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JAPANESE BEETLES ARE IN MINNESOTA FOR GOOD

By VERA KRISCHIK

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Japanese beetle arrived in Minnesota in the early 1990s.

For the last five years I have been trapping Japanese beetles around the Twin Cities. This year the numbers were 100 times higher than last year. So if you have a problem this year, you will have one next year.

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Japanese beetles eat the roots of only grasses. Grubs in the soil cease feeding in June and emerge as adults in July. Females prefer to lay eggs in irrigated turf. Adults feed on foliage of many

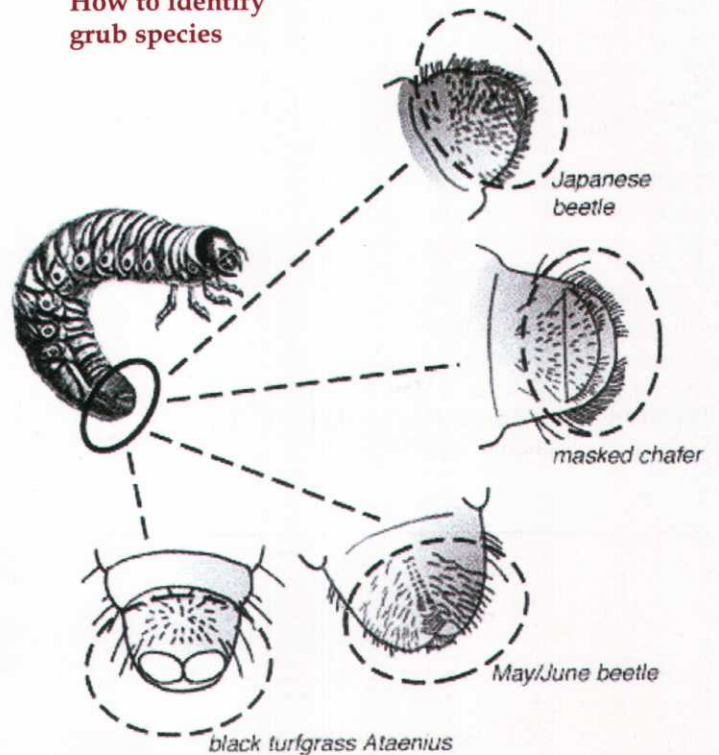


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How to identify grub species



plant species, preferring rose, linden, grape and ivy. Females fly to turf at the end of the day and return to woody plants to feed during the day.

Controlling adults will not control grubs. Pheromone traps can be used to determine the extent of your problem. However, collecting beetles and then killing them will not reduce your problem. You need to kill the grubs in the soil.

Insecticide recommendations for grub control

Control grubs by using imidacloprid (Merit) in May for overwintered grubs. However, in May larger grubs are difficult to kill. Also, apply imidacloprid in August to kill newly hatched and feeding grubs. Since our falls are warmer, you can apply it until the end of September. Halofenozide is an insect growth regulator (Mach 2) and will kill grubs, not adults.

If you find grub problems in the spring, then retreat as early as possible.

(Continued on Page 15)

Japanese Beetles-

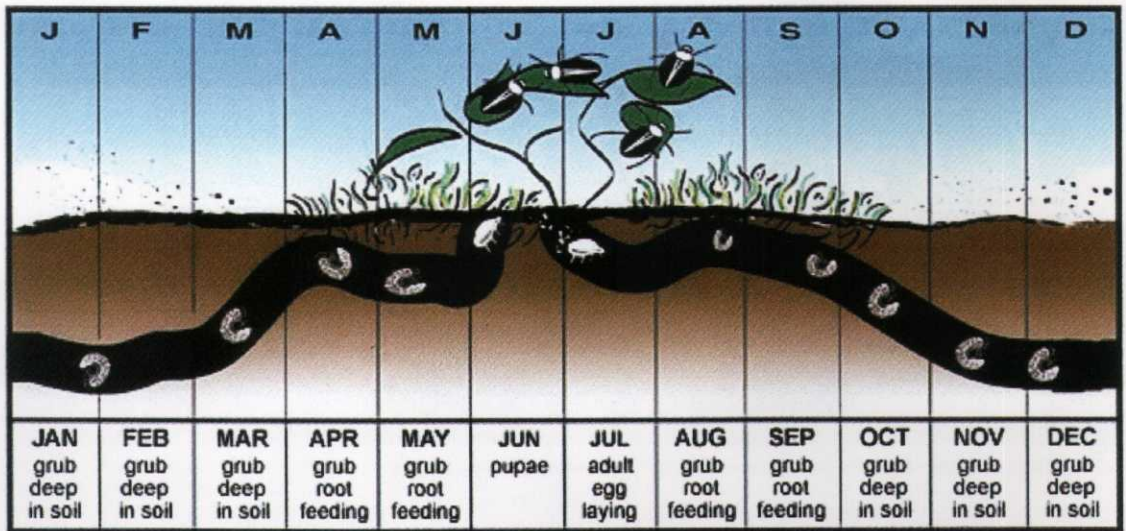
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Scouting for grubs

Remember you need to remove the thatch and look in the soil for the grubs. Grub populations between seven and 15 per square foot can cause significant damage to non-irrigated turf. Irrigated turf can withstand a higher grub count because the increase in water compensates for the roots chewed off by the grub.

Know what species of grubs that you have

When you use imidacloprid, you will kill all grubs in the area. However, adult *Ataenius* beetles, the small black beetles that form mating balls in May, July and September, can be controlled as adults with an application of a pyrethroid like



Talstar. Knocking down populations of the small *Ataenius* adults can resolve your problem, in some cases. Turf can tolerate 50 *Ataenius* grubs per square foot.

Grubs can be identified to species by the pattern of hairs on their brown hind ends (raster). Using a 10-power hand lens, you can see that the hairs on the raster of Japanese beetle form a small "V" shape

just below the anal slit. Clockwise from top are rasters of Japanese beetle, masked chafer, May/June beetle, and black turf-grass *Ataenius*.

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