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Japanese Beetle on Tobacco

The adult Japanese beetle, *Popillia japonica*, is a brightly colored, oval insect about 3/8 to 5/8 inch long. The body and legs are a bright metallic green, while the elytra (wing covers) are coppery brown. The Japanese beetle is distinguished from any other beetles with similar coloration by the white spots, or tufts of hairs, of which there are five on each side and a pair at the tip of the abdomen. Females are slightly larger than the males. The larva, or grub, is about 3/4 to one inch long when mature, and usually takes on a crescent shape when exposed. It is grayish white with a yellowish brown head. The larvae can be distinguished from other "white grubs" by a V-shaped row of spines on the underside of the last segment of the body.



Japanese beetle adult.
Photo: Clemson University CE
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Adults are voracious feeders on the fruit and foliage of over 275 different kinds of trees, shrubs, flowers, and other plants, including tobacco. Leaves attacked by the beetle have a lacy appearance, since everything but the veins is consumed. Beetles may also affect the development of corn by eating the silks and preventing pollination. The larvae feed on the roots of grass. Severe damage can occur on lawns, golf courses, and pastures when populations of 10 or more larvae/square foot are present. Large areas of brown grass often show up during dry spells in September and October. Under heavy populations, large pieces of sod can easily be peeled back revealing the larvae.

The life cycle requires about one year. Adult beetles Japanese begin emerging in mid-May and early June. Peak emergence is reached by early July. Adults remain active for four to six weeks. Egg laying takes place in July. Eggs are laid in small clusters in cells two to four inches below the soil surface. Each female lays 40 to 60 eggs during her life. In about 10 days the larvae hatch, move into the root zone, and begin feeding. As winter approaches, the grubs move deeper and form an earthen cell where they spend the winter. Early in the spring, they move back to the root zone and resume feeding. Pupation takes place in late April and May. During this stage the insect transforms to the adult stage.



Japanese beetle feeding damage on tobacco leaf.
Photo: D. G. Manley



Japanese beetle adults feeding on smart weed.
Photo: D. G. Manley

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Birds feed on the adult beetles to some extent. And the larvae are attacked by several parasites. Prolonged dry weather during the egg laying and larval hatching periods can kill many young grubs. However, all of these are insufficient to keep population levels low enough to prevent injury.

Chemical control measures are available for Japanese beetles. With all insecticides, read and follow label instructions carefully. During peak beetle activity, treatment may be necessary at weekly intervals to provide adequate crop protection.

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