

Japanese Beetle in Corn

By Wayne Bailey

Economic Infestations of Japanese beetle are occurring in scattered locations throughout the state. This beetle was first found in the United States in 1916, following its accidental introduction from its native country of Japan. Japanese beetles are approximately 1/2-inch in length, metallic green in color with bronze or copper colored wing covers. They can be confused with the beetles of the green June beetle, but are smaller in size. Adult beetles emerge from the soil in May and June to feed for approximately 60 days. During this time the beetles mate and females deposit eggs in the soil. Each female may lay 40 to 60 eggs with larvae emerging in about 2 weeks. Larvae will feed on plant roots and decaying material before overwintering in the soil as 3rd instars. The following spring larvae quickly finish development, pupate, and emerge as adult beetles beginning in May.

Japanese beetle adults often congregate in large numbers to feed on foliage and fruit of 300 to 400 different hosts, including ornamental, tree and small fruit, and corn and soybean plants. Typical feeding damage by the beetles is often

seen as a lace-like pattern on host plant foliages as beetles avoid leaf veins when feeding. Beetles often begin feeding on the top of plants and move downward. Tassels and silks of corn can be severely damaged by adult feeding, whereas foliage feeding is common on soybean. Feeding on corn silks can disrupt pollination and result in substantial yield losses. Foliage feeding on soybean is less damaging, although small double-crop soybean may sustain economic damage. The grub stage of this pest will feed on plant roots of both corn and soybean with most feeding occurring in late June, July and August. Damage to plant root hairs may result in poor uptake of water and nutrients or be more severe and cause reduced stands through plant mortality.

In field corn, an insecticidal treatment may be justified if during the silking period there are an average of 3 or more beetles present per ear, silks have been clipped to 1/2 inch or less in length, and pollination is less than 50 percent complete.

The following insecticides are recommended for control of Japanese Beetle in field corn in Missouri.

PESTICIDES LABELED FOR USE ON JAPANESE BEETLE		
Chemical Name	Product Name	Rates: Amount of Product /acre (Unless otherwise noted)
cyfluthrin	*Baythroid 2	1.6 to 2.8 fl oz
bifenthrin	*Capture 2EC	2.1 to 6.4 fl oz
bifenthrin	*Fanfare 2EC	2.1 to 6.4 fl oz
zeta-cypermethrin	*Mustang Max	2.72 to 4.0 fl oz
methyl parathion	*PennCap-M	2 to 4 pts
permethrin	*Pounce 3.2EC	4 to 8 fl oz
gamma-cyhalothrin	*Proaxis	2.56 to 3.84 fl oz
carbaryl	Sevin XLR Plus	2 to 4 pts
lambda-cyhalothrin	*Warrior	2.56 to 3.84 fl oz
* indicates Restricted Use		