

# **JAPANESE BEETLES ARE IN MINNESOTA FOR GOOD**

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## **Japanese beetle arrived in Minnesota in the early 1990's**

For the last 5 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 had a problem this year, you will have one next year.

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 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.

## **Scouting for grubs**

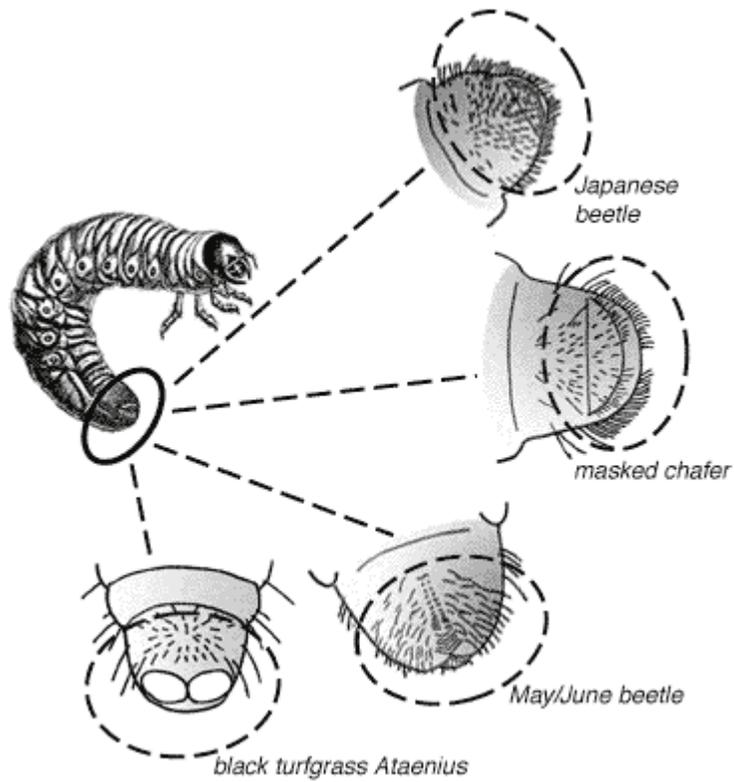
Remember you need to remove the thatch and look in the soil for the grubs. Grub populations between 7 and 15 per square foot can cause significant damage to non-irrigated turf. Irrigated turf can withstand a higher grub count because the increase in water compensates for the roots chewed off by the grub.

## **Know what species of grubs that you have**

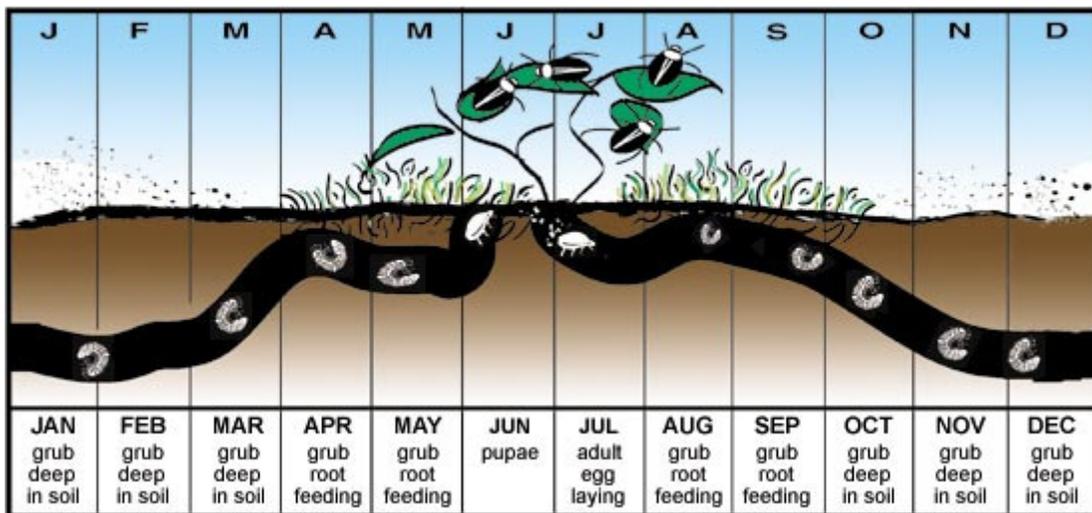
When you use imidacloprid, you will kill all grubs in the area. However, adult *Ataenius* beetles, the small black beetles that form mating balls in May, July, and September can be controlled as adults with an application of a pyrethroid like Talstar. Knocking down populations of the small *Ataenius*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

## How to identify grub species



## Japanese beetle grubs in soil.



**Adult stages of several grub species.**



adult Japanese beetle  
*Popillia japonica*  
Japanese beetles have five tufts  
of white hair along the wing  
margin.



adult False Japanese  
beetle  
*Strigoderma arvicola*  
False Japanese beetles lack  
the five white hair tufts  
along wing margin.



rose chafer  
*Macroductylus*  
*subspinosus*



May/June beetle  
*Phyllophaga* species



masked chafer  
*Cyclocephala borealis*



black turfgrass Ataenius  
*Ataenius spretulus*