June 26, 2012

Japanese Beetles are Active

Japanese beetles have become more prominent in the last two weeks. The beetle's emergence is about three weeks earlier than normal just as most other things are due to the warm weather and it appears that the number of beetles emerging is substantially greater than in past years. Extension has been monitoring some Japanese beetle traps on the west side of Marshall. About 6 years ago we were trapping 20 to 30 per day. This year we have trapped over 12,000 in a single day. In most areas their numbers will steadily increase through June then slowly decrease through when peak numbers will result in damage to many different tree, ornamental, fruit, and field crops. Adult Japanese beetles typically feed on green silks and tassels in corn, foliage feed on soybean, and damage the foliage and fruit of over 400 flower, shrub, and tree species.

The beetle was first found in the United States in Riverton, New Jersey in 1916, following its accidental introduction from Japan. In Missouri, infestations were first found in the southern portion of the City of St. Louis in 1935. By the early 1960's infestations were reported in the urban centers of Kansas City, Columbia, and Springfield, introduced probably through imported soil and plants. About 10 or 12 years ago the beetles began to spread into more rural areas of the state. The Japanese beetle is still in a colonization stage of population growth with continued dispersal in most counties of the state. At present, most rural areas of Missouri will experience increasing populations of this pest for the next 7 to 10 years and maybe beyond, according to Wayne Bailey, Extension entomologist. Beneficial biological pathogens and agents will eventually slow these expanding populations, resulting in annual population fluctuations at levels below peak populations experienced in earlier years.

Japanese beetle adults are approximately ½-inch in length, metallic green in color with bronze or copper colored wing covers. A diagnostic characteristic is the presence of twelve white tufts of hair or bristles located around the edge of the shell (five running down each side and two located at the very back end). Without magnification, these structures are seen as white dots. Adult beetles typically begin emerging from the soil in late May or early June, reach peak numbers in June into early July and then diminish during late July into Aust. Each beetle female typically lays 40 to 60 eggs in groups of 1 to 8into the soil. Larvae emerge in about 2 weeks and feed on plant roots and decaying material before overwintering in the soil as 3rd instars (worm or grub stage). The following spring they finish development, pupate and emerge as adults and the cycle begins again.

Feeding damage is often observed as a lace-like pattern of host plant foliage. Beetles often gather in high numbers on host plants. Several tree species, roses, and mature fruit are favored

hosts of this pest. Tassels and developing silks of corn can be severely damaged and disrupt pollination and result in substantial yield loss. In field corn, an insecticidal treatment is justified if during the silking period an average of 3 or more beetles are present per ear tip, silks have been clipped to ½ inch or less, and pollination is less than 50% complete. In soybeans, foliage feeding is less damaging but can be significant. For soybean n, insecticide treatment is justified if foliage feeding exceeds 20% - 30% prior to bloom and 10% - 20%from bloom through pod fill. Use the lower threshold numbers if soybean plants are under drought stress.

Wayne Crook, Agronomy Specialist