Japanese Beetle – Lab note

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Japanese beetle has become established in the southern 2/3rd s of Wisconsin. This non-native beetle is a turf and grass pest in the grub stage and the adults feed on a wide variety of fruits, vegetables, trees, shrubs and flowers. Japanese beetle can be devastating pest of urban landscapes.

Adults are 3/8 inch long with a metallic greenish copper head, legs and abdomen, tan wing covers and a serious of white dots along the side of the abdomen.
Life cycle – Adults appear in late June and are active until early September. Eggs are laid in grassy areas and hatch into grubs that begin feeding in late summer. A small amount of feeding is done in spring and grubs pupate in May and early June.

Damage- The c- shaped grubs feed on the roots of grasses . Damage will appear in later summer and fall. Turf will appear droughty and will not respond well to watering due to the lack of roots.

Adults feed on flowers, fruit and leaves and prefer plants in sunny locations. Leaves often have a lacy appearance appearence with only the veins left

Prefered plants- Grapes, roses, raspberries , elm, birch, linden, cherry, purple leafed plum, soybeans, Norway maple , beech, hawthorn, larch, cannas, and zinnias. Over 300 species of plants have been recorded as host plants.

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Control

Many of the beetles that are feeding on plants fly in from areas up to a few hundred yards from your property - so treating lawns will not automatically control the problem for next year. Turf should only be treated if grub feeding causes damage.

Traps – Although they capture thousands of beetles- research shows that plants near traps get much more damage than plants in areas of with no traps. Beetles are drawn into trap areas and those that are not captured are more likely to lay eggs in turf areas near by.

Hand picking- The presence of beetles on a plant attracts more beetles- Daily removal will reduce the number by ½ compared to plants that allow the beetles to accumulate. Beetles can be killed by knocking them into a bucket of soapy water.

Chemical control – Many landscape sprays will control adult beetles but may need to be applied every 5-10 days. Products containing carbaryl (Sevin), malathion, imidacloprid and several pyrethroids - bifenthrin, cyfluthrin, deltamethrin, lambda-cyhalothrin, permethrin, and others. can be used. During the heavy adult activity periods, sprays may be needed every 5 to 10 days. Products are best applied in afternoon when beetles are most active.

Organic sprays – various neem oil products, rotenone and pyrethrin and spinosad (Bullseye, Monteray Garden Spray, Entrust

Systemics Applications of imidacloprid (Merit, Bayer Advanced Tree & Shrub Insecticite) generally need to be made 20 days before anticipated Japanese beetle adult activity.
Geraniums- A chemical found in foliage and flowers will paralyze and kill Japanese beetles if eaten.
Insect Parasites - Several parasitic wasps, especially *Tiphia popilliavora* and *T. vernalis*, and the winsome fly, *Hyperecteina aldrichi* have been into the US but do not appear as of this time to be able to control Japanese beetle in Wisconsin.

Lawn treatments . Populations above10sq.ft. per ft can cause problems. . Allowing lawns to go dry by not irrigating during egg laying will help reduce populations but natural rainfall my counteract this management technique.
Milky spore disease can be applied to tuft but takes 2-3 years to build up. Recent research has shown some problems and at present time we are not recommending this product in Wisconsin. Nematode preparations containing *Heterorhabditis* spp. can be used to control grubs.. Apply the nematodes when the grubs are small. Irrigate before ***and*** after applying the nematodes.

For details on the use of chemical for control of grub in lawns s- see Wisconsin Garden Fact Sheet X1062