

## Japanese Beetles

*By Andy Luke, Regional agronomy specialist*

Recent trappings of Japanese beetles indicate that numbers are extremely high in the region and across the state. High Japanese beetle captures do not mean that treatment is necessary, but do indicate that fields should be scouted for damage.

Japanese beetles are a metallic green beetle with bronze-colored wing covers often found in crop fields. Approximately one half inch in length, they will have 5 tufts of white hair on each side of the abdomen. The beetles will feed on nearly all plant parts and are most active on warm, sunny days. In many plants, they prefer to feed on the upper leaf surface, which results in skeletonization of the leaf. Japanese beetles are able to overwinter in Missouri as grubs and emerge from the soil from June to August. While the grubs will damage crop plant roots, thresholds for insecticide applications are based on feeding damage by adults.

Economic thresholds for Japanese beetle control vary by the infested crop. For corn, treatment is recommended if three or more beetles are present per ear or if silks are clipped to one half of an inch in length. Do not apply insecticide if pollination is more than 50 percent complete. In soybeans, treatment is recommended based on the percent defoliation, not on the number of beetles present. If soybeans are in the vegetative stage, the threshold for treatment is 30 percent defoliation. Once they begin flowering, the threshold drops to 20 percent defoliation. Forage crops such as alfalfa and fescue do not have established economic thresholds, as treatment is rarely warranted in these species.

Japanese beetles produce aggregation pheromones, so they have clumped distributions in fields. Border sprays can be an effective management option if the population is restricted to the field edge, while reducing non-target effects of insecticides on pollinators and other beneficial insects in the field.

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