been thoroughly or scientifically tested, but some gardeners report success with this effort.

Biological: This approach is the use of parasites, nematodes, fungi, etc. for the control of the grubs.

Why are Japanese beetle adults so attracted to roses, feeding on both the flowers and

leaves?

Research has shown that the natural sugar content and the presence of odoriferous compounds are important factors in determining susceptibility to attack by Japanese beetles. Roses contain a number of volatile chemicals, including eugenol and geraniol, that are very attractive to Japanese beetles. Both chemicals have been the primary compounds used in mixtures for Japanese beetle lures. As Japanese beetles feed on roses, these chemicals are released, attracting more beetles to the area, which increases the likelihood of extensive feeding damage.

Several additional factors influence how attractive roses are to Japanese beetle adults: (1) Roses in full sun tend to be favored more than those in wooded or shaded areas; (2) Japanese beetles seem to prefer and feed more extensively on white and yellow colored rose blooms than other colors; (3) As mentioned above, leaves fed upon by Japanese beetles produce odors or volatiles that attract other adult beetles.

Other factors that may also affect susceptibility are rose height, fragrance, flower size, petal count and number of blooms.